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Natural Resources Committee
October 09, 2012

[LR495]

The Committee on Natural Resources met at 9:00 a.m. on Tuesday, October 9, 2012, at the Pappas-Missouri River NRD, Omaha, Nebraska, for the purpose of conducting an interim hearing on LR495. Senators present: Chris Langemeier, Chairperson; Ken Schilz, Vice Chairperson; Tom Carlson; Mark Christensen; Annette Dubas; Beau McCoy; and Jim Smith. Senators absent: Ken Haar. Also present: Senator Heath Mello.

[LR495]

SENATOR LANGEMEIER: I think we'll get started. Good morning, everyone. We'd first would like to start off, if we could get your attention. Senator Haar, we haven't heard from. His staff said he was going to be here but we haven't had any communication with him, so hopefully he'll be joining us in a little bit. First of all, we'd like to start off by thanking the Pappas-Missouri NRD District for the use of their facility. I personally have never been here. This is a wonderful facility for these type of meetings and for what they do as an NRD, so we want to thank them for that. We are here today to have a hearing on LR495 introduced by Senator Mello, and Senator Mello is here. If you're planning to testify today, just some paperwork issues. There's these green sheets and they're right outside the door there. If you're planning to testify, we ask that you fill one of these out. And when you come up to testify, we'll have you give it to Barb. And I'll introduce everybody here in a minute. But before you testify, it allows us to keep a more accurate record of today's events. If you're here and you're not planning to testify, but you want to be on the record as being here, there's a tablet out there on a clipboard and if you'll fill that out and put your name and information on there, that way we know you were here. You don't have to do both. All you have to do is one. That helps us, again, keep a more accurate record. This is the Natural Resources Committee. We are one committee that likes to travel around through the state and get out and deal with natural resources issues. My name is Chris Langemeier, I'm the Chairman of the Natural Resources Committee. I'd like to introduce my colleagues who we've kind of mixed up, I see, in their seating arrangements here on the road. We're going to start out to my far right or

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your far left, we have Senator Jim Smith from Papillion, District 14; then we have Senator Christensen from District 44, or Imperial, so he gets the award for coming the farthest distance today; then we have Senator Beau McCoy, District 39, Omaha, which we are in your district or really close. [LR495]

SENATOR McCOY: We're close. [LR495]

SENATOR LANGEMEIER: Yeah, he just lives to the north of here a little bit. Senator Haar, hopefully, will be joining us in a minute. He's from Malcolm. And then we have Senator Ken Schilz who is the Vice Chair of the Natural Resources Committee, is here from Ogallala. So it might be a fine line who came the farthest. Going out clear to my far left or your far right, we have Barb Koehlmoos who is the committee clerk for the Natural Resources Committee; then we have Senator Tom Carlson from Holdrege, Nebraska; and then we have Senator Annette Dubas from Fullerton; and then we have Laurie Lage, who is the legal counsel for the Natural Resources Committee. At this time we'd ask that if you look at your cell phone, if you would turn those on to vibrate or just turn them off, we'd like to give the people that are testifying the opportunity to have their testimony heard undisturbed. Again, we are here for LR495. I've talked about the green sheets. Senator Mello will open on LR495 and then he has a list of testifiers that are going to testify and I assume they have been informed so they know. We're going to allow those individuals to come up and we'll call off their name when we get to that. And then we'll take open testimony from anybody that would like to have some thoughts on this resolution that was introduced by Senator Mello. So with that, is there anything else I missed? Senator Mello, good...oh, wait a minute. Senator Mello, welcome. [LR495]

SENATOR MELLO: Good morning, Chairman Langemeier, members of the Natural Resources Committee. My name is Heath Mello, H-e-a-t-h M-e-l-l-o, and I represent the 5th Legislative District located in south Omaha. LR495 is an interim study to examine the flood control needs of the city of Omaha and the greater metropolitan area with an emphasis on the role that a natural resources district may play to meet those needs.

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This study, as well as a similar interim study resolution that I introduced last year, LR257, was introduced at the request of the Papio-Missouri NRD, and I'd like to thank the Papio-Missouri NRD board and staff for hosting us here this morning. While the original resolution was actually introduced before the 2011 Missouri River flooding, and Omaha like the rest of the state has just gone through an extended period of drought, I believe that now is an appropriate time to exam the flooding issues. As residents of Ames or Cedar Rapids, Iowa, to our east, would no doubt tell us, the circumstances of every flood are unique and in most cases are entirely unpredictable. While I feel that the city of Omaha, Douglas County, and the Papio-Missouri River NRD, as well as Sarpy County, did an outstanding job in responding to the 2011 floods in minimizing the infrastructure and property damage, the next flood we face will likely present a different set of challenges. As the committee no doubt knows, natural resources districts are a unique form of local government in Nebraska. Created in 1972 through the combination of various resource management entities such as soil and water, conservation districts, drainage districts, and watershed boards, natural resources districts have a broad range of powers and duties related to the protection and enhancement of our state's natural resources. Among the chief statutory purposes of an NRD is to develop and exercise programs relating to flood control and prevention, which is, of course, why we're here today. While levees and dams are the primary flood control tools in both rural and urban areas, it's important for us to remember the role of storm water management in urban flood prevention. Smaller flood control structures like drainage lagoons or storm water basins, and smarter urban planning that provides for an adequate proportion of parks and other green space, can go a long ways towards reducing but not eliminating the need for additional dams and levees. In addition to the representatives from the Papio-Missouri NRD and the city of Omaha, we've invited officials throughout the metropolitan area to share their experiences from the 2011 floods and discuss any potential policies or statute changes that may need to be examined further by the Legislature. I'll leave any of the flood-related questions to the testifiers behind me, but otherwise would be happy to answer any questions the committee may have. [LR495]

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SENATOR LANGEMEIER: Very good. Are there any questions for Senator Mello? Seeing none, you're going to stick around. Okay. You've heard the opening on the resolution. Now we're going to ask the chairman of the Papio NRD, Rick Kolowski, to come up and testify. Good morning, and again thanks for letting us use your facility here. [LR495]

RICK KOLOWSKI: Good morning, senators. It's my pleasure to welcome you also and it's great to have you here to have this opportunity to share with you. I'm Rick Kolowski, chair of the Papio NRD, and it's my pleasure to make some introductory comments concerning some of the flood plain issues that we have concerns over. The first map that you see on the screen to my left, to your right, looks at the six-county area within the 23 NRDs within Nebraska as a whole. Ours is rather unique because of the way it follows right down the Missouri River. The six-county area that we encompass and the mission that you see there listed of our NRD. At the northern end, of course we have the South Sioux City, Dakota City area, all the way down to Sarpy County as far as the physical properties of our boundaries. The next slide shows the Omaha metro flood threats that we have. There are two major flood threats for the Omaha metro area: the Papillion Creek Watershed and the Missouri River. The Papillion Creek Watershed houses one-third of the state's population. The creek system is flashy and susceptible to flooding. As we have recently seen, the Missouri River also provides flood control challenges for the Papio NRD, Omaha, and others residing and working within its flood plain. A year after the historic flood the challenges are in repairing the levee system and maintaining them so that they are able to perform to high standards again. The third, please. Some of our projects to the Papio NRD has worked with communities in the Omaha area to complete a watershed management plan. And the first two structures of that plan are under way. WP-5 and Papillion is under construction with an estimated cost of \$38.5 million. And dam site 15A located near 168th and Fort Street in Omaha is in design phase. The estimated price of land and construction for dam site 15A is \$50 million. Next, please. The current flood control efforts by the Papio NRD for the Missouri River consists of accrediting our two levees in Sarpy County with FEMA so that they

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continue to provide flood protection and that can protect the valuable life and property behind them. On the left you see the current structure with Offutt Air Base located right there, almost in the center, with the levee system intact and certified at the current time by FEMA. If it was not certified, the picture on the right would be the extent of the flood plain and you can see what happens to Offutt Air Base. Next one, please. While the primary purpose of our projects are flood control, we seek opportunities to make them amenities for communities to utilize and enjoy also in the Omaha area. With that, I thank you for your time and I thank you for being here today, and we wish you the very best in your work as far as the challenges that are before us in this largest population area in the state of Nebraska. And again, it's a pleasure to have you here. Thank you very much [LR495]

SENATOR LANGEMEIER: Very good. Are there any questions? Senator Dubas. [LR495]

SENATOR DUBAS: Thank you, Senator Langemeier. Thank you, Mr. Kolowski. [LR495]

RICK KOLOWSKI: Yes, ma'am. [LR495]

SENATOR DUBAS: You briefly mentioned something about repairing the levees that were damaged in the most recent flood. Where are you at in those repairs? [LR495]

RICK KOLOWSKI: Well, we have a combination of things that are taking place. I'd defer to our general manager, John Winkler, for an update on that as far as his time and his comments. [LR495]

SENATOR DUBAS: All right. [LR495]

RICK KOLOWSKI: He can give you a point-by-point locations and where the stresses are and what we hope to get done. [LR495]

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SENATOR DUBAS: Did you feel that the levees that were in place did what they were supposed to do? Did they show some deficiencies? [LR495]

RICK KOLOWSKI: They did a remarkable job all through the Omaha area, and we're very proud of the way they held up with the challenges that was prevalent because it was a huge flood. Anyway you cut that, it was a tremendous challenge. We had good results almost everywhere. As you know, other measures were also taken to pump water, for example, out of the Eppley Air Field area to get that water over the dikes and over the levees back into the river. A number of things had to be done, but they all worked and we're proud of that. And the height of some levees and the strengthening of certain areas where we found water bubbling up in the fields and all the rest, John can talk about those and give you a little more background on that. But it worked very well. We're proud of the work done by the NRD in cooperation with many other agencies in the area. Bellevue and...most of our efforts from our perspective were down in Bellevue and the Offutt Air Base area, and John can elaborate on that. [LR495]

SENATOR DUBAS: Thank you. [LR495]

RICK KOLOWSKI: Thank you. [LR495]

SENATOR LANGEMEIER: Senator Carlson. [LR495]

SENATOR CARLSON: Thank you, Senator Langemeier, and thanks for being here. [LR495]

RICK KOLOWSKI: Yes, sir. [LR495]

SENATOR CARLSON: Could you go back to the picture of R613 and R616? Now, it would be for my benefit, what's R613 mean? Is that a project or is that an area or what's

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included in R613? [LR495]

RICK KOLOWSKI: That's the levee located as you count the number of miles or locations of finding the point on the levee as you're going downstream on the river, either Missouri or the Platte River. That's designations of locations. It's sort of like a road map. It's telling you where you are, GPS-like. [LR495]

SENATOR CARLSON: Okay. So these two are pictures of a flood plain, they're not a planned project. There's not a planned project here. [LR495]

RICK KOLOWSKI: No. The one on the left is with FEMA-approved levees, how that looks and what is consisting...what the blue is, the flood plain that would be consistent with that levee structure as it currently sits. Without FEMA, okay, the flood plain would be expanded tremendously into that entire blue that you see on the right. [LR495]

SENATOR CARLSON: Okay. And you had indicated a dollar amount on WP-5 and 15A. [LR495]

RICK KOLOWSKI: Yes, sir. [LR495]

SENATOR CARLSON: What about 613? [LR495]

RICK KOLOWSKI: I'd defer to our general manager again on the amount of money. [LR495]

SENATOR CARLSON: We'll put him on the spot when he gets up here. [LR495]

RICK KOLOWSKI: Absolutely. [LR495]

SENATOR CARLSON: One other question. Are you asking something of the committee

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today? [LR495]

RICK KOLOWSKI: No, sir. I'm just advocating for additional attention to the issues that we have within the largest metropolitan area, population area of the state; and I would advocate for assistance, of course, to help meet these needs in the metropolitan area for both the Missouri River, the levee issues, as well as the Papio watershed. [LR495]

SENATOR CARLSON: And when you say, ask for assistance, then you're talking about state dollars? [LR495]

RICK KOLOWSKI: Whatever means and whatever direction assistance could come from. We have the levee authority that you've given us with the watershed and the dams that we're producing, and that's a tremendous tool for us to utilize at the current time. And again, our general manager will address other things as far as levees. [LR495]

SENATOR CARLSON: Okay. Thank you. [LR495]

RICK KOLOWSKI: Thank you, sir. [LR495]

SENATOR LANGEMEIER: Senator Christensen. [LR495]

SENATOR CHRISTENSEN: Thank you, Chairman. Thank you, Rick, for coming in. You mentioned a little bit about what happened at the airport and how they put in the wells and things. And I don't know if you went and toured that, but if... [LR495]

RICK KOLOWSKI: I threw sand bags. Yes, I did. [LR495]

SENATOR CHRISTENSEN: I was going to say if you didn't, that is an awesome tour. I went on the university tour this summer evaluating all the flood damage up and down the Missouri, and that probably was the highlight to me of the whole trip was seeing how

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they come together and put that pumping site, the dewatering wells. We've had different bills within this committee talking about dewatering and different things and just to see what they did and how it reacted and worked, I would encourage anybody that could get the opportunity to go to the airport and see that. And I asked you that for the reason it's in your district. I think it was amazing to see how they come together, put these pumping systems in, pumped it out, and maintained the integrity of the airport; and it just shows what we can do. And I didn't have a question for you, just a comment.

[LR495]

RICK KOLOWSKI: No. [LR495]

SENATOR CHRISTENSEN: You answered the question if you had been there, but just for people to realize that the plan that was executed to keep that airport open and how they dewatered that was an amazing feat. And anybody that gets the opportunity to see that, they ought to take advantage of it. Thank you. [LR495]

RICK KOLOWSKI: Thank you, Senator. The number of pumps that they brought up from Texas and Louisiana that helped battle Katrina down there, because they were stored down south, and they rushed those up here, and the engineering feat to put that all together and to figure that out and to maintain that was remarkable. Thank you, Senator. [LR495]

SENATOR CHRISTENSEN: Yes. [LR495]

SENATOR LANGEMEIER: Very good. Seeing no other questions, thank you very much. [LR495]

RICK KOLOWSKI: Thank you very much. [LR495]

SENATOR LANGEMEIER: Well done. Our next testifier is going to be Laurie Zook with

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HDR Engineering. Good morning. [LR495]

LAURIE CARRETTE ZOOK: (Exhibit 1) Good morning. Good morning, Chairperson Senator Langemeier and the members of the Natural Resources Committee. My name is Laurie Carrette Zook and I'm a water resources engineer with HDR Engineering here in Omaha. And I'd like to thank you for the opportunity to provide testimony regarding the Papillion Creek Watershed. HDR was retained by the Papio-Missouri NRD and the Papillion Creek Watershed Partnership to study and evaluate flood mitigation measures within the Papillion Creek Watershed. Work began in 2001 with data collection and modeling, and it was completed in 2009 with a document outlining the Papillion Creek Watershed plan. I have a copy of that in front of me here. I plan to provide an overview of the storm water issues that face the Papillion Creek Watershed and the communities that reside within its boundaries. In August of 2001, the Papillion Creek Watershed Partnership was created to facilitate compliance with federal mandates. The Environmental Protection Agency required urbanizing areas to obtain National Pollutant Discharge Elimination System permits for their storm water discharges. In order to reduce duplication of programs and reporting, the Papio-Missouri NRD and the communities and the counties located within the Papillion Creek Watershed banded together with a common mission to address issues related to water quantity and storm water quality in the Papillion Creek Watershed by establishing regional common goals and standards for the development of the watershed through 2040. The partnership joined communities located within the 402-square-mile watershed of the Papillion Creek into the three counties, Washington, Douglas and Sarpy, in which about half of the watershed is in Douglas, and a quarter of it is in Washington and Sarpy counties. A total of nine local governments are represented in the partnership and the guiding principles of cooperation, participation and comprehensive watershed planning. The logos for the nine communities are depicted on the bottom of the slide. The Papillion Creek Watershed has a history of flooding. In the late 1960's, the U.S. Army Corps of Engineers proposed a series of 21 regional dams to protect the Omaha metropolitan area. Of those 21 dams, only eight have been constructed to date. As urbanization

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continues, the amount of paved roads and rooftops increases, thereby increasing the amount of runoff coming off our lawns, collecting in our ditches, creeks, and rivers. Flood plain management, levees, channel and reservoir projects, and conservation measures have proven to be effective in reducing our flooding risk. However, a flooding threat still exists in the Omaha metropolitan area. It is estimated within the next 30 to 50 years, the majority of the land in the watershed will be developed as can be seen in the graphic on the slide. The smaller graphic shows the area that's urbanizing in red, and if you look at the other graphic, is the land use that's projected from 2035 to 2060 is the red, on this, going to be urbanizing. So you can see the majority of the watershed is looking at being developed. Existing problems will get worse if appropriate actions are not taken now or continue in the future. What was missing was a single, comprehensive watershed management plan, a plan that would provide direction to minimizing flooding and improving water quality within the watershed. The watershed plan that was recommended by the partnership consisted of nonstructural and structural elements. Each community passed an ordinance requiring low-impact development, or LID strategies, to improve water quality. This ordinance required all new developments to control the first half into runoff on site and that a no-net increase in the two-year discharge be achieved. The structural component of the plan was to construct 15 regional detention and 12 water quality basins in Douglas and Sarpy counties. These structures would be located upstream of urbanizing areas and designed to store floodwaters while the water quality basins would be constructed upstream of these regional detention basins to collect sediment and pollutants. Regional detention basins have proven to be an effective flood control measure saving lives and property in the Papillion Creek Watershed. The next couple of slides will show some examples of LID and detention basins. Low-impact development can be effective in improving water quality. LID employs principles such as preserving and creating natural landscape features, minimizing imperviousness to create functional and appealing site drainage. There are many practices that can be used to adhere to these principles such as bio-retention facilities, wetlands, pervious pavements, rain gardens, and on-site detention. LID strategies promote the natural movement of water within a watershed.

