

## PROCEEDINGS

(9:00 a.m.)
JUDGE BIRO: Okay. Is there any preliminary
matters to address before we continue?
MR. BIERI: None from EPA, Your Honor.
MR. McAFEE: No, Your Honor. Thank you.
JUDGE BIRO: Okay, thank you, gentlemen.
Would the Agency like to call its next witness?

MR. BIERI: Thank you. We call Pete Stokely.

JUDGE BIRO: Mr. Stokely, would you please stand in the witness box while the court reporter swears you in?

Whereupon,

## PETER STOKELY

having been duly sworn, was called as a witness and was examined and testified as follows:

JUDGE BIRO: Please be seated.
THE COURT REPORTER: Could you state your name and spell it for the record, please?

THE WITNESS: Okay. My name is Peter
McDonald Stokely, and the last name is S-T-O-K-E-L-Y. THE COURT REPORTER: Thank you. JUDGE BIRO: Please be seated, Mr. Stokely.

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## DIRECT EXAMINATION

BY MR. BIERI:
Q Good morning, Mr. Stokely.
A Good morning.
Q Can you tell us who you work for?
A I work for the Environmental Protection
Agency.
Q How long have you worked for the EPA?
A I've worked for EPA 30 years.
Q And what is your current position with EPA?
A I'm currently in headquarters in Washington,
D.C. and I work in the Office of Water Enforcement. I am a technical staff person there.

Q How long have you been at headquarters?
A I've been at headquarters since 2006.
Q And where were you before that within EPA?
A I worked for EPA Region 3, which is in Philadelphia.

Q Okay. And prior to Region 3, where did you work?

A I worked for a contractor at EPA, the BioMedics Corporation, and there I was a photo interpreter.

Q Okay. And how long did you work for that company?

A Eight years.
Q And would that take us back in time to about the time you graduated college?

A Correct.
Q Okay. What's your current job title at EPA?
A The job title is environmental scientist.
Q Okay. Your CV, which is marked as AX-6, says that you are also the Clean Water Act, Section 404 coordinator, is that right?

A Right. Yes, that's part of what I do --
Q Okay.
A -- at headquarters.
Q Can you describe your responsibilities within or under that umbrella?

A Well, mainly it's running a monthly phone call with regional staff in the Section 404 enforcement program, and also, you know, sending out information, updates to my mailing list and, you know, running the call, and I am most recently coordinating a national meeting that we had in Chicago.

Q And these are all on 404 issues?
A Yes.
Q Okay. And what about your other responsibilities within the Agency since you've been at headquarters?

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A Well, I continue to do technical case support, case development, through photo interpretation and mapping. That's Clean Water -Section 404 enforcement mainly, and besides that though there is always, you know, other duties at headquarters; reviewing documents, briefs, you know, things that come out that are affecting our program from other sources, letters, things like that.

Q Do you consult with other EPA regions on Clean Water Act matters?

A Yes.
Q Have you worked with every region throughout your career?

A I've worked on an enforcement case in every region, yes.

Q Okay. And how long have you been doing mapping and photography interpretation?

A Well, I began as a photo interpreter in 1986, so I guess that's 38 years.

Q Okay. Have you done photo interpretation in all of your positions for the last 38 years?

A Yes.
Q And we have your CV and Her Honor has read this and I assume everyone else has so I don't want to belabor it too much.

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Where did you go to college?
A I went to West Virginia University.
Q All right. And did you take classes in photo interpretation there?

A Yes. As part of the -- I was a forestry major, so as part of the forestry curriculum there was aerial photo interpretation classes.

Q All right. I think I know the answer to this, but do you have any particular areas of expertise, in your mind?

A Well, since -- I mean, more recently, I mean, I guess over most of my career -- I started as a photo interpreter for the Superfund Program, looking at hazardous waste sites, but that was only for about a year. Since then it's been primarily Clean Water Act, Section 404, either mapping wetlands, mapping streams, or helping develop enforcement cases, Section 404 enforcement cases.

Q Okay. How many Section 404 enforcement cases do you think you've worked on over the past 30 years, ballpark?

A You know, a hundred maybe.
Q Okay. Are there matters touching on 404 issues that may not be enforcement cases that you've worked on outside of those hundred?
co-authored a couple articles that dealt with the use of aerial photo interpretation, Geographic Information Systems for environmental forensics or, you know, discovering conditions that were -- that occurred in the past and things like that.

Q Okay. Was that published in the -- by the American Bar Association, or do you know?

A The most recent one was published by the American Bar Association.

Q And can you describe the relationship between Section 404 of the Clean Water Act and aerial interpretation?

A Well, aerial photo interpretation is a tool that can support multiple programs and multiple disciplines. In terms of the Clean Water Act, Section 404 , since we're regulating the discharge of dredge or fill material into wetlands or other waters, the photo interpretation aspect comes in handy for identifying and mapping wetlands, streams, and -- streams, the connections between the wetlands and the streams.

And then over time, you can see changes to those wetlands or streams, either from manmade or natural changes, through photo interpretation.

Q And you talked, when you were discussing one of your publications, about GIS. What does GIS mean?

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A Yes.
Q Okay. In the course of your work for the last 30 years at EPA, can you estimate or approximate the number of images you've viewed or interpreted?

A Well, that would -- yeah, I mean, since 1980
when I graduated from college, it had to be thousands of individual images.

Q All right. Do you teach any courses within EPA or put on seminars within EPA related to your area of expertise?

A I do, yes.
Q And how often do you do that?
A Oh, probably on average once every couple years. There was a timeframe when I was doing it every year, then I'd skip a few years, and I just did one in Philadelphia, June of this year.

Q All right. Have you authored any
professional publications related to aerial photography?

A I've authored -- I've authored a couple of them, yes.

Q Okay. And can you just kind of describe what you've done in that field?

