

MR. ZILKOSKI: Well, good morning. I see I don't have the same problems as John, because he focused horizontal, vertical was always better. Now, I'm going to take a little different tack because I don't know what was correct, all the technical financial users that was all the same for the vertical. The vertical did have one advantage to horizontal was a few years ahead so all of the lessons learned; we were following what was working and what was not working. And so we were trying to attack it from a different perspective. It seemed to help us a lot.

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But I will say that no matter what you do, this is NGS. Some users are not going to be worried about the datum change until you actually do it. They will complain that you didn't tell them soon enough. This has happened no matter what you do. That's just part of the process. So what can you do -- next slide -- what can you do to help this process? I'm going to outline a few things based on my experience as a project manager that we did some of these. Some we did better than others. Some of this is that we learned from that we didn't do enough of it or didn't do at all that we should. So the first thing that NGS was doing with this summit was right on target involving all of the users? And you will see items really dealing with a lot of users and understanding who they are. The technical part of this, NGS along with their colleagues are going to do it. That is not an issue. There will be obstacles but they will overcome them and they have a lot of talented individuals at NGS. They always have and that's how they solve these. And as John said, they brought in people from around the world to help with solving the problem. And I think you will find some similar things going on here and I would encourage them to continue doing it. But it is you and everyone in this room and out on the line that are going to be very, very important in this process because you are the user. Most of you in the room are not going to be doing a lot of the work. You're not going to be doing the technical end of this. But you are going to be the user. And it's going to be more important to you than it is to anybody inside NGS because most of the people inside NGS don't really use what they created. That's their job and they do use it somewhat. And inside NOAA, there are a lot of organizations that will be using this. That's why they do it. So, what I'm proposing is keeping people informed and involved, more than just informed, involved. And you got to find many different ways that you're able to do that, many different forms. This is the first of many, preparing quarterly, reports. You can't provide too much information to people. They will take what they want and they will discard what they just don't think is of interest. And my first slide said, they are going to hear it over and over again and come back at the end and say, you never told us that. So, you need to provide lots of information. This is your opportunity by the way, everybody in this room and on the web to get involved with the process: These next two days, you need to speak up. You need to fill up that one minute timeslots that Dave mentioned earlier. Bring your concerns, your issues, and your questions and if they don't answer them now, they will answer them later. But there is your opportunity and they need that.

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You need to involve everybody. And there once again, they are doing it here state and local governments. NGS now has height modernization group of individuals and it's huge, across the nation. If you ever -- one of their monthly Thursday conference calls, they are -- I don't know how many states are represented now but it seems when you get on that call, it's 20, 25 states being represented and you have spatial reference centers, a few individuals that will be representing them around here. You need to use them and they are. We have a different infrastructure. We didn't have with the NAVD 88. So now you have a good opportunity to engage in that and bring them together. Involving universities: John mentioned the visiting Scientist Program. The NAVD 88, we used that to solve a lot of our technical problems if you had the similar type problems that the horizontal did. That was a great program.

3 I think somewhere in this next decade, they need to figure out a way of bringing that type of program back officially. It is not an easy task; it is not as simple just bringing scientists over for a year like they did. It's -- in the Government, there are a lot of rules and regulations but you need to do that and bring it together. Professional societies, ACSM, ASPRS, you've seen it; they are represented here and actually supporting this. They have a big role in this. I think you need to bring them together. Private industry: That is something that is sometimes a controversy that has to be brought together with -- once again, in Government, it's hard to bring private industry into the solution. But I think you need to find ways you are able to do that because they can help and they will definitely during the implementation phase of this be your biggest critic if you do something wrong. So bring them together, early and have them involved in the process.