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These techniques can work in reducing runoff for more frequent events on local drainage sites. Regional detention basins are larger on-site facilities such as dams that regulate or control storm water from a larger area. These regional detention basins not only provide protection from less frequent events, but also offer recreational benefits to the surrounding communities. On the left is an example of a regional detention basin and water quality basin. This is just right outside the window, actually this is Wehrspann Lake that we are on. Upstream of Wehrspann Lake is a water quality basin located south of Highway 370. So on the figure on the left, there's a concrete spillway in the foreground of the picture. That is where the water quality basin is located and that's where all the sediments and pollutants are settled out. And then it's discharged into the main reservoir, thereby keeping the sediments and the pollutants upstream where they can be removed easier and not impair the water quality of the main lake. On the right side is Walnut Creek. Walnut Creek is located in Sarpy County and offers flood control and recreational opportunities for the city of Papillion and Sarpy County. With the implementation of the Watershed Management Plan, the flood plain boundary will decrease. The photos on the left illustrate the 1980's flood plains in green and the 2004 flood plains in blue. The flood plain has increased and numerous businesses and homes are at risk of flooding. The figure on the right illustrates the 2004 flood plain in blue, and the flood plain boundary with the improvements of the plan in orange. As you can see, the flood plain shrinks. But at some locations, like at 144th and F Streets on the West Papillion Creek, the flooding risk is reduced, but it's not eliminated. Okay. So what are some of the benefits of having a watershed plan? The benefits are that the application of the water quality controls are throughout the watershed, is that we have equal and the consistent controls and goals across the watershed. This flexible implementation of the flood control projects where and when they are needed. The plan has proven methods of flood control that are recognized by FEMA who administers the National Flood Insurance Program. There's manageable levels of structures requiring operation and maintenance by strategically locating these regional detention areas in areas that can offer both flood protection and recreational opportunities. And it maintains development densities and reduces urban sprawl. So what is the cost for this

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watershed plan? The intent is to have the water quality low-impact development strategies be funded by development as that is a requirement for all new development. Regional detention basins and water quality basins in Douglas and Sarpy counties would be funded by public and/or private partnerships. The Papio NRD has had great success in constructing several flood control projects with a partnership with the private sector. It's estimated in the plan that it would cost \$376 million, in 2010 dollars, for the implementation of the watershed plan, which includes the 15 regional detention and 12 water quality basins. And that it's estimated to almost be \$1 million for the implementation through 2050 as the projects are scheduled to be staggered in different years. So that's the conclusion of my presentation. If anyone has any questions about the watershed plan, I'd be happy to answer them. [LR495]

SENATOR LANGEMEIER: Very good. Are there any questions? Senator Christensen. [LR495]

SENATOR CHRISTENSEN: Thank you, Laurie. I guess I always wanted to ask this question. We hear about low-impact developments and you showed that garden in there... [LR495]

LAURIE CARRETTE ZOOK: Uh-huh. [LR495]

SENATOR CHRISTENSEN: ...and I understand the value of these, no matter how wet we keep it, there's always going to be some water go in there. But being Americans, we're very spoiled. Since that garden is there, we're going to water it. So what actual benefit do we get out of the LIDs when we basically use a sprinkler system and water them to keep it for the beautification versus if we didn't use that approach? [LR495]

LAURIE CARRETTE ZOOK: The LID practices a lot of the things that are done at the homeowner level or the local areas where they're trying to maintain the runoff on site. And these rain gardens typically are in a depressed area where they would have

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vegetation there that would grow, that would give it ecstatic value, but also that it gives the opportunity for the water to drain and to percolate into the ground. Because that's what you want to do is try to clarify that water as it goes into the ground, into the soil. And so, you're correct. I mean, they are nice little amenities but they also need to be kept up. So that's why it's very important that those LID strategies are to be used predominantly for water quality improvement and not really flood control because it would be...they do a little bit to help on the on site to reduce the floods for the frequent rain events that we have. But when we have the events that are in excess of a five- or a ten-year event, those detention areas are not designed for those. [LR495]

SENATOR CHRISTENSEN: I realize that the impact was minimal but the water quality makes more sense to me than trying to take it off, but yet I have seen...pictures have been showed before where they try to have parking lots drained where two cars meet and they leave the dirt in between for the purpose of trying to get some of that water utilized. And I just didn't know the actual benefit or if there's really good studies on that, so. [LR495]

LAURIE CARRETTE ZOOK: Yeah. And there are some more studies as more LID practices are being used and done it more of a larger scale to showing that the improvements to the water quality, and in some cases it can also help for some of the water quantity, but not for...depending on how they're designed and how they're used. [LR495]

SENATOR CHRISTENSEN: Okay. Thank you. [LR495]

SENATOR LANGEMEIER: Senator Schilz. [LR495]

SENATOR SCHILZ: Thank you, Senator Langemeier. Good morning. Thanks for coming in. [LR495]

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LAURIE CARRETTE ZOOK: Good morning. [LR495]

SENATOR SCHILZ: As I was watching your presentation and going through that, I see it seems to be...you know, it's the issue of, you're going to have people upstream do things and, from what I understand, pay for things that are going to protect people downstream. And therein lies part of the problem of getting this done. If some of this is back on the developers, or on the homeowners themselves, how do you justify that to them when they're not the ones with the problem that's downstream? And I'm not saying that they're wrong, I'm just saying that's... [LR495]

LAURIE CARRETTE ZOOK: Yeah. There's a continual battle between upstream and downstream and when those people that were downstream when they built near or down along the channel, those...that one (inaudible) didn't exist that far out. And so it's just by consequence of development that now they are at higher risk. But that's why that's the nice thing about the watershed plan is everybody is on the same playing field. Everyone understands that we need to do things for the benefit of the watershed not just of the one...well, to benefit the communities in that watershed, and so that everybody needs to do their part to try to reduce the runoff that comes from their area and use these regional goals and these regional plans so that they can benefit the whole watershed. [LR495]

SENATOR SCHILZ: So when you say that, then will you...will there be strategies to find ways for those downstream that are getting the protection from those upstream building this, to move money upstream as well? [LR495]

LAURIE CARRETTE ZOOK: Well, the monies that are used that will be used for the fees associated with the permit, the development permits, goes into all these different projects, not just one specific (inaudible) for the projects that are going on at that time, so. [LR495]

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SENATOR SCHILZ: Right. Okay. And right, I understand that, but then those downstream that are in the area you have to protect because of what's happened, where does their contribution come in? [LR495]

LAURIE CARRETTE ZOOK: Well, again using the public funds, using NRD funds. [LR495]

SENATOR SCHILZ: Okay. [LR495]

LAURIE CARRETTE ZOOK: And some of the communities will also probably be involved as the monies for these projects get developed. But that's how this really is done is (inaudible) through the NRD public funds. [LR495]

SENATOR SCHILZ: Okay. Thank you. [LR495]

SENATOR LANGEMEIER: Senator Carlson. [LR495]

SENATOR CARLSON: Thank you, Senator Langemeier. I want to take off a little bit further on what Senator Schilz just talked about. In the six years that I've been in the Legislature, and several of us have heard several hearings that have to do with Missouri-Papio NRD and the watershed and the problem in greater Omaha area, but I think that you concluded with your work that LRDs (sic) are helpful but they're not the total answer. [LR495]

LAURIE CARRETTE ZOOK: LID. [LR495]

SENATOR CARLSON: LID. [LR495]

LAURIE CARRETTE ZOOK: Correct. [LR495]

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SENATOR CARLSON: Okay. And we have had a certain group of people that have testified in these hearings that all is needed is LIDs. And you're not in agreement with that? [LR495]

LAURIE CARRETTE ZOOK: I think there's a combination plan that needs to be done with both the LID strategies and regional detention. [LR495]

SENATOR CARLSON: Okay. But we have one group that that's their mind-set, that's all we need. [LR495]

LAURIE CARRETTE ZOOK: Uh-huh. [LR495]

SENATOR CARLSON: We have another group that absolutely doesn't want any more dams any place. And that's a retention facility, isn't it? [LR495]

LAURIE CARRETTE ZOOK: Yes. [LR495]

SENATOR CARLSON: Okay. So we have that group of people. And then we have, of course, the others that would like to see these retention facilities. And you put up the figures there that we can look at, and I think you partially answered this with Senator Schilz; so again, what's your recommendation on how to pay for it? [LR495]

LAURIE CARRETTE ZOOK: Again, the public...there's a couple of different tiered and it's dependent on the implementation of the communities. What there is right now set up, is that for on the lot level when a lot is developed, I think it's what, \$500 or \$700...\$700 that would be collected at that time to help offset some of the costs, so that there is a development participation there. In addition to the majority of the funds come from the public sector, being from the NRD's tax levy or other bonding authority. [LR495]

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SENATOR CARLSON: Okay. And I believe that, I understand that. But, of course, the NRD is a vast area and the watershed within that NRD is a large area, and there are people within the NRD who would say, don't tax me for the problem downstream. And so that's the difficulty. So would your recommendation be that the tax levies be spread out over the entire NRD? [LR495]

LAURIE CARRETTE ZOOK: Well, that's what the NRD's levying authority is, is throughout their district... [LR495]

SENATOR CARLSON: Uh-huh. [LR495]

LAURIE CARRETTE ZOOK: ...and not just at the Papio for the watershed. [LR495]

SENATOR CARLSON: And that would be your recommendation rather than trying to split the NRD up in some manner in terms of tax levy? [LR495]

LAURIE CARRETTE ZOOK: You know, the NRDs do a lot of projects throughout the district and I don't think they've ever looked at where the projects are and those people that are in that area and saying, well, you're responsible for paying for that yourself. Again, you'll need to talk to the general manager on how the disbursement of funds and things are within the district. But it's always been, it's one pot, everything is for the good of that whole district and not individuals for just watershed. And then like Dr. Kolowski said, a third of the population of Nebraska is in this watershed. And so as we have more and more people, they have more people at risk of properties and lives. And the one thing is that these eight reservoirs that have been in place have been doing a really good job because we do...we don't see the big floods that we could have had if those projects weren't there because they are doing their job in protecting...the levees are doing their job to channel improvements. There's a lot of things that are good that have been done. We just need to make sure that we continue, and this plan will help develop what needs to go on. [LR495]

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SENATOR CARLSON: Okay. Thank you. [LR495]

SENATOR LANGEMEIER: Seeing no other questions, thank you very much. Well done. [LR495]

LAURIE CARRETTE ZOOK: Thank you. [LR495]

SENATOR LANGEMEIER: Our next testifier is going to be Mike Sotak of FYRA Engineering. I'm sure he'll tell us what that all stands for. Good morning. [LR495]

MIKE SOTAK: Good morning, Senator Langemeier. It's been a while. Good to see you again. Senators of the committee, thanks for allowing me to testify this morning. My name is Mike Sotak, it's FYRA Engineering. It's a new company that was just started in July. FYRA Engineering has been contracted by the Papio-Missouri River NRD to provide levee certification for the R613 and 616 districts in southern Sarpy County that Dr. Kolowski first introduced. And a quick background on levee certification is consultant engineers need to provide levee certification. And what we are basically doing is testifying to FEMA and certifying actually that the levees meet today's technical design criteria. FEMA then takes engineers' certification reports and then accredits the levees. And by FEMA accrediting levee, what they're saying is, we're going to allow those levees and the good in terms of flood control and changes in the flood plain that they do be shown on the NFIP, or National Flood Insurance Program maps. So, in fact, what we're doing is, we're doing the technical work for FEMA, in a way, to allow the levees to stay on the maps so that flood insurance doesn't have to be paid by those that actually benefit from the protected sides of the levees. Some...(inaudible). [LR495]

SENATOR LANGEMEIER: I think you have to use your assistant. [LR495]

MIKE SOTAK: Okay. So a little bit of a background. So here we've got the R613 and

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616 levees here. Dr. Kolowski started to introduce that and what that means is the R is...if we're moving down the Missouri River, R is the right side. The ones in Iowa would be called the L levees. And what that is, is that's river miles above the confluence of the Missouri River in St. Louis. So the start of the levee system for the 616 down here at the confluence of the Platte River is 613 miles upstream of St. Louis. That's where the names come from. And the other one, three miles up the road is actually the 616 district here. So they were authorized by the Flood Control Act in 1944, planned and designed along with thousands of miles of levees up the Missouri and Mississippi valleys through the '50s, '60s, and '70s. These were actually constructed and finished in 1971 as part of a U.S. Army Corps of Engineers project. The Papio-Missouri River NRD today serves as what's known as a local levee sponsor, and so basically they've adopted this that was originally constructed and built by the federal government with federal tax dollars. They do the ongoing maintenance. They actually operate the levees during flood fights and they do everything that needs to make sure that the levees stay in place. And so the burden of the levee certification effort across the nation has fallen on the local sponsors. And so if you want to keep your levees shown on your flood maps and show the protection they provide, it's up to the NRD to make sure that that happens. So this system, in total we've got 18.2 miles of earthen levees between the two districts here. We have 45 levee penetrations. Penetrations is a fancy word for culverts that go through the levees to allow some of the water that's on the inside of them back into the creek. Those are usually gated off so that you can shut them in times like the 2000 flood, so water doesn't go the other way and work against what they're trying to do. These particular levees which are a far cry from what Omaha deals with in the downtown levees, there's only one pumping facility here, it hasn't been operated in a while but it's down in the very corner of the 613 district that used to drain a lot from the...when the PCS nitrogen facility used to discharge a lot of water as part of their operations; that actually helped to pump those over the levees there. So, in all here, we protect about 7,000 acres. And it may be a little difficult to see here, but here you can kind of see kind of a breakdown of what those are. And Dr. Kolowski showed a nice map that showed in blue, a single blue shade, what was protected and what doesn't.

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This takes it one step further and actually breaks it down into the different land uses there, in the green there, showing what's at Offutt Air Force Base and the Offutt Air Force Lake, etcetera, but it shows some of the other work and some of the other areas and what type of businesses, residences, etcetera, ag land is being protected by the levees. So real quick, a little bit about each one. So this red outline that goes around here along the right side of Papillion Creek bank and then goes along the right side of the Missouri River, and then the left side of the Platte River here is what's known as the R613 levee. Just over nine miles here of this levee, and this shows some of the major facilities on the left that this protects. So you've got U.S. Highway 75, and really the level of protection is more down here. The future U.S. 34 corridor runs right through here. So here's Platteview Road. That's going to be kind of the hub of development for the future of southern Sarpy County. Southern Sarpy County, of course, is going to be the fastest growing area in Nebraska for years to come. And so that corridor that also connects Mills County, a center in Iowa, also one of the fastest growing areas over there, crosses the Missouri River. The bridge is under construction right now and so is the actual approach going through the levee district. So if the levees, in fact, weren't certified, the new U.S. highway would actually be under water in times of a flood. So, of course, it's very vital to the transportation infrastructure there. There are two major rail lines that run through the area here; UP and BNSF both have a railroad line there. Lots of agricultural land that's still currently agricultural, runs through there. And, of course, future development. And Sarpy County and/or the city of Bellevue will probably talk a little bit about the importance of this area and one of the best spots in the state for a big industrial development to help keep Nebraska growing. Of course there are some residences down in the area as well. That was color coded on that last map as well, so. The 616 district, a very similar size. They're almost the same length, each one there. Here we've got a major highway corridor in Highway 370 that crosses the Missouri River there. Same residences, businesses, etcetera. But, of course, we've got Offutt Air Force Base. And as you saw, about a third of the far southeast corner of that runway was inundated by the 100-year map. So letting these levees go to pot and returning that area to the flood plain really doesn't make much sense. Same railroads pass through

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this area; ag land; dead end. Of course, right here we've got a billion-dollar Papillion Creek wastewater treatment facility, so one of the two facilities that treats all the wastewater that comes from the Omaha area and, of course, also portions of Sarpy County, as well as part of the 616 district. So when we talk a little bit about where these levees are and what they do here, we've got three major systems we're dealing with which makes this a pretty unique set of levees. We've got, of course, on the top here, this is the Missouri River basin here, 410,000 square miles in the basin all the way up into Montana. Only 90,000 or 80,000 of those square miles are uncontrolled. So that means that water, in that green area, gets to Omaha without having to go through the main stem dams. In the bottom left here, we show the Platte River down there. We've got 90,000 square miles there; and of course, the portion that is in the brown, darker brown there, is controlled by Lake McConaughy and Pathfinder. There are some smaller dams around the way, but not main stem dams that actually provide a lot of flood control along the way on the actual river itself. And then, of course, you've already seen these maps from Dr. Kolowski and Laurie from the watershed plan where it talks about Papillion Creek and the 402 square miles there. So this presents kind of a unique set of challenges in that we've got two systems here that provide very large areas, very long...potential of very long drawn-out floods, and then we've got the levee system that goes through the middle of the two systems along Papillion Creek that provides for a very flashy watershed where water goes up and down very quickly in flood events for Papillion Creek there, so. The Missouri River flood, of course, everybody knows these. These photos were taken by Rick Anderson, a very famous photographer in Nebraska, and this shows some of the effects that you saw at Nebraska City and some surrounding communities here. Some interesting parts about this flood is that...you know, the flood, the levees here that we're talking about have to meet a minimum, according to FEMA criteria, of a 1 percent chance protection. So that equates to the 100-year flood. And so in terms of that flood and looking at the 100-year flood here, some interesting parts about that is we had about 100 days of flooding where the water got up to the toe of the levee, etcetera. Sixty-three of those days, the water was above the 100-year threshold for the actual storm event. So the water elevation itself was high

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for 63 days; and, of course, that's because most of the water came from that 320,000 square miles that's protected by the main stem dams according to the Missouri River operating plant and the main stem operating plant that the Corps executed, so. Absolutely, you know, there were a lot of decisions made in terms of how much water to release and why. You've heard people criticize the Corps, you've heard people praise the Corps. You know, a couple things you think about, the Fort Calhoun Nuclear Station with a couple more inches of water could have been another Japan. It could have been another issue there had more water been let go. So there are lots of reasons of why they did what they did. But this just goes and reminds us of the constant state of threat that we may live in. When we talk about levee certification--this is all Title 44 of the Code of Federal Regulations, which is called 44 CFR--FEMA dictates, and that basically says is that if you want your levees to show up on the NFIP maps and you want people to receive the benefit of not having to pay flood insurance, that they need to show up on those maps which bankers, developers, etcetera, use; and that means that they have to be certified in accordance with the Corps of Engineers' criteria. So that brings into two major stakeholder agencies that work with regards to levee certification. FEMA, of course, is responsible for administering the NFIP program; and we've got the state Department of Natural Resources, etcetera, that helps act as the local liaison for that; and then, of course, the NRDs and the communities act even on a more local level to work and make sure of that. The Corps of Engineers actually provides almost all of the technical criteria that we have to meet in order to certify our levees. And so we're working with both agencies; however, the Corps of Engineers doesn't require levee certification. So it's a little bit of a mix-up there, but they're actually working together very well under what they call the Silver Jackets team to make sure everybody is on the same page and make sure we're all marching towards the same requirements here. This is the flow chart for levee certification that FEMA put out, I guess kind of a typical federal road map in some respects. But we'd like to simplify that down a little bit more and if we...go to the next slide, Brian. This is really in essence what we do as part of levee certification. We go out and we look at the levees, investigate them, what's going on here. We go through an analysis and design of the levees. Do they meet current

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criteria? We talked about...Dr. Kolowski talked about how well the levees performed during the 2011 flood--and they did, in fact. That doesn't necessarily mean that they meet technical criteria. We anticipate and we look at what levee deficiencies exist that I'll go into in a little bit, design (inaudible) it's a matter of construction, and then we go through the FEMA accreditation remapping. And so FEMA gives the local sponsors two years to complete all this, which is really almost impossible. The Papio-Missouri River NRD and a couple other local entities have done a good job of getting out in front of this effort and realizing that if you're going to do this correctly, there's no way to do it in two years. So that's what they're working on right now and trying to get these levees so that when they do have to react within that two-year time period, they're prepared and their constituents don't have to deal with changing maps and flood insurance, etcetera. So the overall part and kind of the nexus for levee certification comes from FEMA is what they call their map modernization efforts through NFIP. Map modernization, if you think about it, it's kind of like mowing a giant lawn. As soon as you get done with it, you kind of have to start again. And, of course, the communities that are growing are going to be some of the ones that are going to see the biggest changes because we've got more impervious area, etcetera. A lot of things are happening within the communities to change some of the hydraulics are there. But in essence, how this started out was, was that FEMA wanted to make sure we took these old maps that looked like the one on the left here, and changed them into and created what they called digital flood insurance rate maps or DFIRMs, you might have heard that word, on the right there. In this day, the computer age, as bankers, insurance regulators, developers, and every...look at areas along major water courses, now they can actually just go in, in state and local NRD databases, and just click on and off which areas are in the flood plain and which ones aren't. So when we talk about levee deficiencies here, the map on the right shows...and I apologize for the scale here. I'm trying to show both systems on the same map here. We've got a little bit of a legend up here and what that basically says is that the green levees, the ones that are shown in green, which the majority of the 616 district along the right bank of the Missouri River there are shown in green, currently meet FEMA's freeboard requirements. That means that the levees are high enough, basically.