A Well, the most recent ones, I'd have to look back at my resume for the title, but I either wrote or

A GIS is Geographic Information Systems.
Q And what is that?
A Well, it's a -- that's a computer-based
system of organizing geospacial data, aerial photos, georeference maps, other digital georeference data such as streams, soils, wetlands. It's a way of organizing all of that in a structure in the software, viewing it, analyzing it.

Q Is there a software that you primarily rely upon --

A Yes.
Q -- for photo interpretation?
A Yes. It's the ESRI ARC map software.
Q Okay. And how long have you been using ARC map -- ARC map software, excuse me.

A Probably since around 2000 or 2001, I guess.
Q Okay. Have you testified in court before like we're here today?

A Yes.
Q On, I think, your CV it looks like maybe 20,
24 or 25 times. Does that sound right?
A Correct.
Q And in each of those cases, were you proffered as an expert?

A Yes.

Q Have you ever been disqualified by a court as an expert?

A No.
Q We're going to get into this in more detail, but can you just kind of generally describe how you use your expertise in aerial interpretation in analyzing water bodies with respect to the Clean Water Act? Kind of what you do.

A Well, I mean, the first -- the first step would be someone identifies a particular area that they're interested in looking at, a site or an area, and then I would -- and they ask me to get involved, then I would begin acquiring aerial photography and other maps and other data of the area.

So, you know, it sort of starts with the identification of a site, the acquisition of aerial photos and other information that's relevant, and then analyzing it.

When I use the Geographic Information System as my tool for viewing and analyzing the aerial photos and the other data -- so, you know, acquisition and analysis, you know, and frequently the analysis is were there wetlands, how -- you know, how long have they been there, how have they changed, are the hydrologically connected to other waters. And then,

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you know, have there been more recent changes or impacts to them, so that's typically what I'm asked to look for and analyze.

And then, you know, form opinions or results and draft a report.

Q And what is your mindset when you approach a new case or a new matter?

A Well, it's, you know, always with interest, and I'm interested in seeing what the photography can do and what the aerial photos say about the facts supporting a case.

Q Is your job to be neutral or in favor of the Agency or otherwise?

A Neutral.
Q And what kind of weight do you give to -- in a particular case if other people have drawn conclusions about a water body, what kind of weight do you give that?

A Well, if I'm provided somebody else's report or information, I review that. I look at their information. Sometimes it's geographic information I can put into my software and compare it to my own information.

Q How are you being compensated in this matter?

A As my salary as a federal government employee.

Q Okay. Nothing extra?
A No.
Q I want to talk about some general terms that you use in your report and that we've been using in court the last day.

Can you describe the difference between an intermittent and ephemeral water body?

A Well, as a -- in terms of how I would define them, I guess starting with the ephemeral type of stream, it's a -- it's a stream or a water body that flows in response to rainfall events primarily. The rainfall stops, the ephemeral stream quits flowing.

Intermittent streams also respond to rainfall events but they have a groundwater component to it, at least for some parts of the year, so they would flow longer, they would flow as a result of rainfall events but also groundwater that would contribute flow when it's not -- in the periods when it's not raining.

Q Do ephemeral streams typically have interaction with groundwater?

A Yes. The groundwater table -- an ephemeral stream intersects the higher groundwater table, at
least at certain times of the year.
Q Okay. And then a perennial stream, what is that?

A A perennial stream is a stream that flows year-round. It also responds to rainfall events and snow-melt, but it has a groundwater component that keeps it flowing all year, whether there is -- in most years -- whether there is rainfall or not.

Q Can characteristics of water bodies, streams, tributaries, lakes, things like that, be observed through aerial imagery?

A Yes, some of the characteristics can. Yes.
Q All right. What characteristics can be seen on aerial imagery that are indicative of a seasonal intermittent tributary?

A Well, streams are identifiable from the aerial photography by their curvilinear shape, their dendritic sort of branching pattern, tree-like branching pattern. Frequently you can see them -they have a riparian zone or, you know, a vegetative zone that follows a stream corridor that helps you identify the network, the stream and the network of streams in an area.

Intermittent streams typically are, you know, pronounced geographic features. They express