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This is what I call creating this collaborative integrative collaborative environment where everybody becomes part of the process. I got to be honest with you, when you are leading organization and Juliana needs to think about this, you are going to have everybody's opinion in the room. Everybody wants to go a certain direction. There are some things that NGS will make decision from a technical standpoint that they have to do and they have to go in this direction. But they need input, they need this involvement. I think once again, this is a good start, having individuals come together, talk about what they think are the problems or issues and what are some of the technical issues? There are some people in the audience that will participate in the technical issues and NGS wants this to occur or should. Symposium: We did several for horizontal that NAD and several for the NAVD 88, the symposium that we brought people from all around the world. These are international symposiums that brought people to talk about a lot of the technical issues. I think that that's important and I think that you should continue it. And I think it ought to be broadened a little bit to not just the technical because I think the technical issues are going to be able to be solved today with the technology that exist and what people have been working on. But I believe that there are a lot of the user issues that are going to be very, very important and during the implementation of this. We had a tough sell of the NAVD 88 in terms of why you should not create a new datum. At the end of this, I will give you some examples of what we used. The same thing that John was saying, trying to sell a datum change to get money for research is

not easy. People don't understand it. And people don't like to change. So the more you bring people in to become part of the process is something that they continue to work with you and help you on. This next one, talking about the work plan, this is important. NGS does work plans, they have action plans and they have all of their performance plans and every employee is linked up to what needs to be part of the actions and tasks. At least they were when I was involved and I assume that that is still being continued. But I think that something that needs to be really formalized, is something about NGS collaborating with others, so it becomes part of the process. They need to bring this together and work with others in their transition plans. NGS and the project manager work directly with the USGS and the COR and it was difficult to get them really engaged in the datum change because it was going to cost them resources and money and they had a hard time trying to sell. So we worked with them and tried to get them the support they needed. We were successful in some others and not so successful in others. One very good success was FEMA. FEMA actually had a document written about the implementation of NAVD 88 before we had the coordinates loaded in the database. That actually scared me a little bit because they were ahead of the game and their own -- once again, their own individuals out there didn't fully understand it. The headquarters understood but the local people that implemented it did not. That's one of the things that is clearly a good lesson learned, is one of the things that I should have done is I should have gone to each one of those regions and talked to them about what was going on with their own headquarters so that they understood it and they would probably push back a little bit saying, we still don't have the resources to implement it and slow down. But that is something, I think more and more, you have these seminars and geospatial summits, you are going to get to a lot more of these individuals on these webinars.

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So one of the things that I always go at, is understanding each other's requirements. One of the things that I found inside NGS is that there is a lot of discussion going on along all of the scientists and they have 6 divisions so the division chiefs discuss things and many times they become heated discussions which are good. But they all have a different opinion about where they wanted to go and what should be done. But eventually, they come to looking at what are our requirements and that's why they are doing what they do. That's why they are doing the adjustment and these new datum's. This is why they feel this is important. But you all have requirements and they are different than what NGS's requirements are. So they need to listen to what you have and that's why you're here. Once again, you start talking about how and what you need to do to accomplish the new datum that you are going to come up with. Then, that implementation, that impact, that's what is critical and important and will affect everybody in this room. One of the other things is developing models and tools. Be prepared. You have until 2018. It's going to come sooner than you think. But there are a lot of tools and models that can be developed. NGS can work on those as well as others but they need your input to find out what are they. NGS will develop models and tools by the way. The question will be are those models and tools what you need? If they just left to their own devices, they would build what you think they need. Be involved in the

process and they will test and build what you need. But if they don't hear anything from you, then, they won't.

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You got to institutionalize this process. And that means creating an NGS official team which I believe they do have individuals named to the actual new datum's themselves, but you need a team. One of the most important aspects of this is it needs to be considered through the implementation. Many times what we do is we do the adjustment of something, get it out there and we publish it. And then, inside our own organization -- when I was at NGS, once we did the adjustment, that was just the start of it. That was the technical part, we have it done. But then, the implementation, I spent a third of my career, I worked 35 years for NGS, for a third of my career doing the adjustment and analysis. I spent the second, the second third of my career basically implementing it. It was not totally ad hoc but it was almost ad hoc. So I think from that standpoint, a truly good implementation plan that staff resources really throughout with the involvement of users is important. Formalized agency decisions and work plan. 2018 is a little while from here, and people sitting in this room are probably not going to be involved in this process when it is published. Inside your own agency or group or your organization, you need to get people involved in it. Formulate the process. There are federal registers that could go out for Federal geodetic control subcommittees. ACSM has their program committee that can be -- take this on and I put down for the state DOT disaster, which is very important to all the states. But you need to find those groups and individuals, and it stays with the organization and it is there, no matter who comes and goes. It's part of the process.