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And as you look at some of the...then yellow, then orange, and then all the way up to red, you see that some of the deficiencies in the levee heights start changing a little bit. So that's part of what needs to be addressed as part of the certification effort here to make sure that the map stays certified. Of course, as we move up the Papillion Creek here, you see the colors start to get a little bit darker and that's an effect of growth. So as we look at progress and we look as time goes on, and we look at growth in Omaha, even with the work that has been done with the dams, etcetera, to help reduce flood control, it isn't enough to make sure that the levees and the flood elevations stay the same in the lower portions of the watershed there. In addition to the freeboard or the hydraulic capacity of the levees that's shown, because of Katrina, the Corps of Engineers changed how they look at seepage control. And so there are some new geotechnical requirements that are required of the levees to make sure that they're up to snuff and safe in today's environment. Also there's a lot of general maintenance items making sure that we don't have trees on the levees, etcetera. The Papio NRD has always done an excellent job of keeping the levees in great shape, keeping them mowed, keeping trees off of the them, rodent burrows, etcetera; all those things can affect levee performance. And the last part there is the remapping. We talked about that. So part of the certification effort that we'll work on is remapping and that we also need to look at not only the elevations along the river courses, but all the elevations on the interior, what we call the interior drainage or interior mapping areas need to be done as well. So when we talk about remapping, and you may have heard some discussion about whether or not levees really need to be certified. And the answer is, they don't have to be certified, and FEMA is in the process of looking at some different ways and so I'm not going to go into the technical aspects of each ones of these here. But in essence...Brian, if you kind of click through these slowly here...it gives some other ways that you can actually go and look at levees. What the problem is right now is it becomes very confusing, it becomes an incredible engineering challenge to figure this all out and whether or not you actually want to go in and do this work to figure out how it might change. A lot of this came from some of the early projects in some of the early cities. Council Bluffs currently is kind of under the clock, as you might say, in some of the work

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they're doing. We did some work in East St. Louis as well. They're looking at a \$700 million price tag for their levees in East St. Louis; \$700 million with zero coming from the feds, so you can imagine what kind of impact that has on the local economy and businesses. And the threat is that some of these businesses along the river in East St. Louis could pay as high as \$70,000 a year in flood insurance rates that they would have to pay in order to keep their business going where it is now. A lot of them, of course, think that's the nail in the coffin for them. So as we look at why we would provide it, a sound number you hear thrown across the country sometimes is a million dollars a mile, and preliminary estimates get us somewhat close to that. When we're dealing with some of the issues we're dealing with in terms of levee height, etcetera, some of the changes we're going to have to make to the levee to deal with seepage concerns like putting in wells, putting in berms, etcetera, some of that stuff, the land it takes, etcetera, that's a real good example of some of the people in the lower part of the watershed having to pay the price for water that's coming from up above, in fact. So why do that and why do this project? Number one, that investment, if you look at a traditional BC ratio, we talk about transportation delays. Of course, whether or not shutting down Offutt Air Force Base's runway is even a possibility, you look at the impacts of U.S. 34, U.S. 75, some of the business operations of railroads, and you think about what that does to commerce in Nebraska. Of course there's huge, huge average annual flood damages that occur from that that we want to prevent. It also decreases the liability of the NRD. So we talked about 63 days of 100-year-plus floods, up to a 250-year flood is what we dealt with, but you also talk about 100 days of flooding. And so the NRD in that, in working with the Corps, the National Guard, AmeriCorps, etcetera, dealt with 1,200 man-days. And so we're talking almost 30,000 man-hours was spent with people walking the levees during a flood to make sure that the levees were doing what they're supposed to do. That's a safety issue. That's an issue that probably none of you would want to be out walking on the levees. It's a tough job. And doing that during a flood, doing that at night, etcetera, is a dangerous job, so making sure the levees are up to snuff is something, of course, that anybody would want for any of their loved ones walking those. The levees also then provide a consistent level of protection. Again we're talking about a 100-year flood year,

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and so we need the levees to maintain that so that it doesn't change everything that's going on. We've got a huge impact to businesses, residences, ag land, etcetera, if all of a sudden all these people have to start paying crop insurance, home insurance, all for flooding, etcetera, there. In terms of these two sets of levees here, we're protecting billions of dollars in property. We're talking about a billion-dollar wastewater treatment facility, we're talking about the new STRATCOM facility, we're talking about future developable ground that's going to bring businesses to Nebraska. Lastly, it creates and maintains those safe places to grow. You know, 80 percent of the U.S. population lives along the flood zone. It's real easy to sit back and say, don't build there, don't live there. But 80 percent of the U.S. lives inside a flood zone right now. These people were already here. That's why Omaha was settled. That's why Bellevue was settled, because it was along a river, of course. They're already there; the development is already up around them, of course. And so all we're doing there is giving them a safe place to live. So that, in essence, is the end of my presentation of testimony. Of course, I would be happy to answer any questions you might have. [LR495]

SENATOR LANGEMEIER: Very good. Are there any questions? Senator Christensen. [LR495]

SENATOR CHRISTENSEN: Thank you, Chairman Langemeier. Thank you, Mike. When you talked about the deficiencies in levees and the red being kind of the new area, is that new development which has caused more runoffs, so now that you need to put levees there? Was that what you were meaning? [LR495]

MIKE SOTAK: Well, the levees are already there. And so the water coming down the Papillion Creek, the 400 miles in the Papillion Creek system has obviously increased with growth. Anytime we have additional rooftops, parking lots, etcetera, you're going to have more water. [LR495]

SENATOR CHRISTENSEN: So as you raise the areas that you had in red, which was in

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the upper edge of the levees because more water is coming, is that going to cause down lower them levees to now be downgraded into a different color or not meet FEMA certification now because more water is coming? You've raised the levees here, so you're shoving more water through which means those along the stream are going to have to be raised? Is this an endless problem? [LR495]

MIKE SOTAK: The first part of the question is no. Because of these levees where they're at, the ones that were just downstream of them were already shown as being higher. Part of what we do is what we call system analysis, and that you can't take and force water on someone else. And so as part of us raising levees, you can't force it into someone else to protect your own, so that part of the FEMA requirements. So if we go back to that map, on the lower portions of Papillion Creek we're already shown it being raised, just not as raised as much. The levees are wider there. There's more capacity. They're also affected by the back water of the Missouri River through the lower portion of Papillion Creek here. It just...once we get up...the influence of the Missouri River on the Papillion Creek system ends right around in here. And so up above those, we no longer have the Missouri River influence, so it just required the upper portion of those levees to be raised a little bit more. The second part of your question is, is it an endless cycle? If we don't continue to do things upstream to protect more water from coming down, it will be an endless cycle. And some day they'll come back and they'll have to look at this again and say, we have to raise these levees again. And so to maybe work on a little bit of a question I heard before is, you know, all the great things, we're talking about 100-year floods here and all the great things that LID does for maintenance and water quality, etcetera, it doesn't do anything for 100-year floods. No matter what scale you do, it doesn't do anything for a 100-year flood. And so, that's...you know, it's going to take major efforts to actually change this from having it happen again in the future. [LR495]

SENATOR CHRISTENSEN: So you don't see the red area eventually going further up as more pavement and building tops come in, or will that be a continuous...? [LR495]

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MIKE SOTAK: Well, this is actually the end of the levee system. Okay? And so what that means is that these levees were designed to provide 100 years' protection on the protected side of the levee for these particular levees. There's a gap in between this system and the next system through the city of Papillion which provides a 100-year level of protection. In between there, there are some levees that provides various levels of protection: 25-, 50-year levees. Salt Creek through Lincoln doesn't provide a 100-year levee...or a 100-year level of protection. So there are some systems that don't provide a 100-year level of protection. So the city of Papillion eventually would be the next one upstream. Now, is this going to influence and work its way all the way back to the city of Papillion? It won't. It's a matter of grades in the channel. But anytime you raise this here, all we're doing is we're keeping the water from spilling out and being wider and keeping it in the narrow channel and getting it out to the Missouri faster. [LR495]

SENATOR CHRISTENSEN: Okay. Thank you. [LR495]

SENATOR LANGEMEIER: Any other questions? Senator Dubas. [LR495]

SENATOR DUBAS: Thank you, Senator Langemeier. You mentioned that basically the feds built the levees and then after that the maintenance and everything goes back on the locals. But it's very obvious that these levees are very critical to the ongoing operations of Offutt. Is there anything that Offutt Air Base contributes as far as additional dollars for these levees or maintenance or anything? [LR495]

MIKE SOTAK: Well, I'll let Manager Winkler answer the specifics of that question, but what I'd say is that right now we're in the process through our design in getting a handle on what is the price tag. And so as you look at Bellevue and Sarpy County and NDOR and all these people who have the benefits of being on the protected side of these levees, the NRD has maintained communication with them throughout the process. They haven't promised them that they're not going to ask them to help. They haven't

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promised them that they are going to ask them for help. The U.S., as a whole right now, is...there's bills in the federal Congress to help pay for some of this. And so until we get to that point, I think they're just sitting back and saying, let's make sure we understand the problem, let's make sure we understand the price tag. I know the senators in Illinois are working hard to try to get some federal funding for some of this type of work. Whether or not they're successful, I don't know. But right now I'll just tell you that the lines of communication are open, and if Mr. Winkler knows something more than that, I'm sure he'll let you know. [LR495]

SENATOR DUBAS: All right. Thank you. [LR495]

SENATOR LANGEMEIER: Senator Carlson. [LR495]

SENATOR CARLSON: Thank you, Senator Langemeier. As we're going through various testifiers here, in my mind we're adding money on top of money. And we started out with \$80.5 million on WP-5 and 15A and then we got to a figure of \$376 million in 2010 dollars, and now you talk about roughly \$20 million in levee certification. And I don't know if you know the answer to this, but is that on top of the other dollars that we're listening to or is that...do you think that's included in the figure that we've been given before? [LR495]

MIKE SOTAK: Well, I know that...Laurie can correct me if I'm wrong. The \$80 million that was given to you as part of WP-5 and 15A, those are two of the first two projects in the watershed plan. And those two projects themselves are included in the overall watershed plan costs which were \$376 million in today's dollars and whatever the figure was in 2050, nine hundred... [LR495]

SENATOR CARLSON: Nine hundred sixty-three. [LR495]

MIKE SOTAK: Okay. So the levee certification project is not part of Papillion Creek

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Watershed plan itself. That's really addressing upstream issues. We're down at the bottom of this in the mouth and this is something that the levee certification issue and the whole project itself, this came way after the development of the Papillion Creek Watershed Partnership plan. And, in fact, Gordon Andersen will be telling you a little about Omaha's, and how they're going to have to deal with the same issue here. [LR495]

SENATOR CARLSON: Okay. And I appreciate your presentation. Could we go back to the picture, it was quite a bit earlier, that showed the effect of the flood. [LR495]

MIKE SOTAK: The first slide. [LR495]

SENATOR CARLSON: There, there. [LR495]

MIKE SOTAK: Okay. [LR495]

SENATOR CARLSON: And then you made a good statement: You can't force water on someone else to protect yourself. So that water was held way up north, all the way to Montana, in various structures. The Corps made the decision when that water should be released. One question is, do we have any areas up there that after the water was released looked like this in terms of destruction? Or did they simply protect themselves and pass the water on down to us? [LR495]

MIKE SOTAK: The Corps reservoirs...the Corps has a different management strategy for federal reservoirs than sometimes local people have to adhere to. And so when we build dams locally we may store water in a different manner. The Corps actually maintains easements to store water up to the top of their dams usually, along the main stem reservoirs. So there are people who do business inside that, etcetera. There, of course, are people that work some of that ground, etcetera, so there were damages by the main stem reservoirs holding all that water back. But the biggest threat was really to,

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in terms of how they decided that, was the dams hadn't held that much water in a long time. And if, in fact, they failed when they let it go, is the scary part when all the water is rushing through them. There, of course, would be a lot of people in between them that could have been at a threat. But in essence, you know, the people upstream in the rural areas there, you know, they held that and the people who the land was acquired from years ago. It's all owned by the Corps and the feds now, you know, to provide protection in the lower part of the watershed. That's how flood control works. [LR495]

SENATOR CARLSON: Well, and I understand if there was a facility that broke in Montana, it might have wiped everything out all the way to St. Louis. But then there had to be a decision that somebody made that, well, we know it's going to be bad in Nebraska and Iowa, but we don't have a choice and we'll let them suffer. [LR495]

MIKE SOTAK: Well, I probably would rephrase that a little bit to say, yeah, if we kept holding dams, water in the upstream dams, and you talk about Montana. Fort Peck is the largest of the structures up there and it's the farthest up, so I think what they said was, if they had a failure there, they could have what they call a cascading failure where all that water comes down and hits the next dam, that fails, and what happens is it just builds on itself which, yeah, could have caused a lot of problems for Omaha, Kansas City, and probably St. Louis there. So it was a matter of safety. But they also looked at us and said, how do we protect Omaha? Because they could have let a lot more water go, and everything I've been told is, if Fort Calhoun got some water in it, it could have been in real trouble. So maybe they were actually looking out for our best interests. There's a lot of things they balanced. I wasn't part of those decision-making processes, but I've heard a lot of presentations on it, and it was undoubtedly a tough decision in a difficult time. [LR495]

SENATOR CARLSON: Okay. Thank you. [LR495]

SENATOR LANGEMEIER: Any other questions? Senator Christensen. [LR495]

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SENATOR CHRISTENSEN: Thank you, Chairman. I'll just state from that water tour I went on this summer, I got a lot more respect for the feds after that in listening to it, because as they were gauging the snowmelt, which they typically have to deal with for determining the amount of release and when, then they had a 75-year rain event which brought all this rainwater in on top of it, plus the snowmelt faster. And that was part of the feds' scheduling problem which led to this, was they anticipated a longer melt, but when that big rain event come, it melted the snow and put it all there now. Which I'm not saying the feds didn't make any mistakes, I can't say that, but I thought it very interesting listening to the various federal representatives, whether it was bureau, whether it was Corps, there's a number of them that came and spoke to us, and how they have such a scientific layout of how they determine based on snow impact or the amount of snow, and projected temperatures, where we're at. I tell you what, that was probably the second most powerful thing that I heard was how detailed of scheme they have based on temperatures, based on amount of the snowfall, based on what normal rainfall should be, based on that capacity of when they have to release and what they have to release. And then they come back in and showed with the rain event what happened and how all the previous management now is absolutely looks wrong because of everything coming there quickly. And again that was...I've been on a lot of water tours, try to hit one every year, and this was...I thought it might be one of the most boring ones, but it was probably one of the best ones just because I didn't understand everything that was detailed in this. And again, I was in that group kind of blaming the feds. To hear how it was operated was very impressive. So I just share that. Whether it's accurate or not, I can't tell you. [LR495]

MIKE SOTAK: Yeah. Well, let's not forget that, you know, the original project too was supposed to benefit downstream people. It was to provide navigation along the Missouri and the Mississippi River, and that was the original purpose of putting it in. And like anything else, we've adapted over time. There are environmental considerations as we work with dam sites now as well as flood control, etcetera. So the original project itself

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was actually to benefit us down here and allow commerce and barges to get to Omaha.
[LR495]

SENATOR CHRISTENSEN: Thank you. [LR495]

SENATOR LANGEMEIER: Senator Smith. [LR495]

SENATOR SMITH: Thank you, Senator. Mike, you did a fantastic job. You've got a great command of knowledge and obviously have a lot of experience with this. And maybe some of the ones that follow you can elaborate on this a bit more, but you know you make a great case for the need for flood management, avoiding the risk of future flooding. You know, I don't think anyone can argue with our need for having runoff management and flood control. I think the question becomes, how do we ensure that we have responsible and appropriate spending on these projects? So it's hard for me to kind of relate this to something else, another industry. There's always a good, better, best; and I know what we're trying to do here is to build a system that takes care of the likely risks that are out there. But, I mean, what steps do you see in going through and for us to understand how much is enough and where do we draw the line to ensure that there is responsible and appropriate spending? Because, once again, with unbridled taxing authority, there comes the risk of overspending on these projects. And I've heard from constituents and from others, you know, in NRD projects that they are a recreational component to some of the dam sites, for example. You know, that they see that that is outside of the responsibility of flood management and runoff management. So can you kind of just talk about that a little bit? How do we factor that into all of this?
[LR495]

MIKE SOTAK: Senator Smith, I can certainly give you my opinion on it. First of all, I want to kind of clarify, I'm a consulting engineer. I do flood control work. And so some people have told me, well, you testify and so you're going to benefit from this. The truth of the matter is we're going to benefit from it no matter what because you're either going

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to have flood control facilities the engineers need design, or you're going to have to have engineers deal with the aftermath of flooding; and so it's going to be one or the other. With regards to flooding itself and these programs, and responsible spending, there's a couple different things. Number one, we do have some federal regulations and state regulations that we need to meet. FEMA tells us about the levees here. Omaha through the CSO Program is also dealing with TMDLs or total maximum daily loads on Papillion Creek. And so there are water quality functions we need to meet as well. So, first of all, we need to remember that there's local, state, and federal rules and regs that we have to meet as we develop programs and move forward, or there's penalties for it, quite honestly. So that helps to drive it. What helps to...and when we first talked about the Corps of Engineers and Laurie talked about the Corps of Engineers' original program to build 21 facilities around Omaha, and I believe 15 around Lincoln, both projects were partially completed. You know, back then, those were done on traditional BC ratios. And so we talked about benefit-cost ratios of projects and did they cost more than they benefited you. In the electricity field, any other field, it's a typical business decision of, does it make sense to spend the money, are we getting enough benefit downstream of flood control, or are we getting enough benefit of distribution to meet that benefit? So that's one way of answering a question. In recent years we've learned a little bit, and as some of these programs were implemented we've learned about environmental impacts. And so, how do we bring that into the mix of what was always done traditionally on BC ratios? And so there was a couple of fancy programs that were developed by the Corps and some others where we actually tried to incorporate those into it and mix the two. And it became difficult. And typically, from a science standpoint, it's difficult...not only difficult to but you also find resistance of people that want to put a value of a dollar on a wetland or put a value of a dollar on an aquatic habitat unit that provides habitat for a pallid sturgeon, etcetera. So we've kind of gone away from the traditional BC ratios which are what engineers are quite honestly best at calculating. And so in regards to the fiscal spending and the responsibility of it, what I would say is, nothing gets done these days without a host of stakeholders both for projects and against the projects. And what usually happens is, is that we rely on the state of

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Nebraska, the Corps of Engineers, and other people to judge the plan that comes out of it. And so, in today's Papillion Creek Watershed Partnership plan, there's a mix in there that for the people who don't want the dams, for the people that want to promote LID, etcetera, there's a good mix in there that ultimately has to be accepted by other people. And so it has to provide a mix. We have to understand that there are multiple stakeholders and different interests in all these projects. They do drive up...they can drive up project costs without necessarily realizing additional benefit, because again, we don't want to put a dollar value on that wetland, etcetera. So I think, in my opinion, the NRD has been very forthright and open, and not only this NRD but others, in working with the locals and the grass-roots agencies and stakeholder groups to understand their point of view and incorporate a portion of their interests in a plan. So you can either...you can pare things down to a traditional BC ratio, you could also talk about how that affects and compare it to other projects. What does this do for wetlands? What does this do for water quality, etcetera? But until we really get to look at the big-picture items of these, and this is a big-picture issue we're talking about in the city of Omaha here, it's a tough...it's a tough answer. Recreation itself. You know, in the past the Corps, NRCS, and even locally, and even the state, Nebraska's Resource Development Fund, because of how they did projects, assigned some dollar value to recreation. Number one, people then said, if you're going to build these lakes, look, we want to be able to waterski on them, we want to be able to do this, we want to be able to do that. And so you would always see those projects get built at the front of the projects, because if you looked at project economics, you got more benefits year for year that came from those projects. In this day and age, and you talk about most of these projects here, there's a shortage of waterskiing. We don't allow, usually, waterskiing on most projects because we want them to be good fishing lakes because that's what we set it up for. And so this day and age, when you talk about the value of passive recreation, you look at what that did for Walnut Creek, you look for what it does down here. Yeah, it cost some extra money, but when you look at the catalyst at these lakes and look at what Walnut Creek did for Papillion, you look at the catalyst for what those types of lakes did for the areas around them, that's where people want to be. And so I

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think the majority of the people, sometimes unfortunately the silent majority, most of those people, you know, that's what they want as part of the plan. [LR495]

SENATOR LANGEMEIER: Any other questions? Seeing none. Mike, thank you very much. Well done. [LR495]

MIKE SOTAK: Yeah, thank you. [LR495]

SENATOR LANGEMEIER: Our next testifier is going to be from the city of Omaha Public Works and it's Gordon Andersen. Welcome. [LR495]