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| 1 | themselves in the topography of land. They have water | 1 | able to see water in an aerial image definitive of |
| 2 | -- you know, you can determine watershed size and | 2 | what type of stream it would be? |
| 3 | compare that. | 3 | A No. |
| 4 | Q What do you mean by curvilinear? | 4 | Q The case we're here to discuss is the C\&S |
| 5 | A Well, you know, streams are not -- unless | 5 | Enterprise case. Do you remember how you first |
| 6 | they're ditches, are not linear. They curve, but I | 6 | learned of this matter, sir? |
| 7 | use this term "curvilinear". They're curving but | 7 | A Yes. I received an email from Delia Garcia, |
| 8 | linear, they go from point A to point B. | 8 | you know, sending me a map, sending some other |
| 9 | Q Okay. In your report, which we'll talk | 9 | information, and asking me what I thought about this. |
| 10 | about quite a bit later, which is AX-31, you talk | 10 | Q All right. And I think I have that. I'm |
| 11 | about dark photographic tones. How do those play into | 11 | going to show you what's been marked as AX-13. This |
| 12 | your analysis? | 12 | is page 1 . |
| 13 | A Well, water exhibits dark photographic tones | 13 | Is that the email that you received? |
| 14 | on aerial photography. Water, soil, moisture tend to | 14 | A Yes. |
| 15 | have darker photographic tones. And so in terms of a | 15 | Q Okay. I'm going to zoom out a little bit. |
| 16 | stream, you -- you know, if there is water in there, | 16 | Everyone here knows I messed this up yesterday, so |
| 17 | you can see it, it could have a dark photographic | 17 | sensitive about it. |
| 18 | linear tone. You know, shadow can also create a dark | 18 | Okay. Can you just kind of generally |
| 19 | tone on an aerial photograph. But water tends to | 19 | describe the contents of this email? |
| 20 | absorb light more and creates a dark signature. | 20 | A So, the bottom part is her email to me, |
| 21 | Q Are wet areas on a photo typically darker as | 21 | discussing this case, and she sent me some |
| 22 | well? | 22 | information. It looks like she's attached a |
| 23 | A They are. Wet soils, moist soils are darker | 23 | PowerPoint presentation, which was -- contained aerial |
| 24 | than dry soils. | 24 | photographs. |
| 25 | Q All right. Are you able to observe features | 25 | Q Did you review that PowerPoint presentation? |
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| 1 | of a bed and bank in a stream through aerial imagery, | 1 | A Yes. |
| 2 | if you can see it? | 2 | Q All right. And was that the end of your |
| 3 | A Right. So, aerial photography comes in | 3 | analysis in this case? |
| 4 | varieties of scales and altitudes flown and times of | 4 | A It was the end at this point in time, which |
| 5 | year. But if the scale is correct, the resolution is | 5 | is December of last year. |
| 6 | correct, the time of year is correct, you can see the | 6 | Q Okay. And between that time and coming here |
| 7 | bed and bank features of a stream. You can see point | 7 | today, did you do anything else? |
| 8 | bars, sandbars, the banks casting shadow, features | 8 | A Yes. |
| 9 | like that. | 9 | Q Okay. We're going to talk about that. |
| 10 | Q Are you ever able to see actual water in | 10 | When you received this email, do you |
| 11 | streams on aerial imagery? | 11 | remember what you initially reviewed? |
| 12 | A Yes, on occasion, particularly the larger | 12 | A I reviewed the PowerPoint that she sent. I |
| 13 | streams and rivers. Sometimes on the smaller | 13 | believe I created an ARC map project; you know, opened |
| 14 | tributaries, you can see water on occasion. | 14 | up the software, loaded in some geospatial data, |
| 15 | Q Okay. And if you're unable to see water, | 15 | zoomed to the area, and looked at some basic |
| 16 | what does that tell you? | 16 | information on the GIS, but not a lot at that time. |
| 17 | A Well, I mean, a lot of times these | 17 | Q Okay. And you say you believe the |
| 18 | tributaries have dense vegetative cover, riparian | 18 | information supports the tributary as an intermittent |
| 19 | cover or they're in the forest so you very seldom can | 19 | stream, which we have argued many times equals |
| 20 | see their channel anyway, and so but not being able to | 20 | relatively permanent. Was that based upon your |
| 21 | see water, it's not surprising. So, it's -- it's | 21 | initial review? |
| 22 | something that I -- you know, it's just not surprising | 22 | A Yes. |
| 23 | if you can't see water in a vegetative stream. | 23 | Q Okay. Ultimately, did the work that you |
| 24 | Q And so I think I know the answer to this, | 24 | performed in this case lead itself to you creating a |
| 25 | but is the presence of or lack thereof of you being | 25 | report? |

A Yes.
Q Okay. And that's Exhibit 31. What did you mean by relatively permanent in AX-13?

A Well, relatively permanent is, as I used it then, it's a relatively permanent geographic feature. You know, it's been around a long time. I could tell by the aerial photos, and also mapped as intermittent by the U.S. Geological Survey. You know, I put those factors together and considered it to be relatively permanent in flow as well, at least in terms of the guidance that the Agency has put out interpreting what relatively permanent is, which is seasonal flow.

Q And did anything you reviewed after the date of this email change your opinion that this was a relatively permanent water?

A No.
Q Can you describe for us what you mean by the term in your report "watershed"?

A Watershed?
Q Yes.
A Watershed, watershed is the area of land where when precipitation falls, it's the area that gathers that moisture and rainfall and runoff and puts it in a -- you know, points it downstream to a tributary. It's the area of a -- that contributes to
them yourself versus relying upon others?
A Well, I mean, in the case of a PowerPoint presentation, for instance, it's -- the image that I could acquire somewhere else has probably been clipped to a smaller geographic area. I don't know what the resolution preservation aspects of it would be in the PowerPoint, so I like to go back to the original data and get it; you know, the original resolution data.

Q Did you do that with every single photo -with all of the photos that you were provided copies of from EPA?

A Yes.
Q Can you tell us the sources that you recall from which you -- you acquired images? Excuse me.

A Right. So, the primary sources would be the U.S. Geological Survey, state data warehouses. In this case it was Ohio State University -- Iowa State University, I'm sorry. There is a private vendor of satellite images called Digital Globe, and then there's a private vendor of low-altitude oblique aerial photography named Pictometry, called Pictometry. And then -- so those are the sources I used in this case.

Q Okay. And I know these terms are familiar to you, but what does oblique mean?

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a tributary.
Q Okay. Is that precipitation and groundwater or both in a watershed?

A Well, water -- it's both, yes.
Q Okay. I want to talk a little bit about the methods that you employed in this case. The first one I believe was acquisition. Can you tell us what acquisition is in your field?

A Well, again, it's researching public databases for information, aerial photos, maps, other data that covers the area of interest, and acquiring that imagery, for instance, or other data. And generally, when I'm acquiring the imagery or other data, I'm using several federal sources. I also use the, you know, state, state data warehouses, so it's researching and acquiring data from repositories of data.

Q And did you seek out images yourself using that method in this matter or did you just rely upon images sent to you by EPA?

A No, I seeked out and acquired my own images.
Q Okay.
A Which happened to be a lot of the same images but I acquired them myself.

Q Okay. And what's the purpose of acquiring

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A So, oblique is an aerial photograph that's taken on an angle. Most aerial photographs are taken vertically down from a camera point straight down. Obliques are taken from an angle.

Q Okay. And how do you use oblique imagery?
A Well, I use it the same way as vertical
aerial photography. I interpret it for features of interest.

Q Do you recall how many images, approximately, you acquired related to this matter in this case?

A Thirty-five or 37 images.
Q Okay. And are those images contained in AX10, Agency Exhibit 10, and Agency Exhibit 31, which is your report?