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Probably, the most important thing that people are really looking at is what are the impacts, benefits and responsibilities? You need to start identifying the impacts as well as the benefits. And I think NGS has done a nice job of looking at some of the issues that they think are benefits and some of the impacts. But in reality, you sitting in this room, you know what the impacts are going to be and the benefits are. And you need to identify these. You need to find out what it's really going to mean to you and then assign the responsibility and be accountable. They are going to have to spread this around. NGS is going to have its role to do implementation but there is going to be a role for the users. Some of the other agencies, this all has to be spelled out and you have time to do this now. But you need to spell it out and everybody needs to agree with it or you will be at the end trying to get resources, trying to identify impacts. So you really need to do that up front.

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These are just some impacts that probably are not going to be similar to what you had in the new datum that you hope to change. Databases are going change. This is a little bit bigger deal than it is for them because most things that you have now, especially

2018 are pretty much computerized. Everything in 88 is on paper. As John mentioned, you have contracts but a lot of the other agencies did not. So now, today, you have a different scenario. But you need to identify those but there will be impacts. Changing value, changing heights makes some difference. A lot of laws out there, a lot of paper products that people still use.

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Here are some of the benefits that we had which you know, may or may not mean much now to the new datum. You have to as John mentioned earlier, accuracy is not as important as you thought about back when we were doing the NAD and that's true, normally when you talk to users and what they use, they don't really need a millimeter to do most of their work. Now, what do you really need? What is the accuracy? From 29 to 88, we had a lot of benchmarks that when you leveled between them you could not close. The 88 was going to remove them because there was a lot distortion in the network. So what are some of those benefits that are going to make a difference to you now? You need to identify those and think about it. And you have the time now to start thinking about that and actually finding out what they are. There are going to be a lot those, a lot of those benefits. And you need to have the individuals that say I don't really need this new datum, identify why don't you need it and those that say you do them, why and then find out are they really benefits. And will this make a difference? And what do you really mean in the future? You have to think out in the future too what you need today is not going to really be the same thing you may need ten years from now. You have to think that way.

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NGS responsibilities: Identifying responsibilities, outcomes and improve and helping and who's going to do what? So this is just some examples of what we do in the NAVD. We identify what is the responsibility for NGS? And at the same time, though, identify –

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Which is probably most important, everybody understood that NGS has responsibility to do because our data, our adjustment, datum, we are going to do that. But identify user responsibilities.

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Users responsibility is what set people to task. The user was not used to saying, well, wait a minute, I have some aspect of this. I'm just going to use it. Well, no. You have a responsibility of providing it into the process which you did today lots of responsibilities of helping the process and educating people, training people, identifying benefits. You have to go both ways. You need to be part of this process. It's --as I was telling Dru earlier, you got a lot of people signed up. This is exciting because that means people are very, very interested in it. Or people are very, very scared of what you're going to

do, one of the two. But it doesn't make any difference. You're here and you're involved. And part of what I believe NGS needs to do as well as yourself and organization is make it easy to communicate, to get-together, to be able to understand what's happening, how it is happening and identifying your own responsibilities in it and be part of the process because it is your new datums. You're going to be the most use of it, not NGS. Once again, inside NOAA, there's a lot of use of it, but you are the users and you are important and I believe that you need to become part of this process.

And my last slide

Just a little finer thought I like this slide about collaborating a common goal. For those that can't read it, it is a picture of people sitting around the table saying, just look at what we can accomplish when we work toward a common goal lunch. Well, 2018 is going to be here before you know it. And if you're not ready, and not collaborating, you are not going to be ready in 2018. So, I'm really encouraged to see that NGS started this process now. It's only people engaged, so many different users and trying to get people to help them identify these issues. And Dru did a nice job on that paper and hopefully, everybody had time to read it because it really does identify some of the issues that they are serious about getting all of your input into this process. So please take the next two days here and divide it by part of the process. Thank you very much.