GORDON ANDERSEN: Well, thank you. And I want to thank...on behalf of the city of Omaha I'd like to thank you, Chairman Langemeier and other senators for this opportunity to really get down to some of the nuts and bolts as to the specifics on the city of Omaha's levee system and also give a little history of what we had to deal with last year. You probably saw a lot of it in the news, but there's a lot more detail to it that I'd really like to get out there. Well, to begin, the city of Omaha is the sponsor for the levee system known as R627 as designated by the U.S. Army Corps of Engineers. It is a levee that starts right up here, which is right at the intersection of Pershing and Read, and then it continues to go around the airport for 9.3 miles until it comes down to the start of where Rick's Cafe Boatyard is, and then it turns into about one mile of I-wall, flood wall. The reason for that is they didn't have enough area for a levee through that section. After that one mile, then we have another almost 3.5 miles of earthen levee just like we do on that north end. So it's a rather complex system because we have a great deal of infrastructure that is being protected by this levee system. To begin with, we have heavy industrialized areas up in here, various manufacturers of bulk goods, whether it's for agriculture, fuel, industry, recycling, so forth. We then have the obvious airport system, Eppley Airport and the Omaha Airport Authority. Going farther south we get into the Omaha Correctional Center; and that turned out to be one of the more important...I'll get back to that, but that turned out to be a little bit of a problematic area

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not only from the levee system, but also from the importance of that facility. Another very important and critical infrastructure item is this item right here, this is the Magellan tank farm. Continuing to the south we have the stadium area, the Qwest Center, all of the developed area that's, you know, really kind of a bright shining star within the city's downtown area. Additionally, residentially, we have Carter Lake, all the residents there. We have Omaha's residents surrounding that. We literally have thousands of residents that are impacted by a levee issue. Continuing south, we get into an area that is really even more commercial and heavy industrial. What we have through here mostly is rail yard and all of the infrastructure involved with that. We have the Gibson rail yard and also we have the ConAgra facility. And this also is a continuation of the Gibson yard. It terminates at this wastewater treatment plant that's...excuse me, the Missouri River Wastewater Treatment facility and that is the tail end of that levee. The total assets that are protected by this levee system are...we estimate it to be \$5.2 billion. So it's very substantial. Not to mention the amount of residential, the potential loss of life that can be an issue there. When the Corps of Engineers last year started informing us that we were going to be seeing some high water events, you know, we've been through those in the past few years. We didn't realize what we really were going to be up against until the Corps continued to ramp it up. Pretty much every other day we would get a notice that there was going to be an increase of releases. The duration of the releases also would be longer and longer due to the circumstances that Mr. Sotak was discussing. You know, just the long-term snowpack, the heavy rains that were also alluded to by you, Mr. Christensen, it just continued to get worse and worse and worse. So we were dealing with trying to assure the public that we had this system in hand. It's a good robust system, but we also needed to inform them that a catastrophe could take place. And so what we tried to do is not only have all of the city of Omaha's team, the flood fighting team on board with how to maintain and surveillance a levee, but we also enlisted help as much as possible from the neighboring businesses as well as the residents in the area. And to really make this...initially, we just had problems getting it through to the public that this is serious, folks, we really...you know, keep your eyes open; you know, anything you see, notify us. Well, we found out the best way to do

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that...next slide, Brian...is to start putting these signs up. (Laugh) That really got the public's awareness up. Within one day of those going up, and even as they were being pounded in the ground, we were getting calls. The actual seriousness of the situation really got driven home with those. But we really did need those. We had to come up with a way to evacuate a heavily populated area as soon as possible, and in a manageable method. So we did come up with these. And like I say, that really got people on board. After these signs went up, any water main break we had in the area was even called in as a breach of a levee. (Laughter) So it got a little extreme on us. Can you go to the next one, Brian? Okay, this is the inundation maps that we supplied to the area residents. This really kind of illustrates what we would have seen if we would have had a levee breach at the flow rates that were a peak from the Corps. As you can see, we're really in a low basin right here. The entire airport would have had up to ten foot or more of water over it. Carter Lake would have been completely wiped off the map. Everywhere else would have had anywhere from two to six foot of water through here. The consequences of this are even greater than just the impacts it would have had on the city of Omaha. Number one, many of the industrialized areas up here, they're involved with chemical manufacturing and handling. There are environmental issues. A lot of them did take the precautions they needed to do a quick evac, but a lot of them realized that they needed to keep their operations running, so they were running them on notification. We had to work very closely with them to make sure that if there was going to be any problems, they had ample notice to get out and get things secured. The obvious big player in this, one of the biggest players, is the airport, Eppley Airport and the Omaha Airport Authority. And as it was discussed earlier, they did put in a series of, I think it was 70, dewatering wells to keep this area dry. That did also help with our pooling of water behind the levee. However, due to the long-term flood that we were seeing, we had continued underseepage throughout this entire area, all the way down to the Mo River treatment plant. And we, in addition to the airport, had 80 different pumps set up throughout the entire 13 miles of our levee. And what a lot of people don't realize is, we actually had three pumping sites. The combined pump ability of the three sites was right at 750 million gallons per day, so we were able to move a lot of water.

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But even then with some of the bigger rains we got...and thanks to closed floodgates, we still had flooding within the city. We were able to get the water out in a matter of days usually, but we did still have pooling water. And at times we got a 7.25-inch rain down by the Gibson yard, we had six foot of water on both sides of the flood wall. And it took us four days to get that out of there even with our massive pumps. Now, some of the other impacts. Obvious, if we shut down an airport, not a good thing for the entire region. We've got the environmental issues here. Down to the south, it's kind of hard to see, the correctional facility. I was notified pretty much on a weekly basis that it was going to be hard to house 300 inmates somewhere. The state was pretty adamant about don't let that levee fail. Fortunately, the levee stayed in and they never had to evacuate. But they were ready to evacuate and they didn't even have a real good place as to where to house all those prisoners. So that was very significant. Another substantial issue is the Magellan tank farm. That farm, a lot of folks don't realize, that farm actually supplies the majority of the fuels in both states for a 60-mile radius from the city of Omaha. If that farm were to truly go down for an extended period of time, that's substantial. It also supplies all of the fuel for the Omaha Airport Authority. So if it were to become damaged or if we were to somehow lose it, that would be an impact on the region and not just the city. The other problem is if we were to start floating some of those tanks, if they were to become dislodged, we could also have considerable fuel spills. Fuel floats. They would not have been able to restrain it to just that site. Additionally, as we continue to go south, we get into that...first off, the Gibson Yard rail locations. That is a very large regional hub for not only Burlington Northern but UP on the northern end of that. That rail line continues to supply materials and commodities for not only the power plant in the area, but also the MUD drinking water plant. So critical that we were able to keep that open. And at times it did flood, but again we were able to get the water off quick enough they could get the trains moving. There were times when the trains were actually going through one foot of water to just keep up with the necessary routes that they had. But it wasn't comfortable for any of us. Now also, little known, is around the ConAgra campus, which is just right down in here, there is what's known as the Harriman Center. That is Union Pacific's dispatch center for the entire

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nation. If we were to lose that--and we got water within two to three foot of entering that building at times--that would have caused congestion; it would have caused major issues for the entire Union Pacific national railway company. They also use that center to coordinate dispatch with BNSF and all the other major rail companies in the United States. So that is a little known but extremely sensitive situation that fortunately we were able to get through also. And again, continuing to go south we have that Missouri River Wastewater Treatment facility, which is \$100 million-plus facility that did see some damage from the flooding, but it stayed...80 percent of it stayed operational throughout the flooding. That's kind of a wrap-up of what we did see. We do have continued need. We also are going to need certification. And with our situation, we're a little bit unique. Our levee is built to a 500-year, plus two foot of freeboard, so we've got a little bit bigger...we've got a considerably larger, higher, more robust levee than a lot of the others in the system. However, we still need to have FEMA certification which will involve underseepage studies, slope stability studies, interior drainage studies, and plans for mitigation of floodwaters. It's going to be a very long and arduous course. We've entered into an agreement with the NRD to help fund some of the study starting later this year. We're currently involved with rehabilitation of many of the relief wells along the system. But there is going to be a continued and ongoing need for assistance from the NRD. And I might also point out that we did sustain over \$15 million worth of damage that the Corps of Engineers, fortunately, covered on our levee system through the 2011 flood. So it was a long, hard fight, but thankfully we got through it. Are there any questions? I'd be happy to answer them. [LR495]

SENATOR LANGEMEIER: Very good. Are there any questions for Mr. Andersen?
Senator Schilz. [LR495]

SENATOR SCHILZ: Thank you, Senator Langemeier. Thanks for coming in today.
[LR495]

GORDON ANDERSEN: Certainly. [LR495]

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SENATOR SCHILZ: You talked about the certification. Do you have any idea on what that process is going to cost? [LR495]

GORDON ANDERSEN: Well, the actual engineering studies and certification, we're estimating \$2 million to \$4 million. [LR495]

SENATOR SCHILZ: Okay. Thank you. [LR495]

SENATOR LANGEMEIER: Senator Carlson. [LR495]

SENATOR CARLSON: Thank you, Senator Langemeier. I think you indicated that you were able to pump out 750 million gallons a day. Do you have any idea over what kind of a period you did that? How long? [LR495]

GORDON ANDERSEN: It depended on the rain events. Really what it had...whenever there was a rain event, fortunately it wasn't systemwide. It didn't generally cover that whole 13 miles. So what we would have to do is fire up the pumps in the area that was most affected. The biggest rain we got was the August 22 storm. And some of those pump stations had to operate for up to three days. The largest one, which was by the Qwest Center, you probably heard about we had to close off Riverfront Drive. We had 11 large pumps there. That one was able to dry out the Qwest Center area and north in a matter of, oh, six hours. [LR495]

SENATOR CARLSON: Okay. Thank you. [LR495]

GORDON ANDERSEN: Sure. [LR495]

SENATOR LANGEMEIER: Any other questions? Seeing none, Mr. Andersen, thank you very much. Our next testifier would be Mr. Rick Cunningham who's the city of Omaha

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planning director. Welcome. [LR495]

RICK CUNNINGHAM: Thank you. Get my notes up. Chairman Langemeier and committee, I am Rick Cunningham. I am the planning director for the city of Omaha. You may ask, well, what skin do we have in the game. In the city of Omaha, the planning department is charged through our ordinances with the administration of the floodway within the city and our planning jurisdictions. Our approach to the threat of a flood is twofold. And one is proactive, and through our ordinances we seek to be proactive as far as how land use along designated floodways is controlled. And then reactive, which you've kind of heard about to a certain degree already with my tag-team partner from the city. Basically when flooding is occurring, putting in place infrastructure that can mitigate or minimize those impacts during the flood. And then as a reactive is the lessons learned from those events as what we do with our flood protection program. In the city of Omaha, the Omaha municipal code, section 55, paragraph 651 through 663, is the flood fringe and floodway district ordinance that we enforce. We also participate in a multiagency regional watershed management effort, which is led by to a certain degree this NRD that we are here right now. We do believe that that is a cost-effective method of mitigating floods, controlling floods, because flooding is a regional phenomenon. It is not for us in the city of Omaha phenomenal. It is impacted upstream and we have impacts downstream. And in the case of the 2011 flood, we were impacted a great deal by just the management of the Missouri River, and then on top of that, certain significant rain events. The one thing about levees, they're great instruments, but when they keep water out they can also keep water in. So it's an interesting dichotomy for the levee. So a lot of what you heard about with all those pumps was just to respond to the water that couldn't get out. And so we have to obviously manage it from both sides of that perspective. The other thing that hasn't been talked about...and where is the...? Anyway, you see that big ribbon going through there, that's the Missouri River. There is some flooding on other tributaries of that that we have to consider, and that's primarily probably where the planning department comes in with the creeks and so forth that feed into the river and other locations that

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tend to flood based upon rain events or how the river is performing. Our statement of our purpose under our ordinances is clear. It is the purpose of this ordinance is to promote the public health, safety, and general welfare of our citizens and to minimize those losses described in section 652. One is to restrict or prohibit uses which are dangerous to the health, safety, and property in times of flooding or cause undue increases in flood heights or velocities. So in this case we'll talk about those damages and the impacts it could have on it. But also by developing, we can impact how a flood occurs. We can impact the amount of water and how fast the water gets downstream by the amount of development that occurs. Require that uses vulnerable to floods, including public facilities which serve such uses, be provided with flood protection at the time of initial construction. And that's the proactive perspective of it: make sure they're protected in the first place. Three, protect individuals from buying lands which are unsuited for the intended purposes that they might have because of flood hazard. And then, finally, to assure that the eligibility is maintained for public property owners in the community to purchase flood insurance through the National Flood Insurance Program. One way that we control it is through flood development permitting that we enforce. The permit is required. Basically no person, firm, or corporation shall initiate any flood plain development or substantial improvement or cause the same to be done without first obtaining a separate permit for development as defined in the section. Our administration is that we have a flood plain administrator coordinator who is within the planning department and he administers this program. I won't go into his duties at this point. But for a permit, the applicant is required to submit an application that includes where the development is, what is being planned, what kind of occupancy, plans and specifications so that we can view those to make sure that they are adhering to the requirements, the standards set forth in our ordinance. Probably just as important to that proactive part and the reactive part of what we do is that we by virtue of when our ordinance was passed have a number of nonconforming uses or structures within our city. And I wanted to highlight...this is the pointer...which... [LR495]

SENATOR CHRISTENSEN: No. The other one. [LR495]

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SENATOR LANGEMEIER: To your left there, that pen. [LR495]

RICK CUNNINGHAM: Ah, this one. Okay. And now where is the...okay. As an example, I want to point to this area right in here. And everybody knows about the Anchor Inn and Sandpiper Cove, which doesn't exist anymore. But that is in our city a nonconforming use and structures because it was in place before our ordinance came into place. It is allowed to continue or was allowed to continue as long as it did not have 50 percent of damage, either damage from a flood or any other kind of damage. And then they have to justify what that 50 percent, if is below that, as far as putting it back in place in order for it to be put back in place. At this point in time our ruling is, the planning department's ruling is that they will not be allowed to rebuild any of that development in that area. So that's from a reactive perspective, and the way we control nonconforming uses is not to say you've got to go. But as long as there's not damage, 50 percent or more of that structure or the property, they can continue to operate. But once there is that over 50 percent damage, then we do not allow them to go back in. The one thing that I would say, in most of the city we have two flood areas or flood zones identified as the floodway, which is the current 100-year flood. It's defined as a 1 percent chance, which is the 100-year flood. But we also have instituted a flood fringe. The flood fringe identifies that area that is, by the studies, likely to become a floodway based upon the ultimate build out of the area around, upstream, and so forth. And I just bring that up because, again, floodways are not static. They change. They change because of the dynamics of the system. They change because of future development and can get bigger, our flood fringe area, with that upstream development or the final build out of the area. That is important because of that one purpose which was to make sure that our citizens are informed where the floodway is and where potential flooding could occur for when they're anticipating purchasing or developing property along our floodways and our flood fringes. I can tell you that from the planning department's perspective this can be difficult because a lot of people wanted to basically develop along the floodway, the flood fringe, and a lot of times that development wants to infringe in that area. And then

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it becomes somewhat of a debate, a battle to enforce our ordinance and maintain the course as far as the floodways. I'm available for any questions. [LR495]

SENATOR LANGEMEIER: Are there any questions for Mr. Cunningham? I do have one, Mr. Cunningham. [LR495]

RICK CUNNINGHAM: Yes, sir. [LR495]

SENATOR LANGEMEIER: You talked about in your role of planning and zoning and you start to look at things that were, what do I want to say, grandfathered in. How did we end up with a penitentiary facility in that high risk of an area? That blows my mind. I mean, that's borderline stupidity I guess in my mind. How did that ever get there? [LR495]

RICK CUNNINGHAM: You know, I can't really tell you other than it's on the dry side of the levee which... [LR495]

SENATOR LANGEMEIER: May or may not be. [LR495]

RICK CUNNINGHAM: Well, it's... [LR495]

SENATOR LANGEMEIER: I can see a lot of other spots that are drier to the west, and the whole state goes to the west. [LR495]

RICK CUNNINGHAM: Absolutely. Well, I was not involved when it was done so I couldn't answer the exact... [LR495]

SENATOR LANGEMEIER: I was hoping you could tell me some history. There obviously was some politics involved. [LR495]

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RICK CUNNINGHAM: I can tell you that...well, you know, why did any of this development occur in this area? It's a number of different factors. These areas tend to be flat. They tend to be, in this case, in an area that is accessible either by closest to the river with river barge traffic and so forth or...because there were other industries along there that we have subsequently taken out but that were located there for that reason. Land costs sometimes comes into play because it is challenged land because of that. I think there could be a lot of reasons why. And then you brought up the other big one and that is politically. But, I mean, we have a lot of things down there, as my partner told you. Five billion dollars, which is about a sixth, potentially, of the total value of the city of Omaha is right along in this area. So it's a good question. Why did it occur? I can say most of it if not all of it occurred before our ordinance was put in place. But the other big thing is it is on the dry side of the levee and theoretically protected, and it's protected at least from the river. Some of the issues that come about is, as I said, a levee works both ways. It keeps the water out but it also keeps the water in, especially at the kind of flows that we had in 2011. And I think one of the big lessons we learned is then we have to have infrastructure in place to deal with that interior drainage, interior potential flooding. [LR495]

SENATOR LANGEMEIER: Very good. Are there any other questions? Seeing none, Mr. Cunningham, I do need you to fill out one of these green sheets. [LR495]

RICK CUNNINGHAM: I did and I didn't...I've got it right here. I'm sorry. [LR495]

SENATOR LANGEMEIER: Okay. If you'll give that to Barb when you're done. And I thank you very much. Well done. [LR495]

RICK CUNNINGHAM: Thank you. [LR495]

SENATOR LANGEMEIER: Our next testifier is from the city of Papillion. And, Mark, I'm going to let you tell me your last name when you get up here because I don't want to

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butcher it. [LR495]

MARK STURSMA: No problem. [LR495]

SENATOR LANGEMEIER: Sturma (phonetic), is that right? Am I close? [LR495]

MARK STURSMA: Stursma. [LR495]

SENATOR LANGEMEIER: Stursma. Welcome. [LR495]

MARK STURSMA: (Exhibit 2) Well, thank you, Chairman Langemeier and members of the committee. I appreciate the opportunity to testify here today. My name is Mark Stursma and I'm the planning director and designated flood plain manager for the city of Papillion, and I'm also one of the designated representatives on the Papillion Creek Watershed Partnership representing the city of Papillion. I'd like to tell you that the city of Papillion fully supports the plan that was put in place by the partnership and the efforts of that partnership community to control flooding within the watershed. We feel that the implementation of the elements of that plan are vitally important for several reasons. Papillion is a downstream community. We're at the lower end of the Papillion Creek Watershed. So as there is increased development, as there is pollution, as there is anything that affects the watershed upstream, it flows down towards us. So our risk is greater as a result. Recently FEMA revised the flood plain maps. We rely on those to regulate development. Those maps are a prediction of the risk of flooding. And I want to make it clear that we don't allow development in the flood plain. Historically, that hasn't always been the case before we had flood plain maps to rely on. So there is some older development that is in the flood plain. When those flood plain maps are revised, new properties that were perceived to be out of risk, we now know there is a risk. And that's how those flood plain maps work. Nothing changes physically; it's just a better prediction of risk when they update those maps. So in Papillion's case the levees were decertified. And we have areas where, in some cases thousands of feet beyond the