A And AX-10 is the PowerPoint presentation?
Q It's kind of a catalogue of about 22 images.
A Yeah, I compared that to my own report, and I believe if you combine the two -- I think I've obtained some images that may not have been in AX-10 and AX-10 may have had an image or so that I didn't obtain and didn't use in my report.

So, if you combine those, that would be the data set.

Q Okay. In the course of your review in this
matter and preparing your report, did you look at other information other than images?

A Yes.
Q What else did you look at?
A So, I looked at U.S. Geological Survey maps.
I looked at the National Hydrography database, which is USGS's digital stream database. There was LIDAR imagery available, and I looked at some of that. There was also stream stats, which is another U.S. Geological Survey application to map out the watershed of this small tributary. I can't think of what other off the top of my head.

Q And in your report did you try to include everything that you -- referenced everything that you reviewed?

A Yes.
Q All right. Did you look at any photographs that appeared to you to be taken from the ground at the facility or at this property?

A Yes.
Q You referenced, I think it was the National Hydrog -- Hy --

A Hydrography.
Q -- Hydrography database. What is that?
A So, that's the U.S. Geological Survey's

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digital steam mapping. So, it's --
Q How did that help you in this case?
A Well, whenever I'm looking at tributaries, I
like to see what the U.S. Geological Survey has said about that stream or how they mapped it, and how they characterize it. And so that's one source of information.

In addition to their topo maps themselves,
which you can see the line drawn on the topo map, they publish the digital lines, which then you can overlay on your own aerial photography separate from the map.

Q All right. When you're looking at a 404
case, do you sometimes look at precipitation data?
A Yes.
Q Okay. And I think that was one of the things that you suggested might be helpful in response to Dr. Garcia's email. Do you recall that?

A Yes. I didn't see it when you put it up there just then, but I recall mentioning that.

Q Okay. And what's the purpose of looking at precipitation data when reviewing a 404 case?

A Well, I mean, there's a couple of things.
The total annual precipitation in an area is a factor in terms of stream flow. Then the monthly precipitation is also information that you can --
helps you understand stream flow. So, the precipitation just helps you understand the area and what you might expect in the way of stream flow.

Q Do you recall the average precipitation based on the data you reviewed of the Deep River, Iowa, area?

A Yes. In this case I believe it was 37 inches annually, on average.

Q And do you draw any conclusions from the annual rainfall of approximately 37 inches and the size of this watershed, how that plays into this matter?

A Well, I've done this kind of comparison, you know, throughout my career in terms of, you know, watershed size and annual precipitation. So, that's what I did here, and what I concluded is the precipitation in this part of Iowa is similar to where I live in Virginia. We get about 39 inches, so it's fairly moist, fairly wet, consistent throughout the months pretty consistent.

And then I factored that into the watershed of approximately 100 acres and, you know, thought about that and compared that to other sites and streams that I've looked at, and that, you know, helped form my opinion about this stream being an

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intermittent stream.
Q Okay. Did you do a site visit in this case to actual on-the-ground?

A No.
Q Okay. Was a site visit necessary in this case to render your opinions?

A Not -- no, not the opinions I put in the report.

Q Okay. Can you explain why it wasn't necessary?

A Well, in my report I'm interpreting aerial photographs and just describing what I see, and I'm comparing it to other information like mapping, the U.S. Geological Survey, and then comparing things like watershed size and just relating that to my experience in mapping streams.

Q And in your review of the photographs -well, let me strike that.

EPA is alleging in this case that this tributary was filled by the Respondent in this case. Have you looked at aerial imagery before and after 2015?

A Yes.
Q Okay. And is it your understanding that the conditions of the tributary have changed or are not
the same today versus what they were before 2015 ?
A Yes.
Q Okay. But you did look at photographs of the ground that others took following the fill, correct?

A Yes.
Q Did those ground photographs in any way influence your opinions in this case?

A Well, they helped me -- I remember a couple of them. You know, one showed some sort of drop inlet where water would flow into a pipe system. I saw some pictures of the tributary upstream from the impacts, some of the conditions and features up there. So, they helped me just get a better understanding of this tributary and what happened.

Q I want to talk a little bit about USGS. What is the USGS?

A The USGS is the U.S. Geological Survey.
Q All right. And what do they do with respect to streams such as the one at issue here?

A Well, they -- you know, a long time ago they were charged to create maps of the United States, and -- topo maps, and they also included streams and stream mapping on those maps. So, they map streams, they map topography, they map features and they create

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maps. It's one of the things they do.
Q Do you know if the USGS has mapped the particular tributary at issue in this case?

A Yes.
Q Do you know how long they had mapped that?
A I think it was -- the first map that I found was, I believe, 1968.

Q Okay.
A That was their first published map that I found.

Q And do you know how the USGS classified this stream?

A The mapped it as an intermittent stream.
Q All right. And in your experience working for EPA, can streams that are classified as intermittent streams by the USGS be jurisdictional waters of the United States under the Clean Water Act?

A Yes, particularly in the eastern United
States. That doesn't apply as well out West where they map intermittent streams in Arizona, for instance, which don't have -- they don't have the flow characteristics in the East. But it's my experience in the East, if it's mapped as an intermittent stream, it's frequently a seasonal flowing stream.

Q And what do you consider to be the West
geographically when you make that statement?
A Oh, west of the 100th parallel or whatever.
Q What states does that run through?
A Oh.
Q Sorry.
A You know, western Kansas where the precipitation starts dropping off into the, you know. 10 to 15 inches a year and then less.

Q Are you able to pull up on your computer your ArcGIS program and just kind of give us a little run-through of how you use it?

A Yes.
Q Okay. Let's see if we can pull this up, and once it gets set up, I'll ask you a couple questions, okay?

A Okay. I mean, it's set up now. Maybe I'll just zoom out a little bit so that there is sort of a larger geographic area.