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West Papillion Creek, perceived to be out of the flood plain, now are in floodway, meaning that not only is there the need for flood insurance, but we cannot issue permits in a floodway per our rules. So, for example, we had a major development. They had put in streets, infrastructure, were ready to start building, and then we had to tell them that you're now in the floodway, we can't issue any permits. That developer lost millions of dollars in investment as a result. So certainly there's a risk in terms of loss of life or danger and that, and that's very important. There's also the financial side. We're taking acres and acres and acres of land that we used to perceive as developable; it no longer is. And that has an affect on a lot of people. We did prepare a mitigation plan as a result of those changed maps. The mitigation plan includes the elements in the partnership plan, and that includes the creation of the reservoirs. It also includes levee improvements and also in some cases some elevation of bridges. The goal is to someday be able to, when another remapping is done, reduce the area of flood plain and floodway rather than have it increase as has been as has been the case with the last update. Those methods, the reservoirs, the levee improvements, and the bridge elevations are all accepted methods by FEMA to amending the flood plain maps. And those are tried and true methods and they're predictable in their result. FEMA does not allow low-impact development to be considered to amend a flood plain map. And the reasons for that are that it's hard to predict the results because they tend to be smaller projects, and also they tend to be done privately. And so the guarantee of maintenance over time is not there. And that's one of the reasons why in the partnership plan there was a decision made to focus on the reservoirs for flood plain management, because we could predict their effect and we knew that they would be accepted by FEMA and we knew that they would be maintained publicly over time so that not only would they be functional upon completion, but they would remain functional over time. The regional detention is valuable for many other reasons. For one thing, the regional detention facilities will provide protection from current conditions immediately upon construction. No fault of Omaha, but Omaha was a city that was built beginning over 150 years ago. The storm water management practices that we have today were not in place through the history of development, and we need to deal with the effects of that today. The

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runoff from the existing built environment is part of the problem that we have downstream. And so we felt that it would be unreasonable and impractical to try to require every property within the city to retrofit to provide flood control. It would be enormously expensive. It would take considerable time. It just was not practical. But we can deal with that runoff through the regional detention facilities. So, especially from Papillion's perspective as a downstream community, that would protect us today, and timing is important. There was a question asked about the need or the benefits of the recreation component of those facilities. The decision was made to include some recreational improvements with those facilities for several reasons. One of those reasons that was highly considered was the value of the land. These reservoirs do take land out of the...you know, take them out of having an opportunity to be privately developed. And so you're taking away taxable revenue from cities and counties and the state. But by creating the recreation amenities, you actually increase the value of the surrounding land to help offset that loss. Another consideration was that there is public funding involved in the creation of these reservoirs, and it was felt that because there's public funding there should be public access. And certainly we've seen a desire to have those improvements by residents. People who aren't in the flood plain or aren't at risk still contribute, but they do get something back by having access to these facilities. We've seen development in the upstream portions of the watershed have increased the flood risk downstream over time. But we feel that it's important that everybody contribute to finding a solution, both upstream and downstream communities, because it does affect everybody. The increase in development, if not managed, has increased the flow of water, the risk of flood. And so we are all in this together. We can't solve the problem downstream when the effects continue to increase upstream. So we have to manage how we solve this together. I'd be happy to answer any questions. [LR495]

SENATOR LANGEMEIER: Very good. Are there any questions for Mark? Senator Christensen. [LR495]

SENATOR CHRISTENSEN: Thank you, Chairman. Thank you, Mark. You mentioned

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Papillion doesn't allow anybody to build in the flood plain. I misplaced my notes here, couldn't...didn't find it. Wasn't there a statement made that 80 percent of the people in Nebraska live in a flood plain? [LR495]

MARK STURSMA: Well, that's not my number. I think that was nationally. [LR495]

SENATOR CHRISTENSEN: Or nationally. [LR495]

MARK STURSMA: I think that speaks to the desire throughout history to locate near water. And in some cases...well, certainly it was a necessity as cities developed. Cities develop near waterways because you need a source of water and you need...in some cases water is used for transportation and it used to be used for power and everything else, so. [LR495]

SENATOR CHRISTENSEN: So you've taken a very aggressive approach to this then because you're downstream. Is that the reason why if 80 percent of America lives in a flood plain and Papillion doesn't let anybody, is that the reason is that you're on the lower end of the creek? [LR495]

MARK STURSMA: That's correct. Well, and I don't know that we...we enforce the same rules adopted by FEMA as all the other communities within the program. But I would say that I think we take them very seriously. When the new maps came out, for example, we got the draft maps. It was probably four years before they were formally adopted. Within that four-year period, we adopted ordinances locally to allow us to enforce those draft maps before they became finalized because we felt that that was the best available information and we wanted to protect that property as best as we could. So once we had the better information, that's what we regulated it to. We didn't have to do that, but we took that extra step. [LR495]

SENATOR CHRISTENSEN: And would you explain a little further the difference

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between the flood plain and floodway? [LR495]

MARK STURSMA: Certainly. And there are probably people here who could explain it more technically than I can. But in the floodway when there is a flood event, that's where water is anticipated to be flowing and it would have the greatest risk. And so we don't allow...we don't issue permits in that area. When I say that, we don't allow any fill to be allowed, which means that you cannot develop; so we do not issue any permits. That land must stay as it is. In the flood plain, which is the area beyond that, we do allow fill to be placed to raise property so that the first floor of any building in the flood plain has to be at least one foot above the designated flood plain elevation. Through the partnership, we've also taken the extra step of limiting how much fill can be placed on property to 25 percent. Prior to that, adopting that policy, you could take a permit out and you could fill in the entire flood plain on your property and construct a building, but now we limit that. And the goal is to limit the amount of fill that is occurring in the flood plain, limit the amount of development so that we aren't creating more problems downstream. As you fill the flood plain, that limits its capacity to hold water and you just create a greater effect of flood risk downstream. [LR495]

SENATOR CHRISTENSEN: Okay. Thank you. [LR495]

SENATOR LANGEMEIER: Are there any other questions? Seeing none, thank you very much for your testimony. [LR495]

MARK STURSMA: Thank you. [LR495]

SENATOR LANGEMEIER: Well done. Appreciate it. Our next testifier is with the Sarpy County Chamber of Commerce, and Wendy Richey. Wendy, welcome. [LR495]

WENDY RICHEY: Thank you. I'm going to keep my green sheet because I wrote some notes if that's okay. Wendy Richey. I'm the president of the Sarpy County Chamber of

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Commerce. Thank you so much, Senator Langemeier and the committee, for letting us present to you today. I wish I could be as eloquent as Mike Sotak on the engineering aspects of all of this, but he's much brainier than I am. He did take away a little bit of my thunder as far as the economic impact of what a flood would occur in Sarpy County. I think you looked at the maps and you saw the impact it would have on Offutt Air Force Base and the properties to the south of that. Let's just take a look at the southern part there of the Highway 34 bridge which is a major investment not only from the state of Nebraska but also in the state of Iowa, which will connect those two through the Platteview Road which will be probably our next Highway 370 type of development, and then onto highway down to Lincoln, which is a regional package that we present that has an economic development, Omaha, Sarpy County, Lincoln. If we're looking at it from a global economic development standpoint, it comes as a regional package, so it's very important to us. You've got the wastewater treatment plant, which provides services for all in that southern area as well as Offutt Air Force Base. You've got an industrial section there that has been inquired by at least 15 companies a year to house a manufacturing facility there which could provide jobs, tax base, economic development for that area. That's very important to Sarpy County. Offutt Air Force Base, and Ned Holmes from Offutt will talk a little bit more about that specific impact that it will have in there. You talked about the STRATCOM building, which is a half-billion-dollar investment from federal money, as well as the infrastructure that is already existing at Offutt Air Force Base. I think it is our responsibility as good stewards of that land and of those investments, either private or federal or public, that we take care of the property and the investment that they have made there. So from an economic standpoint it's very important that we support the NRD, the Corps of Engineers, and what they need to do to protect those investments right there. I think one of the questions was, how is this going to be funded? At this point, I mean, I do not believe that there's any bills or legislation to talk about taxing of our private or our public. That's something that I do not envy you guys to make that decision upon, but I do hope that you rely on the NRD and also on the Corps of Engineers to make that wise decision. Any new development that does occur here in Sarpy County, those new developers do pay \$4,000 per acre that

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does go into that fund. So as new economic development comes, new industries and manufacturing companies come to this area, there will be funds put into that fund for that particular reason, so. Do you have any questions for me from an economic development standpoint? [LR495]

SENATOR LANGEMEIER: Very good. Are there any questions for Wendy? Seeing none, we appreciate your testimony. [LR495]

WENDY RICHEY: Okay. Mine are very brief, but I hope that we can... [LR495]

SENATOR LANGEMEIER: It's okay. Well said. [LR495]

WENDY RICHEY: And again, thank you so much for your time. [LR495]

SENATOR LANGEMEIER: Thank you. Our next testifier is Chris from the city of Bellevue. And, Chris, I'm going to have you say your last name because I've tried to butcher them in the past. It just doesn't go well. [LR495]

CHRIS SHEWCHUK: Good morning, Senator Langemeier and members of the Natural Resources Committee. My name is Chris Shewchuk. [LR495]

SENATOR LANGEMEIER: Got it. Thank you. [LR495]

CHRIS SHEWCHUK: And I'm the planning director and flood plain administrator for the city of Bellevue. And flood control is a very important issue for Bellevue, as you've seen on all the maps that have been on the board already, that we are at the bottom of the funnel for the Papio Creek Watershed. So everything that happens that affects flood plain and runoff comes down to the Bellevue area and we have to deal with that in one way or the other. One of the ways we are dealing with that is with the Papio-Missouri River NRD through the Papio Creek Watershed Partnership, adopting regulations that

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limit some of the runoff; as was noted earlier, low-impact developments that will again control runoff; and water quantity and quality. The other issue that we really need to talk about is the flood protection and the levee certification or recertification of the levees in our area, not only to protect existing development. If those levees are decertified, there is existing development in our area, primarily Offutt Air Force Base, that would be affected and could be put into the flood plain. That is, as I'm sure everybody knows, a billion-dollar-plus generator of revenue for the area, the largest employer in Sarpy County. We certainly don't want to be doing anything that would jeopardize Offutt Air Force Base and giving anybody any reason to, you know, say we should be closing Offutt for any reason at all. Fortunately for us, we don't have a lot of other development that is in the current flood plain through I'll say luck of natural resources or whatever and wind directions. The Papio Creek lines up with the Offutt runway, so we have both flood plain ordinances and our, what's called AICUZ, which is the base noise ordinances that protect a lot of the flood plain. So fortunately we don't have a lot of current development in the flood plain. If the levees are not recertified in the next couple of years, and Wendy talked about this a little bit and I don't want to repeat everything, but we have a great potential for development down south of Bellevue along the new Highway 34 corridor. That's a bridge and highway project connecting Mills County, Iowa, with Highway 75. Millions of dollars are being spent on that road and bridge. If those...and we see that as a huge potential for industrial development in south of Bellevue, Sarpy County. It'll benefit not just the city and the county, but it'll benefit the entire metro area with new jobs and new population of people coming into work in the area. There is potential, as I think Wendy said. We've talked to a lot of businesses already looking in that area. Hundreds of millions of dollars of investment potential in that area. If the levees are not recertified, that area will be in the 100-year flood plain and nobody will be going there. There's too much risk. There's too much competition for sites for industrial development. Nobody will take that risk of developing within the flood plain. So those levees really need to be recertified and keep that area out of the flood plain so we can realize the potential that we have down there. Again, there was some investment with Highway 34 and a potential for a lot more investment that will benefit the entire area. A lot of things

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that I've talked about or was going to talk have been already said by others. I don't want to repeat everybody. But again, flood control, keeping things out of the flood plain is very important to the city Bellevue and the economic vitality of both the city and the county in the metro area. And I'd be happy to answer any questions if you have any. [LR495]

SENATOR LANGEMEIER: Very well put. Are there any questions? Seeing none, thank you very much. [LR495]

CHRIS SHEWCHUK: You're welcome. [LR495]

SENATOR LANGEMEIER: Well done. Our next testifier is Fred Uhe from Sarpy County, a representative. Good morning, Fred. [LR495]

FRED UHE: (Exhibit 3) Good morning, Senator. Senator Langemeier, members of the committee, again my name is Fred Uhe. The last name is spelled U-h-e. I'm with Sarpy County and here representing the Sarpy County board of commissioners. I will attempt to be brief because you've been hit with a lot of information this morning. But first, I guess I need to extend an official welcome to Sarpy County. We appreciate you guys coming here and hopefully you'll spend some dollars while you're in our communities. The map I'm handing out is kind of a...it shows the flood zones in Sarpy County. We're fortunate enough to be impacted by both the Missouri, the Papio, and the Platte Watersheds. So it seems like every spring part of Sarpy County is under water. And as mentioned previously, you know, the FEMA maps do change and you always run the risk of, with development upstream, of the maps changing and impacting residents and businesses that are already located in what they thought was safe territory at the time. We've identified privately approximately \$3 billion of valuation that's at risk and probably \$3 billion to \$5 billion of public infrastructure: Offutt, the wastewater treatment plant, state highways, county roads, city streets that could be at risk. The 2011 flood was quite interesting. Actually the cost to the county was somewhat small, and I think that was

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mainly the costs also being borne by the state of Nebraska, the National Guard, the NRD, AmeriCorps, etcetera. I think our reimbursement that year was about \$60,000. Of course that doesn't pay any overtime...or I mean that is overtime only. So judging regular time of sheriffs and public works employees, we probably had easily \$100,000. But much...I guess, you know, we were very close, you know, during the Missouri floods that if there would have been a major rain event within the Papio Watershed, we would have had probably one of the largest catastrophes to hit this area in a long time. You know, actually the Missouri was pushing the Papio back up; I think it was mentioned on an earlier map kind of where the Missouri impact ends. Well, if we would have had a major event in the Papio Watershed, there would have been no place for that water to go and it could have possibly backed up as far as Papillion. And the cost to not only the cities and county and the state of Nebraska as a whole would have been just tremendous. So I think we were, you know, very, very lucky to have dodged the bullet on that one. From the county perspective, we've also adopted the proper zoning standards. We do use the same threshold as the city of Omaha: 50 percent on a noncomplying structure. We've also participated with the NRD and recently with the city of Bellevue as well on actually buying out residences along the Missouri River to alleviate some of the potential future damage from these type of events. But it's very apparent, you guys are all aware, we are at the bottom of the watershed. It does all flow downhill. And so there's a lot of tremendous risk to a lot of economic activity in this area that Sarpy County is proud to be a member of the partnership. And I think the regional cooperation was the best way to go to solve these problems. So with that, I'll answer any questions. [LR495]

SENATOR LANGEMEIER: Are there any questions for Fred? Seeing none, thank you very much. Well done. Good to see you again. Our next testifier today is Paul Woodward with Olsson Associates. There he is. Good morning. [LR495]

PAUL WOODWARD: (Exhibit 4) Good morning, Senator Langemeier and the rest of the committee. My name is Paul Woodward. I'm a water resources engineer with Olsson

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Associates. In my previous life, I was the water resource engineer here at the Papio for over six years. So I'm going to be talking today a lot about...you've heard a lot about the new flood plain maps, and I want to kind of go over why those were brought in and why the things were changed> So kind of look at the past and the present and then give a specific example. Just kind of a broad view of what I'm going to talk about: the purpose of the new flood plain maps and how they came about. I think one of the important things I want to present is some of the factors that go into what affect the flood plains throughout the Omaha metro area, that includes all of Washington, Douglas, and Sarpy County; look at a specific example that I think I want to bring some attention to; the economic impacts there; and then actually provide an example for you about if one of the regional detention basins, one of the dams was built, what kind of benefit you would see to the flood plain there. Actually it's a little ways downstream of that dam. And then talk about some of the future considerations, even maybe concerns that we might have about the flood plains in the future. Go ahead. What I want you to think about when you look at this slide is what influences our flood plains. So first is where and how much it rains. We can't control that. But when we do the flood plain maps, we're looking to pick where water is coming from that's going to cause us the greatest amount of flow in the creek; so what's going to make the highest flood just so we know that. It's something we can predict. Not all natural disasters are out there and you can say I know where the tornado is going to hit tomorrow. But, at least with this, you can kind of get a better prediction. So what those colors represent is that, you know, during certain reaches, the maximum flow of water is controlled by different parts of the basin and for different reasons. One of them is the watershed's shape and size. Throughout most of the Big Papillion there, you see a lot of Washington County is highlighted. That's really not because...you can think of Washington County, there's not as much development, urban pavement, stuff up there. But it still controls because of its size and its shape. It's a big funnel coming down to one point and heading through the Omaha area. The same can be seen in the West Papio there where you might see the different...so the orange is the area going through Papillion here. [LR495]

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SENATOR LANGEMEIER: If you use the other one. Use that pen-looking thing. [LR495]

PAUL WOODWARD: Gotcha. [LR495]

SENATOR LANGEMEIER: There you go. [LR495]

PAUL WOODWARD: Going through Papillion here, it's mostly controlled by rainfall that would have occurred kind of in this middle area here, including the South Papio Watershed. Some of the areas in yellow you see are already controlled by reservoirs, so it's some of the area we've gotten done. But other things that influence it, and we'll talk a little bit more of that. A lot has been said about the watershed land use. So, again, as we urbanize, we get more water faster. Flood plain land use: As we develop in the flood plain, it's been done over a century as we've talked about here, it has impacts on how water moves through the creeks and through the flood plains. The stream channel size and slope--and I'll probably want to hit on this a little bit later as a very important factor. One of the things, going back quite a ways in history, before any of the Papillion Creek was developed these were looked at as drainage ditches for agricultural lands. They were straightened in some cases, dredged out. And what that's done, that's left us with somewhat of an irreparable slope that's continuing to go up into the watershed. So most of the streams that lead to all of these bigger streams are degrading. They're getting deeper and wider and, in essence, they carry more water. So without us doing anything else, more water is going to continue to come down, even in addition to urbanization, and continue to come down those streams. And then the flood control, we'll talk about some of the aspects that are there. But keep all these factors in mind as we talk about some of the things here. Go ahead. So the original flood plains were not developed until the first maps kind of came out in the '70s. Before that, unless it was a specific area, most of the Omaha area didn't know what was potentially going to be flooded. There was nothing done to control where people developed or how they developed, so they might have developed low and in a flood plain. At least as things changed over time, we would have required that they developed high in a flood plain to try to protect

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themselves. But then they also were done pretty arbitrarily on ten-foot contours, so we didn't have a lot of good accuracy in what was defined as our flood plain. It didn't consider build-out conditions. I'll talk about that here in a minute. One of the benefits of the new flood plains is that we've tried to account for one of those factors. We've tried to say what happens if the entire watershed builds out, what's it going to look like. So we can kind of predict that a little bit. And that's actually what...so when we mention that we have started to adopt new flood plain regulations and we're only filling 25 percent of the flood fringe, we're also doing that based on a full build-out condition. So we're trying to add contingencies into what we do to make sure that we don't come back and have to, in 15, 20 years, create a new map that maps in other people in the flood plain again, so. And then throughout this time period based on all the things we talked about, if there was information, there was sometimes inaccurate information out there for people to build to. So go ahead. The new flood plain maps, not entirely perfect but they're a lot better. What they've taken into account is that we've got a lot more detailed topographic information. And then we did estimate for build-out conditions. So I'll kind of show you how those affect a certain area here. Go ahead. Well, overall, the remapping status, again looking at the entire Papio, is that...so that when you hear about the new maps, the work that was able to be done with dollars that were gotten from FEMA, you saw the map modernization before; it was kind of a program in Congress to stimulate more flood maps being done. And the NRD actually partnered with FEMA to get some of that money to work here in the Omaha area. They're going to do 50 miles of creeks along the West Papio here. What we saw when we did this is, just between the 1970-ish hydrology and today's hydrology, is that just to our current conditions we saw a 10 to 30 percent increase in flows. So we already knew we had a problem going into it. And then when we looked at future conditions, it may add another 5 to 10 percent to that; so quite a few changes that occurred. The rest of the watershed, we're still...I mean, this is going to be, eventually...the Corps is working on it right now. So there was 2,000 new homes and businesses mapped in the flood plain here, and this is at least twice as big with a lot more density of development. So I don't know what will happen when they come out with new maps, but I would expect to hear from people. Go to the next one. A specific

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example, and it's an interesting one that occurred along the West Papio here about 144th and F Street, you've heard that mentioned, is that they looked at it; they had a flood plain that covered most of the property to begin with. So I said, what could we do? Well, there was a lot of work going on that the NRD and others had done previously in the past where they improved the channel. They wouldn't build a levee necessarily, but they would enlarge the upper ten feet of the channel so it would carry some more floodwater and decrease the flood plain at least locally. They looked at doing that and they were able to do that within their project. And it moved the flood plain limits pretty close to the creek. So they already developed most of that area. When we came back with the new maps, we took all that area back into the flood plain. And I'll show you kind of the examples there. And then we'll talk a little bit about dam site 15. Go ahead. This was the map that they had originally before they developed. Their location of development would be right here. But you can see it covers a majority of the property. Go ahead. What they did then is, it's hard to see from the aerial photo, but they basically enlarged the upper portion of this channel so it would carry more floodwater all the way through here. This is the old; this is the new. And what that did is basically they were able to revise the flood plain and move the flood plain limits back into closer to the creek. So they kind of followed all of the requirements. They did what they were supposed to in looking at different things. Go ahead to the next one. And then that LOMR when the state or when the federal government came back and was creating those digital firms, they just included that LOMR on here in 2005. So at the same time we were still doing the updated study. So now go to the next one. This is what the updated study does to that entire area. It basically backed out to where it was or worse. But the purple you can see is where we've actually estimated a future flood. So what happens if the entire watershed above us is filled with homes and businesses and pavement; where would the flood plain be at that point? So that gives you...I mean, you might look on it from a land perspective and say, well, we've kind of seen the worst of the change already, unfortunately, and there's not much we can do to backtrack. But they did look at this, and we've kind of...that's why when we've looked at these certain scenarios and kind of thought about, you know, how are we really going to reduce the

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flood risk--not just keep it the same or try to do little things in improvement; how are we really going to reduce it? And so if you go to the next map, it does show...well, first I guess I want to talk about the...I mean, when they did develop in this, right or wrong, because it was at one time a flood plain, they fixed it. We now have \$51.8 million worth of businesses, commercial developments, things like that right in this area, so. Go back to that one real quick. I think the...well, okay, yeah, I'll show it in the next slide where we can reduce that. Go ahead. So one of the dams we're going to be talking about, the only...so this is just the effect from this one dam would be dam site 15A. It's one of the largest ones in the plan. That's why it costs \$30 more million...\$50 million. But it would reduce the flow at that area and reduce the flood plain extent. So let's take a look at that. So this would be...and it's actually on both sides of the creek from here on down. So when we mapped it, we just did this half of the creek on this part. So kind of just focus from here on down. This is the actual change you would see in the flood plain if that one dam was installed. Go ahead. So I guess I kind of want to just give you guys kind of a final overview, a little bit of what things I see might affect flood plain maps overall and what might happen. But from the entire watershed's perspective, I know we've talked about the levees down here and we've talked about some of the dams up here. When the Corps of Engineers planned for the dams, it kind of stalled and nothing was going on, the Papio NRD and others worked with Sarpy County down here to say, well, let's at least do what we can do for ourselves. And that was to...you're still working with the straightened channels but go through and enlarge some of them, put some smaller levees up. There's no other 100-year levees up here. Papillion was...the one through Papillion was going to be until the new maps. Basically, we talked about certifying levees. Well, the new maps decertified that levee. It was approved for the 100-year flood; now it's not. And that's part of the plan Mark talked about how to get that mitigation, how to get that back to what it was at one time. So these all...and then through the Corps or whatever, all these green ones have basically been enlarged. But recent studies, well, the actual flood plain study has shown that if we continue to...if ourselves as humans continue to enlarge any of the creeks up through this area, we will cause our...we might improve the flood plain locally right there, but we'll definitely not

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make it any better down here. Just too much water at the same time. So we don't continue that. But actually what I was pointing out earlier is that mother nature is doing it for us. It's creating larger channels, pushing more water down. So I guess the bottom line is that our watershed plan to date has focused on how do we control runoff from the area and, you know, whether that's local watershed management or whether it's dams. But then we haven't necessarily gotten to the point of how do we focus on rehabilitating our streams. I think, Brian, if you click on the actual title up there, there's going to be a little picture that comes up. This is just an example stream. This is back in 2000 when the NRCS did a study. They're incredible. They're just dropping their side banks everywhere, becoming 30-foot-deep channels, you know, 50 to 60 feet wide. So it's something to think about and we'll need to continue. I guess as you see the levels of funding you've talked about so far, don't include fixing any of this yet, so. With that, any questions that you guys might have? [LR495]

SENATOR LANGEMEIER: Very good. Are there any questions? Senator Carlson. [LR495]

SENATOR CARLSON: Thank you, Senator Langemeier. You used a figure of \$51.8 million of new investment in the flood plain. Over what area? [LR495]

PAUL WOODWARD: That was just that small area that...of those...that particular development is probably only, oh, I'd say it's 50 to 60 acres of development right there that occurred. So if you take that and think that's 50-60 acres over the 1,000 acres that are in the flood plain. [LR495]

SENATOR CARLSON: So in that area that's a significant amount. [LR495]

PAUL WOODWARD: Right. [LR495]

SENATOR CARLSON: Overall it's not as significant, but in that small area it would be.

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[LR495]

PAUL WOODWARD: Right. And it's a higher investment area. I mean, you're not going to see that with homes or such. But just take that and expand it out over the are and you'll get to the \$5 billion in Sarpy County. And that's...so that's sitting there. It may not all be damaged during a flood. You might just see 10 percent damage. But even at that, you can think about affording some of these preventative measures ahead of time.

[LR495]

SENATOR CARLSON: All right. Now you also mention, and I can follow you on this, that nature has made these streams deeper and carrying more water, but that creates the problem down south, the southern part. So what's the answer? [LR495]

PAUL WOODWARD: I think as we move through the rest of the plan and we do some of the improvements, the dams or water quality basins and storm water, we need to be thinking about how we can control the grade of those steams with...the dams will do it in certain areas, but other areas you'll need weirs or something else or something to keep that stream from getting any deeper. And that's a start to letting the stream heal itself. Eventually areas that are so damaged, they'll need complete repair. [LR495]

SENATOR CARLSON: Okay. Thank you. [LR495]

SENATOR LANGEMEIER: Senator Christensen. [LR495]

SENATOR CHRISTENSEN: Thank you, Chairman. How much do they leave in these lake projects for flood control? Because obviously when they're doing a joint to get the aesthetic value of it to build the homes around the lake area, how much of the lake is maintained for flood control? [LR495]

PAUL WOODWARD: All the dams that are proposed would be high-hazard dams

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because they're in the Omaha area. And what that requires is that no water is going to go around that dam through the auxiliary spillway, the bigger spillway. So typically it's going to go through a 36- or 48-inch pipe. So the reduction is huge. They've taken the 100-year flood and knocking it down from 90 percent or more at that particular location. Now how that plays out throughout the rest of the watershed with the timing of other creeks and stuff determines how much reduction you see in that particular map I showed. But in each dam site they will...it's mandated by state law and by dam safety laws that those have that much storage in them. [LR495]

SENATOR CHRISTENSEN: Correct. But it's like 20 percent of the dam is the only thing that's used for the flood control. The rest of it is beautification. [LR495]

PAUL WOODWARD: Yeah. I think of...when I think of the dam, I mean it's not particularly just like that, but it's kind of a "V" valley. And so even if you set your lake down here and it's got a certain volume and area, flood control really starts to pick up above that. [LR495]

SENATOR CHRISTENSEN: Correct. [LR495]

PAUL WOODWARD: So it doesn't take a whole lot more area for flood control than what the lake is already taking up. I guess it's a little bit...it's probably twice as much or so. So like this lake here is a 500-or-so-acre park and a 250-acre lake. [LR495]

SENATOR CHRISTENSEN: Well, it's like Harlan County. You can put two foot in it and you've got the full flood control in that lake, which is very minimal to the 50-, 60-foot deep it is, but it's because of the surface area. But I guess my point is I've asked before why we don't use pass-through dams instead of regular dams. One, they're cheaper to build, there would be less size. And you can set up a complete plan through the whole basin, anticipating your growth; and, you know, each dam that you're putting in is going to have, as you said, the 30-inch drain instead of overflowing the top. But in doing the

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pass-throughs, you could do so many more projects. You take in so much less area that is restricted and you could set up a plan that goes not only the length of the creek that we're looking at, but you can take all the drainage area up there and anticipate it all being developed and have it all set up on pass-throughs and not worry about them getting deeper, wider; and what are you going to do now because we've concreted more. But as we continue to build these structures with minimal amount up there, now I guess my point is getting, if you're building a structure 50-foot high, and yet one at 20 could do the job, think about in the future all you've got to do is raise that pass-through from 20 to 50; you've now taken care of any new water flow problems. You'll hold more and be able to time the water down through the creeks. [LR495]

PAUL WOODWARD: There's actually a couple things that somewhat contradict that in the fact that when you talk about 50- versus 20-feet high, again go back to the V shape, we're going to need at least 40 of that 50 feet with a dry basin because... [LR495]

SENATOR CHRISTENSEN: Okay. Well, let's talk storage,... [LR495]

PAUL WOODWARD: ...what we've gained down here isn't much. [LR495]

SENATOR CHRISTENSEN: ...100,000 acre-feet of storage and you're building them 200,000 acre-feet. Okay. But you're leaving 180,000 in it. Why not build it at 40,000 and take less area and have it all pass-through? [LR495]

PAUL WOODWARD: I think there could be some reduction there. The other thing that's considered when a lake is like this: If we have the water quality basins upstream, they're catching some of the sediment; we still always have some sediment that comes down here. So typically the lake is there to let that sediment accumulate without it just being...because, let's say, in 40 years the dam is still sitting there but we've lost some of that flood storage because sediment has come in there and filled the lake; we should have anticipated that to begin with and kept the flood storage up here rather than down

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here at the bottom. [LR495]

SENATOR CHRISTENSEN: But at the same point when you build this, that at 80,000 is your normal pool and the other 20,000 is for floodwaters, as this pool fills...yes, I understand it's just eliminating some of the lake; but at some point in time it's going to get to that point. It's like Harlan County Lake is supposed to be full now. It ain't. [LR495]

PAUL WOODWARD: Right. [LR495]

SENATOR CHRISTENSEN: For recreational and aesthetic value it's a great thing it isn't. But from the standpoint of compact issues, if it was full it would solve our issue. [LR495]

PAUL WOODWARD: Right. I guess I don't disagree there could be some savings with doing that. [LR495]

SENATOR CHRISTENSEN: Huge savings. [LR495]

PAUL WOODWARD: They would look at some of the other purposes of the lake people use it for. But I think the biggest factor would be that these dams aren't built like Harlan County. It's not going to be an 80-20 split. It's more like a 20-80 split. [LR495]

SENATOR CHRISTENSEN: Right. [LR495]

PAUL WOODWARD: There's only 20 in the lake and 80 up here that's flood control. [LR495]

SENATOR CHRISTENSEN: I guess the lakes I have toured, I've been up here and toured some of them, I guess I didn't realize it was an 80-20 split. It looked a lot... [LR495]

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PAUL WOODWARD: It looks different because it's, again, got more area up here to use than it does at the bottom. [LR495]

SENATOR CHRISTENSEN: Well, I understand they're all that way. [LR495]

PAUL WOODWARD: Yeah. [LR495]

SENATOR CHRISTENSEN: But I guess it didn't look like to me they were no 80-20. I might have went a 50-50, but I'd never went an 80-20. But, again, I can have poor perception, but. I just... [LR495]

PAUL WOODWARD: They're somewhere in that range. They're not 50-50. There's more storage above the lake than below it typically. It may not be 80-20. I was just flipping your numbers around. [LR495]

SENATOR CHRISTENSEN: Right. [LR495]

PAUL WOODWARD: Yeah. [LR495]

SENATOR CHRISTENSEN: I understand you flipped them. [LR495]

PAUL WOODWARD: I agree. [LR495]

SENATOR CHRISTENSEN: But I guess it didn't look to me like you was actually...because when you get out and you look at the amount of depth that you've got and all you have is your eye perception of the width of it and what it's going to do, that it's really...I would have said it was built more for the aesthetics than it was flood control, looking at it, because...and I don't blame...I'm not unhappy that they build them for that because I realize everybody wants to build around it. I had a cabin on a lake at one

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time, and I understand why you want it. But I always like to ask the question, when we're at one of these, is why we don't look at how much it would save to present to the people if we'd only done pass-throughs--pass-throughs being that it's 100 percent going to drain out--or you leave the minimal sedimentation you want to leave in there for the life that you're anticipating this to be. And hopefully your life ends up like Harlan County, a whole lot longer than what it was when it was built. But I just always wondered why we don't see more pass-throughs. I know there was basically a structure shown similar to that, that they had the concrete spillway on. And if I remember the picture right, there was maybe even a culvert that drained to the side and the concrete was for the big rains. But that one wasn't for beauty. That one was for functionality. And that's why I just...I understand why cities build them that way. Don't misunderstand. But at the same time I think the amount of money we spend doing it so that we have the beautification value is astronomical. [LR495]

PAUL WOODWARD: Yeah. And I just don't know...I guess kind of...I don't know that...the reduction may not be as great as we'd might hope for. [LR495]

SENATOR CHRISTENSEN: Yeah. It could be true. Thank you. [LR495]

SENATOR LANGEMEIER: All right. Seeing no other questions...oh, Senator Schilz. Excuse me. [LR495]

SENATOR SCHILZ: Senator Langemeier, no problem. Thanks for coming in today. And as I look at this picture here and you said that the costs of this kind of repair and remediation aren't even figured in yet. I mean, is that an extreme picture there? Is that some of the worst damage or is that typical? [LR495]

PAUL WOODWARD: I mean, this is one of the bigger creeks so it looks bigger, but I would say that's occurring at maybe 20 different sites across Omaha. The smaller creeks are going to be doing the same thing, just not on as great a magnitude. [LR495]

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SENATOR SCHILZ: Right. Any idea on costs to repair those? [LR495]

PAUL WOODWARD: Everything is a million a mile. (Laughter) [LR495]

SENATOR SCHILZ: I like easy figures. Okay. Thank you very much. [LR495]

SENATOR LANGEMEIER: Power lines, dikes, everything--a million dollars a mile.
Thank you, Mr. Woodward. [LR495]

_____ : Highways. [LR495]

SENATOR LANGEMEIER: Yeah, roads. Our next testifier is Ned Holmes from Offutt Air
Force Base. [LR495]

NED HOLMES: Well, not from Offutt. We're from the community, right? [LR495]

SENATOR LANGEMEIER: Or representing. [LR495]

NED HOLMES: Right. I've got copies of my testimony here for each of you members.
[LR495]

SENATOR LANGEMEIER: Good morning. [LR495]

NED HOLMES: (Exhibit 5) Good morning. Glad to be here. And, yes, I am from the
Greater Omaha Chamber of Commerce. My...good after-morning, maybe that would
be...yeah, good late morning. My name is Ned Holmes, that's H-o-l-m-e-s, and I am the
senior military liaison to the Greater Omaha Chamber, Greater Omaha Economic
Development Partnership, retired Air Force officer, and am a resident of Sarpy County.
I'm going to stay pretty close to the script, so if you have that you could follow along. I

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will say that I'm going to give you a little bit different perspective. We've been talking about a lot of interesting issues. I don't have any slides, but we're going to look at kind of the macro Department of Defense and then we're going to look at Offutt Air Force Base more at the micro level. I did pick up on one of the earlier testimonies talking about, you know, does the federal government have any skin in the game with this. And in talking to the base civil engineer last summer when they were working the flood issue down at the base, they were working 16 to 18 hours a day on base. A lot of base employees were doing sandbagging and shoring up the levee and the critical infrastructure at the base--man-hours and time that could have been spent directly supporting the mission. The other thing that I learned is that the new south gate project to Offutt Air Force Base, which is a \$20 million project, because of the flood has been delayed about six months. And with those delays, I'm sure there's going to be litigation by the contractor because of additional expenses incurred by them to the government. The Corps, I understand, has paid some of those additional costs, and there could be a large sum of money in addition to that because of the six-month delay, so. The focus of my remarks: first of all, to give you an overall sense of the climate in the Department of Defense; then some recent history on Offutt Air Force Base; what we can expect in the next five years; and how, finally, the 2011 flood and impact had on the base. I recently had the opportunity to hear the Secretary of Defense speak at an annual Association of Defense Communities conference. Secretary Panetta stated that the current FY 2013 budget will begin a phase reduction for DoD resulting in a half-trillion dollars in cuts to the defense over the next ten years. Panetta stated that if sequestration were added to that reduction, it would amount to a trillion dollars or double. He said, quote, it was never designed to be implemented--that is, sequestration. It was designed to trigger such an untold damage that it would force people to do the right thing. Well, I'm here to tell you that we're probably not going to resolve sequestration. It will probably be pushed out in the form of a continuing resolution. We're going to have to pay as taxpayers or borrow the money from China to pay for that additional half-trillion dollars. So I think it's very likely that it will be extended and that there will be some consequences, whether we pay it up-front or we pay it later in the terms of additional interest rates. Even without

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sequestration, the Secretary anticipates and has requested a base realignment and closure, BRAC, rounds in 2015 and/or in 2017. It should be noted here that in 2005, BRAC was about consolidating facilities and repositioning and relocating troops from European theaters back to the CONUS and to the Far East. The 2015 and 2017 rounds of BRAC will be about base closures, reducing excess inventory. The Assistant Secretary of the Air Force for installations has stated that by 2020 the Air Force must reduce its inventory of property by 20 to 25 percent. The other branches of the uniformed services will make similar reductions, but the Air Force has the most acute problem. The good news here is that BRAC at least provides an opportunity for our community to make the case for not reducing or for closing Offutt Air Force Base. Another option without BRAC would be for the services, through authority that they have like the Air Force, to use this authority to reduce and relocate people, equipment, missions; in effect, consolidating the bases. Now let me speak to Offutt Air Force Base. Our base has gone from a personnel strength in the late '80s of over 16,000 people to around 9,000 today. With the exception of losing the defense accounting finance office in 2005, which was moved to Ellsworth Air Force Base in South Dakota, the much larger reductions on Offutt over this past 20 years have been through the deactivation of Strategic Air Command, the decommissioning of the Looking Glass aircraft, the relocation of the T-39 or the executive jets from Offutt to another base, the distribution of STRATCOM missions. And I'll mention that the STRATCOM missions are global, nuclear deterrence, space, and cyber space. So I guess I could have an airplane and maybe a nuclear-armed missile there as a good demonstration up there. But I wanted to mention that. And then also our failure to land the Global Strike mission and the Cyber Command. The former one went to Barksdale Air Force Base in Louisiana; the latter went to Peterson Air Force Base in Colorado Springs. Yet Offutt Air Force Base has an annual economic impact over the past several years of \$2.5 billion annual impact on our area. Other states are doing independent economic studies and they are finding that the actual impact on their communities is two to three times greater than the value that the bases are telling us. So if you take that \$2.5 billion, it could be \$10 billion. Offutt has scored in the past by BRAC officials as a good place for headquarters-type missions,

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but the base has rated very poorly for flying- and operational-type missions because of the single runway, limited ramp space. The bottom line here is Offutt Air Force Base is not exempt from BRAC. In fact, I'll tell you why we should even have greater concern in the future, but a little bit more on that later. In recent years, the communities in terms of the Omaha, Bellevue, Sarpy County Chamber have recognized the importance of protecting and in working to attract new missions. My job when I got to the chamber was to bring new business, defense contractors to the base. They will not come if we don't have the missions. So you've got to protect missions and you've got to attract new missions. Our chambers have advisory groups--in our case, called a military target advisory group--comprised of defense contractors, federal delegation, and base officials. We discuss threats and opportunities. In 2007, the Omaha Development Foundation purchased 137 acres of land immediately south and adjacent to Offutt Air Force Base. The primary reason would be to provide the base protection from encroachment and to give the base needed expansion should there be a need for more space, new missions, etcetera. That area is pretty much sort of a crescent-shaped area directly south of the perimeter fence of Offutt Air Force Base and the levee that we're talking about that goes around to the south of the base. In 2008, a group of senior area business executives established the Nebraska Military Support Coalition. Their role has been to advocate for our base, to find new missions at the highest level of government. This group has met with the Air Force secretary, the chief of staff of the Air Force, and they were responsible for the 2009 winter CORONA which was held at Offutt. Normally, winter CORONAs are in the south and in the warm climates. But they had the CORONA at Offutt. It's a semiannual meeting of the three- and four-star-level generals, Air Force generals, all of them come to the CORONA. What else are we doing? We're active with this Association of Defense Communities, the Office of Economic Adjustment, which is a Pentagon organization that works with BRAC communities, whether they've grown from BRAC or if they have closed as a result of BRAC. In fact, our local base, Offutt Air Force Base officials, are right now requesting through official channels a joint land use study for our base. If approved and awarded, such a study would do a SWOT for our base and our community, and help us to understand where we might have