Q Okay. Can you just kind of just take us through, it doesn't necessarily need to be specific to this case 'cause I'm going to run through a lot of these images with you, but can you just summarize for us an abbreviated version of kind of what you do when using ArcGIS to analyze an aerial image?

A Well, I mean, one of the first things -- I

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guess you can see there's a table of contents on the left which contains all the data, all the aerial
photographs and all the other maps, and then -- all the other geospacial data. So, that's -- those layers I can turn on and turn off.

This is a black-and-white satellite image covering the general area of where this unnamed tributary is located. You know, as a photo interpreter, I mean, you can determine the presence of roads, linear light-tone features, roads, road networks. These dark areas, these dark features are ponds. I mentioned that water tends to absorb light and therefore they don't reflect a lot of light back and they look dark.

You can see some of the -- well, you can see this feature here is Deep Creek. It's sort of a curvilinear feature that this tributary flows into, and you can see -- you can actually see the tributary -- I'm zoomed fairly far out right now, but you can see the tributary and its branching pattern.

This is not a predominantly forested area. It's predominantly an agricultural area. That's another thing that's evident on this aerial photograph. The only forested areas are, you know, this sort of rough-textured area here. There is some

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| 1 | more over here to the lower right-hand corner. | 1 | off the top of the photograph a little bit. |
| 2 | So, that's just sort of generally. And | 2 | Q Okay. |
| 3 | then, you know, I would use the tool to scroll around | 3 | (Pause.) |
| 4 | and search wider areas if I need to, and then I can | 4 | Okay, I am publishing this exhibit here, |
| 5 | also zoom in to areas of interest. | 5 | AX-31, Appendix B, page 28. You've outlined |
| 6 | Q The photographs that you're looking at, do | 6 | approximately the watershed. A little bit of it got |
| 7 | you know the date of that photo? | 7 | cut off on the top, is that right? |
| 8 | A This is July, I believe it's July 3, 2010. | 8 | A Yes. |
| 9 | Q Okay. And are you able to overlay layers on | 9 | Q All right. And if that was fully drawn and |
| 10 | top of that photograph, or on top of photographs in | 10 | accurate, you believe that to be about 100 acres? |
| 11 | ArcGIS? | 11 | A Yes. |
| 12 | A Yes. | 12 | Q And where does that information come from? |
| 13 | Q And can you just kind of demonstrate for us | 13 | A That comes from the stream stats |
| 14 | -- and this is going to show up odd on the record, but | 14 | application. I didn't explain it. The way that works |
| 15 | I just want everyone to see kind of the methods that | 15 | is you can put a point -- on the web-based |
| 16 | you employ? | 16 | application, which is a map base, you can put a point |
| 17 | A So, I mean, one of the things I could do | 17 | on any tributary and it will then -- and you ask it to |
| 18 | would be overlay what I've already mentioned, the NHD, | 18 | delineate the watershed, it will delineate the |
| 19 | the National Hydrography Data, and I don't know if you | 19 | watershed above that point on any tributary. |
| 20 | can see that, but a blue line has now appeared where | 20 | In this case, I asked it to delineate the |
| 21 | this tributary is located as well as the other | 21 | watershed where the unnamed tributary flows into Deep |
| 22 | tributaries, Deep Creek, and some of the others that | 22 | Creek. |
| 23 | are just on this image. | 23 | Q Okay. |
| 24 | There's also a watershed boundary I could | 24 | A And that's the product that comes out of it |
| 25 | put on there which -- we'll see part of it, but not | 25 | is that -- that purple line that I showed you earlier. |
|  | Page 308 |  | Page 310 |
| 1 | all of it. | 1 | Q Okay. And this drawing that you made is |
| 2 | Q And where does the watershed boundary come | 2 | intended to approximate the purple line, albeit the |
| 3 | from? | 3 | purple line is probably more accurate. |
| 4 | A So, this came from stream stats, which is a | 4 | A Yes. |
| 5 | U.S. Geological Survey application that -- it covers | 5 | Q Okay. Can we go back to his -- thank you. |
| 6 | most of the states in the United States. | 6 | MR. BIERI: Judge, do you mind if I mark |
| 7 | Q Okay. And if I handed you a map that was | 7 | this, remark this exhibit? |
| 8 | scrolled out, or sorry, zoomed out a little bit more, | 8 | JUDGE BIRO: No. |
| 9 | would you be able to circle or outline approximately | 9 | MR. BIERI: Okay, thank you. |
| 10 | the watershed in this case? | 10 | JUDGE BIRO: What are we going to call it |
| 11 | A Yes. | 11 | now? |
| 12 | MR. BIERI: Okay. Your Honor, may I | 12 | MR. BIERI: Oh, it's going to have a long |
| 13 | approach? | 13 | one. How about we call it AX-31, Appendix B, page |
| 14 | JUDGE BIRO: Yes, you may. | 14 | 28A? I would move to admit that, Your Honor. |
| 15 | BY MR. BIERI: | 15 | MR. McAFEE: No objection, Your Honor. |
| 16 | Q Thanks, and then I'll put this back up after | 16 | JUDGE BIRO: So AX-31, Appendix B, page 25A? |
| 17 | you do it, Mr. Stokely. | 17 | MR. BIERI: 28A. |
| 18 | I'm going to hand you what's been marked as | 18 | JUDGE BIRO: 28 A is admitted into the |
| 19 | Agency Exhibit 31. This is Appendix B to your report, | 19 | record. |
| 20 | Mr. Stokely, and it's page 28 of 38. | 20 | (The document referred to was |
| 21 | And if you don't mind, if you could outline | 21 | marked for identification as |
| 22 | the watershed and then I'll show it to everybody. | 22 | Agency's Exhibit AX-31, |
| 23 | A I mean, this is approximate. | 23 | Appendix B, 28A and was |
| 24 | Q Sure. | 24 | received in evidence.) |
| 25 | A I think it may go up -- I think it may go | 25 | MR. BIERI: Thank you. |

$$
\text { Page } 311
$$

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|  | Page 311 |  | Page 313 |
| :---: | :---: | :---: | :---: |
| 1 | BY MR. BIERI: | 1 | A 2018. |
| 2 | Q And we're looking at a portion of the | 2 | Q Okay. And so would the time period of the |
| 3 | watershed back on the ArcGIS, is that correct? | 3 | photographs you reviewed have spanned from the '30s to |
| 4 | A Yes. | 4 | 2018? |
| 5 | Q Okay. And so can you describe if -- there | 5 | A Yes. |
| 6 | we go. If rain falls in this area within that | 6 | Q All right. Were you able to observe the |
| 7 | watershed, what will happen? | 7 | stream channel in every single image? |
| 8 | A Well, that's the watershed that will collect | 8 | A No. |
| 9 | the runoff and send it to the tributary in question. | 9 | Q Okay. And I believe your report says, of |
| 10 | It's the watershed of the tributary. | 10 | those 35 days, you were able to observe the stream |
| 11 | Q Okay. Of the unnamed tributary? | 11 | channel I think 18 times. Does that seem about right? |
| 12 | A Yes. | 12 | A Yes. |
| 13 | Q Okay. And then how is that water then, or | 13 | Q Okay. And do you recall of those 18 times |
| 14 | is that water then conveyed to Deep Creek? | 14 | you were able to observe the streams how many times |
| 15 | A Yes. | 15 | you saw water? |
| 16 | Q Okay. And how? | 16 | A I believe it was 10 instances. |
| 17 | A Through a channel or through channelized | 17 | Q All right. And I have this -- so it's okay |
| 18 | flow. | 18 | if you can't remember, you don't have your report in |
| 19 | Q Okay. In the tributary? | 19 | front of you, but do you recall what months of the |
| 20 | A Yes. | 20 | year of those images that you were able to observe |
| 21 | Q Okay. Now, this was an abbreviated | 21 | water? |
| 22 | demonstration. I want to ask you this. Did you do a | 22 | A I believe it ranged March, April, June, and |
| 23 | process similar to this with each and every photograph | 23 | July. |
| 24 | that you reviewed in this case? | 24 | Q All right. Did you make an effort to |
| 25 | A Yes. | 25 | reflect some of your observations of water in the |
|  | Page 312 |  | Page 314 |
| 1 | Q Okay. And how much time would you spend in | 1 | channel and related things in your report? |
| 2 | ArcGIS, would you think, with each one? | 2 | A Yes. |
| 3 | A Well, I mean, I probably spent, well, 40, 60 | 3 | Q All right. And I believe Appendix A to your |
| 4 | hours on this case. | 4 | report talks a little bit about that, and in Appendix |
| 5 | Q Okay. And what portion of that do you think | 5 | A to your report, AX-31, starting on page 23, you have |
| 6 | was looking at GIS photos? | 6 | listed image date, water in channel and notes, and |
| 7 | A Well, a good deal of it was. I mean, part | 7 | you've got three columns. Do you recall that? |
| 8 | of it was report writing, but a good deal of it would | 8 | A Yes. |
| 9 | have been the analysis aspect. | 9 | (Pause.) |
| 10 | Q All right. You looked at 35-plus | 10 | Q Okay. Okay, the column entitled "Water In |
| 11 | photographs. On how many of those photographs were | 11 | The Channel", you would use three terms: "no," |
| 12 | you able to observe at least a portion of this stream? | 12 | "probable" and "yes". What did you mean by no in your |
| 13 | A Well, I was able to observe this tributary | 13 | report? |
| 14 | on all, all of them. | 14 | A No meant that I couldn't see water in the |
| 15 | Q Okay. And those 35-some odd photographs, do | 15 | channel. |
| 16 | you know what time period they span? | 16 | Q Okay. Does that mean that you're opining |
| 17 | A They span all the seasons, summer, winter, | 17 | that there was not water in the channel on that date? |
| 18 | spring. | 18 | A No, it's just that the -- that the |
| 19 | Q Okay. The first one you looked at was from | 19 | vegetation cover or the resolution of the imagery did |
| 20 | the '30s? | 20 | not allow me to see it. |
| 21 | A Yes. | 21 | Q All right, and I'm going to show you a |
| 22 | Q Do you remember -- from the 1930s? | 22 | portion of your report from AX-31, page 23. Okay, |
| 23 | A Yes. | 23 | when you use the term "resolution" or "season |
| 24 | Q And do you recall what the most recent image | 24 | limiting" under the notes, what does that mean? |
| 25 | you looked at was? | 25 | A That's when the resolution imagery and also |