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encroachment issues, and what type of community infrastructure could be built in support of attracting new missions, and also to mitigate or diversify our local business so that we're not so dependent on Offutt in the event the base were closed. Other states, other defense communities and bases are working closely also with this association. We're also looking at a regional coalition between Nebraska, Kansas, Missouri, Oklahoma to where we bring the states together and advocate for the value and the Midwestern work ethic and the importance of our military bases to this area, so we have a voice as an area as well as a state that has a community here. So what else is being done? There are things like public-to-public, public-to-private agreements are being written where some of the services currently being done by bases are contracted to local communities: fire protections, snow removal. Also, facilities are being privatized, fitness centers and recreational facilities, golf courses. And obviously, here we've had the privatized housing, which was the case here at Offutt several years ago. Now let me close with a few remarks about the Offutt flood planning in 2011. I witnessed over several hundred thousand sandbags being filled and deployed by base personnel around the critical infrastructures on the base at the levee south of the base. I observed pumps running on the southern perimeter of the base to keep the floodwaters away from these facilities. I noted that all the drainage channels on base were running full of water. I saw water approaching literally the south end of the active runway. We've only got one runway. I've seen the aerial pictures taken by the base of the dire situation around the base despite these measures. Plans were in place and some implemented. There were days where they had no flying at Offutt. They did relocate aircraft. They had procedures for medical evacuation. There was a potential for airfield runway lighting to be disrupted. It was not. Fuel could have been contaminated. Command post was relocated. And there could have been communication disruptions. So here's my question to the panel: If you were an Air Force official, or let's say you were a BRAC commissioner and your assignment was to evaluate Offutt Air Force Base as to whether it was a good location for a new flying mission, or you were looking at the closure, knowing the information that I've shared with you this morning, I would personally have grave concerns about your recommendations. Therefore, I emphatically urge this

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committee and this panel to consider the economic impact to our area and to our state if measures are not taken to prevent the reoccurrence of what we experienced in 2011. As much as I am concerned about a commission finding from 2011, I am more encouraged about the positive steps and the corrective action to mitigate this problem in the future, thanks to the folks that are here and to you as a panel. I want to express my appreciation for the work that you're doing to identify and to resolve this problem. So without any further dialogue, I would be more than happy to answer any questions. [LR495]

SENATOR LANGEMEIER: Very good. Are there any questions for Mr. Holmes? Seeing none, thank you very much. Well done. [LR495]

NED HOLMES: Okay. Pleasure. Yes, sir. [LR495]

SENATOR LANGEMEIER: Well stated. And our last scheduled testifier is John Winkler who's the general manager of Papio NRD. [LR495]

JOHN WINKLER: (Exhibit 6) Thank you, Mr. Chairman, members of the committee. My name is John Winkler. I'm the general manager of the Papio NRD. I have prepared testimony and you can read that. I just want to sum up the testimony before me. You've seen studies. You've seen maps. You've seen the flood zones. You've seen projections. And they all point to the fact...I mean, we've had studies back from the '60s from the Corps. They point to the fact that the Omaha metro area has two flooding threats: the Missouri River and the Papillion Creek Watershed. We've seen what the Missouri River can do. We've seen what the Papillion Creek Watershed could do back in the '60s and the '90s when other flood events occurred. You've also heard testimony about the economic impact of the devastation of a flood and the billions and billions and billions of dollars of infrastructure, if it's from Eppley Airfield to the Magellan tank field to the Harriman Dispatch Center, to rail yards, Offutt Air Force Base, sewer treatment plants. Just to roads, bridges, and utilities, there are over 500 bridges alone in Douglas and

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Sarpy County in the Papillion Creek Watershed area. And, you know, you can take that \$2 million to \$10 million a bridge for repair or replacement, it adds up significantly. What kind of got lost in the testimony a little bit is what our main mission is, is to protect lives. And you have one-third of the population in the Papillion Creek Watershed. A devastating flood, there's no guesstimate of what that may take; hopefully there's time to warn people, maybe there won't be. And I don't know how you place a value on that and that would be difficult to do. But we do have significant challenges. There will be no help from the federal or the state governments with their current budget situations. We can ask. And Senator Dubas had a question of, you know, is Offutt prepared to...or the Department of Defense prepared to provide any funding. And up to this point, no. They did a great job during the flood. Offutt personnel, the National Guard were there on the spot, provided assistance, and we could not have done a better job without them. And we appreciated that effort. But if you look at the federal budget situation and even the state's budget situation, there's just...there's not going to be the funds there. So in working with the Corps, you heard about a flood plain study on the Big Papillion Creek. Because of funding restrictions, they won't be able to finish that anytime soon. So from the federal government's side, we can't even fund a study to see who's in danger, let alone funding to address that danger. So we're on our own. The partnership, the NRD, the (inaudible) communities, we're on our own to fund this. And we're not here to ask for additional state funds, and we are doing everything we can to solicit environmental trust funds or grants or even federal funds. You talk about the \$20 million for the NRD to rehab or bring into compliance the Sarpy County levees. We, through our partnerships, have found a Department of Commerce grant, an economic development grant, that will help you build infrastructure to preserve land for development. We applied for that to try to find any other funding source to help us meet that mission and not to rely on property taxes. If we're successful or not, we don't know. There is high cost. There is high cost to provide the downstream communities with flood protection. There is high cost to provide the city of Omaha, Offutt Air Force Base, Sarpy County with flood protection from the Missouri River in the levees. There is high cost to repair our streams, and there's no debate there. We know we have got a high price tag. But we have a higher price tag if

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we don't do these things. We have billions and billions of dollars if we fail. I don't want to be in a room where Offutt Air Force Base is closed down by BRAC because its mission was jeopardized because of a flood either on the Papillion Creek or the Missouri River. That is one meeting that no one would want to sit through. We're talking a \$2.5 billion to \$10 billion impact on this state and this community. It was brought up that when we build a reservoir, you know, we build it for houses around it. I can assure you, Senator, that when we build a reservoir now, we construct it for the flood capacity, we construct it for the recreation area around it; but economic development happens because of what we do. We don't do it to create these things. We do it to protect. And houses do pop up around our lakes. But, as now state statute stands, when we create a reservoir over 20 surface acres, it has 100 percent public access. And so that's been the mission is when we create a flood control reservoir, we also want to create an amenity. We want to assist in the public good. And to build a flood control reservoir and throw a fence around it? It just doesn't make sense to our board. We want to create those. And recreation is a very small piece of it. I think 10 percent of a total project or less is recreation. And you have assistance from Game and Parks and all these different environmental groups and those type of agencies that will assist with the creating of those fisheries and things like that. So we have a huge challenge, a huge financial challenge. You gave us the ability to bond, and we appreciate that and we've used that. But we're getting up to our point where we're going to meet that 1-cent limit. And we may have to go to a vote of the people to get the additional 1 cent if that's what our board chooses to do, if that's what our citizens want to do. And we may do it. We have the ability to do that. We may decide to do that. But I think what the purpose of this was is to say there is a flooding threat. There's no question about it. We have huge challenges. We have huge opportunities as well to protect what we have. We're a little bit paying for the sins of our past fathers. Eighty percent of the country is developed in the flood plain. You know, if we knew that, what we know now, obviously we wouldn't do that. But we have. And so we have to find some way to rectify it. A couple of questions that were brought up, the rehab on the levees, Senator Dubas. We're completed with those with the Corps of Engineers has helped us. So the levees are back into, I'd say, preflood shape. A couple

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of places they may be better. There was seepage problems that we had during the flood. The Corps and the NRD installed some seepage blankets, berms, what we call, and we're going to leave those in place. And so any future flooding, we know where the weak spots are and we have a mitigating response there. So hopefully we're in better condition. Of course, we're not meeting the FEMA requirements yet, but that's something that we're addressing right now. Another thing that came up I wanted to address before I get any other additional questions, and you had some with Dr. Kolowski that couldn't answer. The board struggles with the funding issue of flood control. And to let you know, the district and its partners are doing a holistic approach, a multi-pronged approach. You've heard about not only reservoirs, but levees. You've heard about low-impact development. You've heard about regulations that have been put in place for flood plain development. You've heard about ordinances adopted by the communities to capture so much storm water (inaudible). So it's not just building reservoirs and it's not just low impact. It's a holistic approach to try to do as many things as we can to have an impact. And with that, whenever we do a particular, we adopt regulations, if we build a reservoir, it has an impact throughout the system. It may be only a percentage of it, but it has a positive impact. So all those things that we've done are going in the right direction. Of course, the more expensive things get the most attention. But, you know, we talk about funding and who should pay. The district has never looked at projects either if it's in...we're building a reservoir in Dakota County--Pigeon/Jones--which is Vince Kramper Lake now. But we never looked at it like, well, how much has Dakota County contributed and can they afford that. We've looked at it as we're all in this together. And I think we liken it to any other infrastructure, roads and bridges. I might not drive on a road in western Nebraska or across a bridge, but I pay gas tax. Everyone in the state does. That goes toward the completion of that. I think the same thing with education. I'm dealing with a lot of educational issues in my community. Well, I don't have kids in the school district, so why should I pay? Well, I think there's a public good to infrastructure, public education, roads, bridges, and reservoirs. Is that...you benefit by having educated citizens. You benefit by having safe and good roads. And you benefit, obviously, with flood control. You might not be directly

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impacted by it. But if a \$10 billion piece of our economy disappeared, everyone would be impacted by it. So that's how we looked at we're in this together and we need to fund all of these things together. And so we haven't broken that up. So I hope that maybe addressed a little bit of what you were getting to. Senator Carlson, I thought I had something for you, and maybe you'll think about it when...(laugh) if I don't get to it. But those are the main questions that I heard and I hope I answered them. But I'd be glad to answer anything else that you might have. [LR495]

SENATOR LANGEMEIER: Senator Carlson. [LR495]

SENATOR CARLSON: Thank you, Senator Langemeier. John, currently with the valuation, what's a 1-cent levy increase bring in? [LR495]

JOHN WINKLER: With our current valuation, 1 cent in our levy brings in approximately \$5 million to \$6 million. [LR495]

SENATOR CARLSON: Okay. Now I was tracking real well with you, because I took it from the discussion that started at the very beginning of the hearing today and I think has taken place throughout the hearing, when you say or we use the terminology "we're all in this together," I took that as the Papio-Missouri NRD, because you've got a big NRD and you take in a lot people. And we're listening to challenges for people downstream and people upstream are therefore, I believe, a part of that, and so you work together. You're all together. But then you kind of shifted here in your statement and took that from the Papio-Missouri to the entire state. I believe you did. And I think you're saying that you need some state sales and income tax to help you with this project. [LR495]

JOHN WINKLER: Not to say that we wouldn't take it. But no, I'm not...I didn't allude to that. (Laughter) I'm just saying that whatever happens in a certain part of the state, ultimately it has an impact. I mean, the drought, agriculture, it has a huge impact in

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Omaha. I mean, so Offutt Air Force Base. It may be a local Bellevue-type thing, but it has not only a statewide impact but it has a national/international impact. I mean, they have a global mission. You heard the Magellan tank field, 60-mile radius. If that were to lose, people would be paying who knows more for gasoline, but that would extend to other states and other areas. So what we do ultimately impacts a larger area than the Papio NRD. I'm saying the Papio NRD, it's going to fall on our shoulders and our tax to take care of this. You know, so if you're handing out sales tax, we'd take it, but...(laugh). [LR495]

SENATOR CARLSON: I understand that. [LR495]

JOHN WINKLER: But I understand. We have huge task in front of us. [LR495]

SENATOR CARLSON: And you also said that you didn't really expect a whole lot of help from the federal government or maybe even from SAC, or Offutt I should say, and I think that's realistic. Then, however small the group gets down to, we each have a decision, are we going to do something about this or aren't we. And we have to do something. We're both in agreement there. It's just how wide that circle becomes, because dollars at the federal level are not much more available than dollars at the state level right now. We've all got a real challenge. And so I wanted to clarify that with you. I appreciate what you've said. [LR495]

JOHN WINKLER: Right. Well, our board is elected. We understand the fiscal responsibility and no one wants to pay higher property taxes. I mean, and you are in that same position as a city council or anyone. And this district over the last six years has lowered or kept its property tax levy the same. But there comes a point in time where priorities have to be determined and where resources are put. And does anyone have...will we ultimately make that decision we need to put more resources; or do we go and take a \$376 million solution--and regardless if it's the right solution or not, but a \$376 million solution--and extend it over a 50-year period to turn it into a billion-dollar

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solution. And that was the whole idea of bonding. We can bond money now--historically low interest rates; we're getting great bids on construction contracts--and build those structures now, get those structures in place, and then pay those over a period of time. But the longer we wait--and this is with anything; the longer we wait, and pay as you go, the more expensive it gets. And that's just pure economics, so. [LR495]

SENATOR CARLSON: Thank you. [LR495]

JOHN WINKLER: But that's the decision we have to make. [LR495]

SENATOR LANGEMEIER: Senator Schilz. [LR495]

SENATOR SCHILZ: Thank you, Senator Langemeier. And John, thanks for being here. Well, I guess you'd be here anyway, so. (Laughter) [LR495]

JOHN WINKLER: I'd just be over there, but. [LR495]

SENATOR SCHILZ: Right. And that did answer some of my question. And help me understand this: So, right now is it local municipalities that are charging this fee for developers to do this? [LR495]

JOHN WINKLER: Yeah. The local...the zoning jurisdictions,... [LR495]

SENATOR SCHILZ: Sure. [LR495]

JOHN WINKLER: ...county or city, build it into their ordinances to charge this development fee, and they contribute. [LR495]

SENATOR SCHILZ: And that fee goes into a fund that is... [LR495]

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JOHN WINKLER: That goes to help fund the construction of the reservoirs. [LR495]

SENATOR SCHILZ: Right. [LR495]

JOHN WINKLER: Now, of course, with development the way...I mean, we're getting very minor amounts. But the idea was, as development occurs, then that over time contributes. [LR495]

SENATOR SCHILZ: Right. And then my question is, then is there any reflection of that in the property taxes going forward for folks? If they're paying an impact fee basically, is that being recognized as they're paying it up-front and not... [LR495]

JOHN WINKLER: No. They'll... [LR495]

SENATOR SCHILZ: And that's what I need to understand. That's the question. [LR495]

JOHN WINKLER: Yeah. No, they'll continue to pay the levy. The impact fee is on all future development. At one point in time, any future development would pay for that. [LR495]

SENATOR SCHILZ: Right. [LR495]

JOHN WINKLER: And the development community was brought in on that discussion, and they agreed we have a responsibility to help. And then, you know, through the process, they agreed to pay that fee. So when it came to the city ordinances, then there was really no argument because they agreed to it. [LR495]

SENATOR SCHILZ: Well, they didn't really have much choice, did they? I mean... [LR495]

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JOHN WINKLER: Well, yeah. I mean, it could have been...you know, so... [LR495]

SENATOR SCHILZ: They could have said, no, but they wouldn't get permits. [LR495]

JOHN WINKLER: Right. But you're not getting a credit because you paid into it on your property taxes. [LR495]

SENATOR SCHILZ: But are you being double taxed? [LR495]

JOHN WINKLER: Well, it's like a sewer fee. Are you being doubled taxed? You know, you pay a connection to hook into the sewer or the water, and you're still paying MUD bill and property tax. So, are you...I mean, that's...are you getting doubled taxed there? I guess that's a philosophical question then. [LR495]

SENATOR SCHILZ: Yeah. But... [LR495]

JOHN WINKLER: I would say no, but somebody else may say yes. [LR495]

SENATOR SCHILZ: Okay. Thank you. [LR495]

SENATOR LANGEMEIER: Seeing no other questions, Mr. Winkler, thank you very much. [LR495]

JOHN WINKLER: Okay. Thank you for the time. Appreciate it. [LR495]

SENATOR LANGEMEIER: You bet. [LR495]

JOHN WINKLER: Thank you for...you're welcome too. [LR495]

SENATOR LANGEMEIER: That concludes the list of individuals we had kind of

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preregistered. Now we'll take open testimony for those that would like to testify. Good morning, Senator Mines. One's unelected and one's unelected. [LR495]

MICK MINES: Yes, that's exact... [LR495]

SENATOR LANGEMEIER: I'm 70-some days away from that. [LR495]

MICK MINES: You're done. You are done. Congratulations. For the record, my name is Mick Mines, M-i-c-k M-i-n-e-s. I'm here today representing the Papio Valley Preservation Association. Let it be noted that aside from the chamber lady that was up before, I'm the first person that isn't either paid by the NRD, employed by the NRD, or paid by any other government entity. I'm a private citizen. And, by the way, if you want to give us funding, you know, we'll take that too. Let me explain who the Papio Valley Preservation Association is. It's a membership organization of about 600 members in the Papio Valley, primarily the northern part of the Papio Valley. We are...first and foremost, we are concerned when government has the ability to condemn property, particularly our property, for the good and betterment of other folks. And this organization has been working diligently to have our voices heard since the 1970s. So we've been around awhile. Our district, this entire Papio-Missouri NRD is, as you know, a unique NRD. You have two counties, Douglas and Sarpy, that have nine out of ten people in the district represented. The counties north--Washington, Burt, Thurston, and Dakota--have one representative on the NRD board. We don't have the money for slide presentations, PowerPoints, hiring engineers. We don't have that kind of money. We have concerns. We understand that the NRD is primarily concerned with the metropolitan area. Recreation is a huge part of what they do. And that's why, Senator Christensen, you mentioned the lakes or the dams for fishing. We haven't talked about trails. Those are amenities that are available primarily in the metropolitan area. There's a new dam that was put in up north by South Sioux City. But, by and large, this metropolitan area has recreation, and that's just fine. We don't share those views. We're largely agriculture. We have different views and opinions and needs. Senator Smith, I think, asked one of

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the better questions. And that question was, there's...when you design projects, there's good, better, best; and everything we've heard today, we don't know if it's good, better, or best. We just know that they will...I think they're going to come and ask you for additional bonding authority. Don't know that, but I would predict next session they'll be in at...they need almost \$400 million today. We don't understand...at least I've been here and I didn't understand the plan. They showed needs and, in fact, this is...I'm curious why this wasn't discussed ten years ago. But all of a sudden, now the district needs I believe up to \$400 million. Well, Senator Carlson, you asked the question I think indirectly, where's it going to come from. We don't know. But we can expect that property owners, the folks that own the land primarily are going to be asked to pay even more for not only mitigation and for flood control, but these funds are usually commingled and recreation is part of that. We believe that whatever plan is put forward needs scrutiny by taxpayers. Another member of the Papio Valley Preservation Association, Shawn Melotz, will come behind me, but we may be the only two citizens that will testify before this committee today. I think the taxpayers need to be involved in the process. And, first of all, we need to understand what's proposed, other than we have all these needs. What specifically will be proposed? What are the priorities? And certainly how much will each one cost us as members of the natural resources district? And you'll notice, by the way, there are no other elected officials here represented. Douglas County is not here because they don't participate in the partnership that's been discussed. Washington County, the city of Bennington in Douglas County, nor are any of the other counties, Burt, Thurston, and Dakota County. We're not included in the discussions. We've been asked to join. We disagree with the partnership--we, meaning PVPA. The partnership is set up to serve the metropolitan area, not the rest of the district. And I think you've seen a lot of examples of flooding and dire consequences. Please remember, the flooding was in the Missouri Valley or on the Missouri River. Papio Valley or Papio Creek had no flooding whatsoever. And there was an incident in 1999, but it was long before that before there was an incident. Certainly we believe that you need to plan and prepare for those incidents. However, we have long...and I think we've beaten this committee up over the years that we believe there are other