|  | Page 315 |  | Page 317 |
| :---: | :---: | :---: | :---: |
| 1 | the time of year, heavily vegetated or what have you, | 1 | Q Can you see that, Mr. Stokely? |
| 2 | would limit my ability to see the channel and see | 2 | A Yes. |
| 3 | water in the channel. | 3 | Q This resolution may not be as good as what |
| 4 | Q Okay. And it looks -- under notes, you also | 4 | you're used to on a computer. What's the date of this |
| 5 | included some notes about precipitation, is that | 5 | image? |
| 6 | right? | 6 | A This is the circa 1930s. I don't believe we |
| 7 | A Yes. | 7 | know exactly what the year was, but circa 1930s. |
| 8 | Q Okay. There was another phrase that I just | 8 | Q Okay. And did you apply the labels? |
| 9 | wanted to make sure I knew what you were talking | 9 | There's kind of a big label and then three other |
| 10 | about, is "canopy limiting". You can see it where -- | 10 | labels. Did you apply those? |
| 11 | right here under 423.94. | 11 | A No. |
| 12 | A Yes. | 12 | Q Okay. In your review of this case, do you |
| 13 | Q What does that mean? | 13 | have any reason to dispute the accuracy of the |
| 14 | A So, I think I was just using -- these were | 14 | location of any of the labels? |
| 15 | notes kind of like I was taking as I was doing | 15 | A No. |
| 16 | analysis, so I was using the term "canopy" or "season" | 16 | Q Okay. Can you describe the characteristics |
| 17 | probably interchangeably. | 17 | you see or what you see in this photo from an aerial |
| 18 | Q Okay. And you used the term "yes" for water | 18 | interpretation perspective? |
| 19 | in the channel. What does that mean? | 19 | A Well, you can see the unnamed tributary in |
| 20 | A Yes means I believe I actually saw water in | 20 | question -- and I can't point to this, can I? |
| 21 | the channel. | 21 | Q You can draw -- actually, you can draw on |
| 22 | Q Okay. And the phrase "probable", what does | 22 | that. |
| 23 | that mean in your report on this table in Appendix A | 23 | JUDGE BIRO: Yes, you can touch the screen. |
| 24 | of Exhibit 31? | 24 | THE WITNESS: I can touch the screen? |
| 25 | A So, probable is more of a -- you know, I | 25 | MR. BIERI: Yes. |
|  | Page 316 |  | Page 318 |
| 1 | believe there is a good chance there's water in there. | 1 | THE WITNESS: Okay. Well, the unnamed |
| 2 | I didn't directly see it but I'm inferring it from | 2 | tributary flows diagonally from the northwest to the |
| 3 | other conditions in the area such as other | 3 | southeast through here like that. And although you |
| 4 | tributaries, other tributaries looking like they may | 4 | really can't see it very well, it flows down to Deep |
| 5 | have water, and also the, you know, rainfall events, | 5 | Creek. So, that's -- that's one thing. |
| 6 | high rainfall for instance the week before. General | 6 | I mean that's -- and there is generally, you |
| 7 | moisture conditions in the area. I'm sort of | 7 | can see agricultural land. Here is Deep Creek, and |
| 8 | inferring it even though I wasn't able to see it. | 8 | then this is -- this is B Avenue right there. This is |
| 9 | Q Okay. And did you cross-reference that or | 9 | sort of a clump of trees. |
| 10 | derive your notes from looking at actual weather data? | 10 | BY MR. BIERI: |
| 11 | A Yes. | 11 | Q All right. And the clump of trees you are |
| 12 | Q Okay. And the weather data, just for the | 12 | pointing to would be underneath the label that says |
| 13 | record, is from -- I'm sorry -- is noted at AX-31, | 13 | "Confinement Building Footprint", correct? |
| 14 | Appendix C. There's 165 pages of weather data. | 14 | A Correct. |
| 15 | Did you procure that weather data or did | 15 | Q Okay. Is there any significance to being |
| 16 | someone else? | 16 | able to view this tributary all the way back to 1930? |
| 17 | A I procured my own -- I procured the weather | 17 | A Well, yes. I mean, it's one of the -- it's |
| 18 | data for the aerial photographs that I was analyzing, | 18 | one of the pieces of information that I used to |
| 19 | and I also believe the region procured the same data. | 19 | determine that this tributary has been there a long |
| 20 | Q Okay. All right, I want to show you some | 20 | time. It's been there historically, 1930s is as far |
| 21 | images now and have you tell us what you see from your | 21 | back as we could go. But it gives me the idea that |
| 22 | expertise. I'm going to start with AX-10, page 1. | 22 | this is a, you know, permanent or relatively permanent |
| 23 | MR. BIERI: Can we zoom out just a hair, | 23 | feature. |
| 24 | sorry, so he can see the full -- thank you. | 24 | Q Okay. I'm going to now show you AX-10, page |
| 25 | BY MR. BIERI: | 25 | 2, looking at -- |

A So, how do we clear these, though?
Q Oh, I can clear them here. Sorry. Got it. No, I got it.

We're now looking at AX-10, page 2. It looks like we're skipping ahead three decades. What's the date on this photo?

A This is circa 1960s.
Q All right. Can you tell us what you see in this photograph?

A So, once again you can see the tributary diagonally going from the northwest to the southeast. I won't -- I'll try not to draw on top of it. And then flowing to Deep Creek.

Now that clump of trees appears to have some buildings where the -- the confinement building footprint is, and you can see the road network and the agricultural land, the fields.

Q And you had talked earlier about curvilinear features and the riparian corridor, and things of that nature. Do you see any of those features on this photograph?

A Yes. So, the tributary itself is what I describe as curvilinear. In places it's linear down near the bottom of it. In other places it's curving, and you can see the vegetation, the texture, the

Q All right. And do you know where this one was sourced?

A This says USDA, Department of Agriculture.
Q Okay. And can you describe for us what you see in this photograph related to the tributary?

A Once again, you can see the unnamed tributary flowing from northwest to southeast and into Deep Creek, and you can see some of the same buildings, roads, fields, Deep Creek. There's another tributary coming into Deep Creek right about there. JUDGE BIRO: And there?
THE WITNESS: I'm sorry. To the eastern side or the right-hand side of the photograph.

## BY MR. BIERI:

Q Just above the label that says AX-10?
A Yes.
Q Okay. Do you have any other observations of that photograph?

A Well, I mean, you can see some of the structures near the confinement building footprint, the road network, but, you know, mainly it's the fact that here you can see the tributary again.

Q Okay. And are you able to on this photograph make out what you see to be a defined channel or not?

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rougher texture of the vegetation; the shadow being cast by the vegetation, and so that's the curvilinear feature that helps me identify that as a tributary.

Deep Creek is similar. You know, it's got a riparian corridor, it's obscuring the creek channel, and that's some of the areas in this photo. And you sort of see how the branching pattern is with the unnamed tributary running into Deep Creek and, you know, it looks like it's forming a Y, but it's like a branching pattern, typical of like dendritic drainage patterns.

Q And the branching pattern that you're noting, is that just to the north of the -- of the flag that says "Approximate end point of impacted stream segment"?

A Yes, that's where the tributary, the unnamed tributary joins Deep Creek, and that's forming sort of a branch in a tree, if you will.