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alternatives that the district refuses to evaluate in their process, meaning dry dams. Your example, Senator, I think is spot on. We as voters and citizens need to better understand what the plan is before it comes to the Legislature to approve any kind of increase in taxes or bonding authority. You know, just one thing stuck in my mind when you were talking about the flood plain. I remember reading or hearing about an HDR study done before this new latest study that said if you want to eliminate all problems in the Papio flood plain, you can buy the properties for \$107 million. And problem solved. Now I'm sure since the flood plain has been reconfigured, that number might be more. But I think we need to look at alternatives; Senator Christensen, one was yours. But, I mean, that's stepping way out on a limb. I'm just saying that it may be less expensive to buy out the property owners and eliminate the flood plain potential in the first place. And then, you know, you hear conflicting issues like the gentleman from Bellevue said they...I understand the levees are not certified in and around Bellevue. I think I heard that. And the other engineer wants to certify those, and it may be a \$20-million figure. And the gentleman from Bellevue wants them certified so that they can build in the flood plain. Well, see, some of these things don't make a lot of sense to our organization and we ask you to consider that as well. And with that, Shawn Melotz will follow me up. She's got more technical information. But I appreciate your time, and be able to answer any questions. [LR495]

SENATOR LANGEMEIER: Very good. Are there any questions for Senator Mines?
Senator Carlson. [LR495]

SENATOR CARLSON: Thank you, Senator Langemeier and Senator Mines. I'm not trying to back you into a corner, I'm just asking a question here. Do you believe that spending on flood control projects is warranted in the area of the Papio-Missouri NRD?
[LR495]

MICK MINES: Yeah. I believe that there are alternatives that are going to cost money. Yes, I do. [LR495]

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SENATOR CARLSON: Okay. And that's all the further I'm going to go with asking you that because I thought you might say yes. Neither one of us can answer really, well, how much is warranted. But then how should it be paid for? [LR495]

MICK MINES: Well, it's got to be paid for by citizens. And we don't...or it needs to be paid for and certainly will be paid for by taxes, whether it's to pay off bonds or to pay off...or just general property tax levy. [LR495]

SENATOR CARLSON: Would you tend to believe that it ought to be paid for by the people who live in the Papio-Missouri NRD or by all the people of Nebraska? [LR495]

MICK MINES: Well, the districts were set up, as you know, to ensure that those that are involved in a particular region share those costs. Now we could have a discussion as to whether the northern counties belong in an NRD with the lower counties, but that's a different hearing and a different day. [LR495]

SENATOR CARLSON: Yeah. Okay. All right. Thank you. [LR495]

SENATOR LANGEMEIER: Any other questions? Senator Christensen. [LR495]

SENATOR CHRISTENSEN: Thank you, Chairman. Senator... [LR495]

MICK MINES: Senator. [LR495]

SENATOR CHRISTENSEN: You say alternatives. The purchase alternative just don't even seem possible. [LR495]

MICK MINES: I agree. I agree. [LR495]

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SENATOR CHRISTENSEN: Okay. [LR495]

MICK MINES: But I threw it out there just as general information. If we're looking at all options, the least expensive options, I just threw it out. [LR495]

SENATOR CHRISTENSEN: Yeah. And I agree with your comment. It's...you know, to get the levee certified so you can build in a flood plain makes no sense. Really I have a hard time having mercy for anybody that deliberately builds in a flood plain. You know, to be there or to get annexed into is a different situation. But other than slowing the water down, which some type of dam, whether it's the dry dam, the pass-through dam, recreational dams, whatever you want to call them, what real other alternative is there? I don't...even...through this discussion, one thing I learned was the fact that...well, the acronym...but SID? No. [LR495]

MICK MINES: Sanitary improvement district? [LR495]

SENATOR DUBAS: LIDs. [LR495]

SENATOR CHRISTENSEN: LIDs, there we go. Low-impact development won't work for certification, you know, dealing with the feds on floods, which I understand that. They are small things that you do. I don't know how that you're going to come up with enough of low-impact developments to take care of a major situation. I know that's been presented to us in the past. I guess I haven't fully understood that. But can you explain how low-impact developments can achieve that or can you give me something else besides building some type of dams? [LR495]

MICK MINES: What I'd like to do is, Shawn Melotz behind me is much more experienced. But I'd...you know, there are other terracing and other environmental practices that aren't full-fledged yet. In fact, Washington County would love to build more terraces, but we can't get funding from the NRD to do that. So I'd ask you to

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redirect that to Shawn Melotz, please. [LR495]

SENATOR CHRISTENSEN: Okay. [LR495]

SENATOR LANGEMEIER: Senator Schilz. [LR495]

SENATOR SCHILZ: Thank you, Senator. [LR495]

MICK MINES: Senator. [LR495]

SENATOR SCHILZ: And this isn't necessarily a question for you, but as I was sitting here listening to all the other testimony and the work that had been done before on flood plain issues in certain areas, and then the federal government turns back around and revises their flood plain. I mean, it's a question for anybody out there: How much certainty do we have that we're going to go through all this work and not end up right back in the same or in a similar position to where we are now? [LR495]

MICK MINES: Well, you're exactly right. I don't know that you can predict it. [LR495]

SENATOR SCHILZ: It's a little scary to spend that much money and not have... [LR495]

MICK MINES: Yeah. And particularly the Missouri River, which is more apt to flood than the Papiio. And those levees are...I know there's some participation by the NRD, but those are largely Corps projects. So I don't know how you predict, Senator. And evidently you'd have to just keep...on the fly you make it happen. [LR495]

SENATOR SCHILZ: Thank you. [LR495]

SENATOR LANGEMEIER: Are there any other questions? Seeing none,... [LR495]

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MICK MINES: Thank you. [LR495]

SENATOR LANGEMEIER: ...Senator Mines, thank you. We're not going anywhere, but just a show of hands: How many more do we have that would like to testify? Okay. Two more. Yeah, that's fine. It's good to see you. Ms. Melotz, welcome. [LR495]

SHAWN MELOTZ: (Exhibit 7) Good morning. I'll have to revise my testimony a little bit. It started out as good morning, so it's going to be good afternoon now I suppose. Good afternoon, Chairman Langemeier and members of the Natural Resources Committee. Here we go again, I guess, as I would like to say. My name is Shawn Melotz, and I'm the current president of the PVPA. And I'll kind of go through my written testimony, and then I'll follow up with a few little comments or hopefully some answers to some questions. But, you know, as we reviewed this legislative resolution, the reservations I have focused with the underlying intent of the study. It appears to me that the Papio NRD is attempting to gain more power and/or increase their monetary resources through this study. Both, in my opinion, would be a detriment to the taxpayers and citizens of this district. With a tax base of \$52.5 billion--and I'm not sure of this but I think it's probably the largest tax base of any governmental entity in the state other than the state--and a bonding levy authority of 4.5 cents, and the authority to issue bonds of approximately \$75 million in today's environment at the 1 cent levy, this NRD has the capability of overburdening the taxpayers of this district, and I believe they're on the path of doing so. For example, the Papio NRD's current year proposed budget is \$87.5 million over this upcoming fiscal year. That's a 280 percent increase for actual spending from 2012. And with this increase in power and property tax funding, coupled with the powers of eminent domain, I believe we're on a dangerous path. And on behalf of the PVPA and landowners, I respectfully ask this committee to be prudent as you examine the NRD's role with respect to flood control needs in the Omaha area. As kind of a little follow-up to a few comments today, first and foremost, one thing we...and Mr. Mines touched on it, we have come to this board several times on several occasions trying to get additional funding for terracing, because we believe terracing is a component of a

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type of low-impact development. We all know it controls water runoff and, yes, storm water runoff. And to some extent if a terrace is built bigger than they are now, they could also control flooding and have some flood control. This NRD has budgeted \$800,000 a year for the last probably five, six years for terracing. They run out of terracing. We've asked for terrace money in the past and have been declined because there's no more funding for it. So we believe if some more commitment is made in the northern counties for other types of flood controls or water runoff, that perhaps that could eliminate some issues for flooding in the Douglas County area. The other point that I'd like to make is it concerns me, the current plan with the dam site 15A, which was the \$50 million, and the dam site WP-5, which I believe they said was \$32 million; but that, coupled with the entire plan, what they have for that section of the Papio area totals \$140 million based on HDR studies. The board was presented with an alternative plan that would include raising some of the bridges, bringing some more of the levees up to a higher level to control flooding. That cost of that plan was I believe \$40 million. So rather than going with the more conservative plan that could have in theory accomplished the same amount of flood control, according to the HDR study, the board voted to use the \$140-million plan. So as you consider the additional funding and the additional maybe powers and monetary authority to this NRD, maybe we need to step back and really look at the lower costs and perhaps more beneficial costs of other types of flood control. I think flood control is important. I just believe there's other ways to accomplish it than using a billion dollars of tax money. And with that, I will attempt to answer the questions that Mr. Mines shot my way. [LR495]

SENATOR LANGEMEIER: Very good. Are there any questions? Senator Christensen. [LR495]

SENATOR CHRISTENSEN: Thank you, Chairman. Thank you, Shawn. On your idea of raising the levees, now that was just going down through all the towns through everything and just raising the concrete, raising the dirt, something that direction? [LR495]

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SHAWN MELOTZ: No. This wasn't my idea. This was an HDR study that actually occurred. [LR495]

SENATOR CHRISTENSEN: Correct. But you're referencing it. [LR495]

SHAWN MELOTZ: Yes, and I believe the study required additional levee build-up in the southern part down by Papillion and the Bellevue area. It wasn't all the way up the stream. And that was the... [LR495]

SENATOR CHRISTENSEN: Okay. Well, it makes sense, because any time you can make it deeper, the same as the discussion earlier with John, the fact that if we make the dams higher--or I guess it might have been with the former employee--but anyway, you're going to move more water. And, you know, I don't see a problem with that method, but I don't...until you see how it's going to affect the businesses beside it, things that way, you know, seeing the study would be very interesting and I'm glad you brought that point up. [LR495]

SHAWN MELOTZ: And I can have Mick provide you a copy of that study if you want. I'm sure I can find it. [LR495]

SENATOR CHRISTENSEN: No, that would be great. And I totally agree with terraces, what it can do. If anybody ever wants to see a huge picture of what terraces do, I've got one up in northwest Kansas, after the 2007 rains. And there was literally, between the farm ponds and the terraces, enough water held up in Kansas to fill the Harlan County Lake. [LR495]

SHAWN MELOTZ: Yeah. I mean, we... [LR495]

SENATOR CHRISTENSEN: So it is a viable thing, whether it's flat channels which will

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hold more than terraces, to manage water. [LR495]

SHAWN MELOTZ: Well, and you mentioned how can LIDs stop this water runoff. LIDs are more than, you know, a rain garden in my yard. An LID, an example of an LID on 84th Street, there's a golf course, which is essentially a dry dam designed to grab the water if it floods. You know, my views are just pretty, I guess, farmer-like: Don't build by a creek. Put your teetertotters and playgrounds along the creek bed instead of the houses. How many developments do you drive around Omaha and you see the houses by the creeks and the playgrounds in the middle? You know, put along the creeks the areas that are low-cost to replace, not the billions of dollars of property and houses and everything else. And the key to making this work is regulations. You know, we have to have the builders changing their thought process on how you build. You know, let's control where they're building and how they're building. You had mentioned the impact fees. On this, you know, to-date \$140 million plan, I believe there's only been collected from developers around \$100,000, if that. So, you know, these fees are just minimal and I would suspect they will never pay one-third of the cost of these projects as they professed. I don't see how it could ever happen. But my fear is that this NRD is using these bonds, and the use of the bonds is going to create a huge financial impact; and the biggest fear is, how are they going to pay for them? I mean, we see SIDs go bankrupt on their bonds. And I don't know if there's a measure, what happens if an NRD does. I guess the investors are the ones that are going to pay the price. [LR495]

SENATOR CHRISTENSEN: Thank you. [LR495]

SENATOR LANGEMEIER: Senator Carlson. [LR495]

SENATOR CARLSON: Thank you, Senator Langemeier. You've made a statement here about LIDs. Do you agree that LIDs are not the...they can't possibly be the total answer to the challenge of flood control? [LR495]

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SHAWN MELOTZ: No, but I think they could be a majority piece of it. I do think that, you know, the LIDs, the perception is they're small--but they aren't. The LIDs are larger-based projects as well. I mean, an LID...PayPal, down right off the interstate, that lake is designed to serve as an LID. [LR495]

SENATOR CARLSON: Okay. [LR495]

SHAWN MELOTZ: They're right off the interstate. So, you know, larger LIDs can work in place of...and control flooding, yes. [LR495]

SENATOR CARLSON: So you would say that you believe that LIDs can take care of more than 50 percent of the problem. [LR495]

SHAWN MELOTZ: I don't know. I'm not an engineer. But I think they can, but I'm not an engineer. [LR495]

SENATOR CARLSON: How much...what kind of a percentage of the problem could terracing solve? Do you have any idea? I don't know. [LR495]

SHAWN MELOTZ: No. I don't know. [LR495]

SENATOR CARLSON: It just would solve some of it. [LR495]

SHAWN MELOTZ: Yeah. [LR495]

SENATOR CARLSON: Okay. [LR495]

SHAWN MELOTZ: I mean, every little piece of this could be solved. [LR495]

SENATOR CARLSON: And then just one other thing. And you didn't make this

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statement and maybe Senator Mines didn't make it, but I wrote in my notes that the Papio Valley Preservation Association hates government takeover of private property. I think he did kind of say that. Well, if...I don't blame you if you said it. (Laughter) [LR495]

SHAWN MELOTZ: Who does like it? [LR495]

SENATOR CARLSON: No, you don't like that. On the other hand, you said the answer is regulation. Well, that's government too. [LR495]

SHAWN MELOTZ: Well, but it's not a taking of private property, or a transfer of wealth, so to speak, of private property. I mean, we have sold a lot of ground to the roads and the highways and what is for the better good. But we believe there's a different process that could occur without having to take property. [LR495]

SENATOR CARLSON: Okay. All right. Thank you. [LR495]

SHAWN MELOTZ: Yes. [LR495]

SENATOR LANGEMEIER: Seeing no other questions, thank you very much. And we saved the best for last. [LR495]

SCOTT JAPP: All right. [LR495]

SENATOR LANGEMEIER: Is that right? [LR495]

SCOTT JAPP: I thought there was two hands raised so I'm not the last one. [LR495]

SENATOR LANGEMEIER: Well, maybe. [LR495]

SCOTT JAPP: (Exhibit 8) My name is Scott Japp. I am a Papio NRD director, but I do

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not speak on behalf of the board. We need a Papio...the Papio NRD needs to encompass the entire area, just not Douglas and Sarpy County. The four counties north of here have experienced just as much flood damage and have just as much property that can be damaged by the Missouri River floods. We have billions of dollars of infrastructure in Blair for the water and waste treatment plant, Cargill, and the nuclear power plant, of which this NRD has voted numerous times not to fund any levees or levee constructions. Three months ago, the city of Blair, which is the only city in the state of Nebraska that 100 percent relies on the water out of the Missouri River for its use, asked the NRD to participate in 12 percent. They had 75 percent cost share from the federal government, the other 12.5 was going to be the city of Blair, and asked the NRD for their 12 percent, which was a quarter of a million dollars. Our board of directors voted it down. One of the director's comment was, if we help municipalities like Blair, we have to help everybody. Yes, we need to help everybody. However, we can't supply a water system or help with a levee for a water system for the city of Blair, but yet I'm going to assume next week or this week we're going to give a quarter of a million dollars for the cancer treatment center in Omaha. Our mission statement is on the wall. We're out of control. I believe that levees are important. As an engineer said, a levee would cost approximately a million dollars a mile. We could wall this entire Missouri River from the Platte River to South Sioux City. It'd be about 200 miles. That's \$200 million, and we would provide 100 percent flood protection. However, the plans at HDR said it will be a billion dollars, and I'll get into the documents here, that will only provide less than 5 percent flood protection in the event of a 100-year rain event. Now, again, we need to provide the flood protection where it's needed and to the citizens that it occur. But a lot of what I've heard today is twofold here. We showed that levees do provide and they held up in an undesigned event way. They did very, very well. The other aspect of what we're hearing is we need these dams on the Papio Creek for a flood that may occur. HDR's own studies provided that building these dams in the case of a 100-year flood event, it would provide less than 5 percent reduction in peak flow. I'm sure all you state senators are familiar with the Ames study, HDR's own study. If we build these dams, there would be no significant change in that particular location. I've heard a lot of

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comments, dams versus LIDs. HDR's own studies, again, as I just said, the dams, the 28 dams only provide a peak flow reduction of less than 5 percent. If we would build LIDs, they control the same amount of money. There is no significant difference. LIDs aren't going to control 100 percent of the flood. They're only going to control 5, as well as the dams. Now when HDR did their study, they broke it down into four different stream flows. In some instances, actually LIDs did provide a little bit better flood control than the dam, but realistically they're insignificant. You asked a very good question. Okay. These dams on the Papio stream are only designed for 50 years. That's their design life expectancy according to HDR. Levees are designed for longer term. Why should we invest a billion dollars with something that's only designed to last 50 years? As were in Omaha, as I sat on the board, the cost of HDR's proposal for these dams is approximately \$35,000 per acre-foot drained into the structure. The CH2M Hill which is designing the storm sewer where they're building low-impact developments to detain the storm water there so it don't combine with the wastewater. And when CH2 came to the NRD board and asking for money to fund low-impact developments, their cost of building low-impact developments that would detain a 100-year flood event in the center of Omaha was \$7,000 an acre. It's an 80 percent greater cost savings. Now I hear and I know that all governments, and as a director on the NRD board, I know that we're all concerned about the fiscal and financial responsibility. However, what we should do is do a need and not a want. We need to find flood control. Levees provide 100 percent flood control at a huge, significant (inaudible). With the funding that you provided in LB160, we already have enough funding to provide the flood control if we want to. However, we don't want to. We want a wish list. We want to provide recreation for the city of Omaha. Our recreational budget on the NRD board is 40 percent greater than the entire Game and Parks of the state of Nebraska. I know you guys do a very good job when you consider your budgets, but why does a six-county area need to spend more on recreation than the entire state of Nebraska by 40 percent? As we've been hearing about potential flood damage and everything that happened, let's get in the greater picture. Two years ago, the engineering firm Olsson, which got up here and spoke, provided a multihazardous report for the entire NRD. Flood damage in 15 years in

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Douglas County was \$11 million. Flood damage just for crops outside of the Douglas County area is \$10 million. We have as much flood damage for crops that our NRD has cut funding to help build terraces in the last...well, actually since '07, by half. It is less than 1 percent of our entire budget. But as we talk about flood damage, our greatest damage according to the Hazardous Mitigation report is drought damage. The entire flood damage from personal property in the last 15 years in our six counties is \$21 million. Just the drought damage from crop, and this is above the 88 percent crop-insured level, is \$24 million. And as we all know, the damage that we've had in crop damages this year in my county, if you assume...I know there's a million acres of crop at \$250 an acre. We just witnessed a quarter of a billion dollars of damage which my NRD does nothing for. Any comments? [LR495]

SENATOR LANGEMEIER: Very good. Are there any questions for Mr. Japp? Director Japp, I should say. Seeing none, thank you very much. [LR495]

SCOTT JAPP: Thank you. [LR495]

SENATOR LANGEMEIER: (See also Exhibit 9) Any other testimony? Are there any other testifiers here today? Seeing none, Senator Mello had to go to another appointment, so he waives his opportunity to close. So that concludes our hearing for the day. And we want to thank everybody that came down and participated. We appreciate it greatly. Thank you. [LR495]