Q Kind of like a mouth.
A A mouth? I'm not sure what you mean.
Q Oh, I said kind of like a mouth, but I could be wrong. Okay.

I'm going to show you now AX-10, page 3, and I will clear that off. What's the date of this image?

A It's -- again, it's the circa 1970s.

A I can see -- I can't see the channel itself with this resolution and the vegetation cover. You can see the path where the channel would be underneath the vegetation.

Q Okay. I'm going to flip this over to AX-10, page 4. Excuse me. Now we're looking at April 22, 1994, is that right?

A Yes.
Q All right. Can you describe for us what you see in that picture?

A Once again, the tributary flowing from the northwest to the southeast. You can actually see on this one -- in the far upper-right, you can see some of the channel features of the tributary where the vegetation covers a little bit less, and then you can see the riparian corridor, the sort of dense trees and shrubs that are lining that tributary, and it's sort of demarcating the tributary.

Q And you said the far upper-right.
A I mean -- excuse me. Far upper-left. I'm sorry.

Q Okay. And are you talking about kind of just to the left of where it says BB Avenue (phonetic) in the upper left-hand corner?

A Yes.

|  | Page 323 |  | Page 325 |
| :---: | :---: | :---: | :---: |
| 1 | Q Okay. All right, I'm going to show you -- | 1 | THE WITNESS: With a marker. |
| 2 | now we're going to move into the 2000s, I believe. | 2 | MR. BIERI: Thank you. |
| 3 | This is AX-10, page 5 . | 3 | BY MR. BIERI: |
| 4 | Okay. This appears to be from April 4, | 4 | Q Mr. Stokely, I think you've only done it |
| 5 | 2009. The image source says Pictometry. What is that | 5 | once, but if you say "Deep Run", do you mean Deep |
| 6 | again? | 6 | Creek? |
| 7 | A Yes. Pictometry is a vendor of oblique | 7 | A Yes. |
| 8 | aerial photography, and this one is an oblique image. | 8 | Q All right. Thank you. |
| 9 | It's not perfectly -- it's not looking straight down | 9 | Okay, I'm going to clear this screen. Okay, |
| 10 | on the ground. It's looking at an angle. | 10 | are you able to see this photograph okay? |
| 11 | Q All right. And can you describe for us the | 11 | A Yes. |
| 12 | conditions that you see in this photograph? And I'm | 12 | Q All right. Kind of want to start that again |
| 13 | probably going to have you actually mark this with a | 13 | and have you describe what you're talking about, and |
| 14 | pen, but you can describe it first. | 14 | then if you make markings on them, I might instruct |
| 15 | A Well, again you can see the tributary | 15 | you to put some labels on what you're -- what you're |
| 16 | flowing from the northwest to the southeast. In this | 16 | marking. |
| 17 | instance, being lower altitude and higher resolution, | 17 | A Okay. |
| 18 | you can see some of the channel characteristics moving | 18 | Q Can you describe what you see here again? |
| 19 | from the northwest to the southeast. So, sort of in | 19 | A Right. So, here once again is the unnamed |
| 20 | the upper-central or upper left-central part of the | 20 | tributary flowing sort of diagonally across the center |
| 21 | photograph, you can see some of the meandering nature | 21 | of the photograph largely. |
| 22 | of the tributary. | 22 | Q All right. |
| 23 | And then you can see the connection, follow | 23 | A Up here in the upper parts where I'm drawing |
| 24 | the tributary down to Deep Run, and it seems like | 24 | an arrow, that's sort of -- that's pointing to some of |
| 25 | there's -- there appears to be a lot of moisture in | 25 | the channel, the meandering channel. Then it flows |
|  | Page 324 |  | Page 326 |
| 1 | the area in general. I'm circling an area in the far | 1 | through the wooded area to the south and east, and |
| 2 | right-hand corner which appears to be moist. You can | 2 | then it straightens out, and this is an interesting |
| 3 | see some additional tributaries in the far upper | 3 | photo here because what I'm pointing to with that |
| 4 | right, Deep Run in the bottom left. | 4 | arrow in the lower center portion is where the channel |
| 5 | Q Are you able to see a defined channel in | 5 | is, but this is one of the photographs where I saw |
| 6 | this photograph? | 6 | water flowing, at least what I believed to be water |
| 7 | A Yes. | 7 | flowing right there where I'm putting that arrow. |
| 8 | Q Okay. And does that extend all the way from | 8 | Q All right. Can you write "water" next to |
| 9 | the top of the photo all the way down to Deep Creek? | 9 | that? |
| 10 | A It extends from the top, and this portion | 10 | A And what's interesting is that it appears to |
| 11 | near the bottom, the straighter portion of the | 11 | me that the water is now for some reason not going |
| 12 | tributary, the channel is hidden by some -- it's not | 12 | underneath the culvert that's there, but has diverted |
| 13 | completely visible, it's hidden by some dense | 13 | itself around, it's flowing over the road and then |
| 14 | vegetation. | 14 | flowing next to the channel. That's how I interpret |
| 15 | Q Okay. | 15 | that image. |
| 16 | A But you can see where it would be. | 16 | So, the channel is where that lower arrow |
| 17 | MR. BIERI: I think I'm going to have you | 17 | is, but the water seems to me to be flowing next to it |
| 18 | mark a couple of things. Judge, may I approach? | 18 | in this instance. |
| 19 | JUDGE BIRO: You may. | 19 | Q And do you see whether there is a continuous |
| 20 | MR. BIERI: Thank you. | 20 | connection to Deep Creek in that photograph? |
| 21 | JUDGE BIRO: Would you like Mr. Stokely to | 21 | A Well, you can see the channel in places, I |
| 22 | stand with you at the bench? | 22 | believe, if you look further south and east, but |
| 23 | MR. BIERI: Yes. | 23 | what's always been a little difficult is in this |
| 24 | JUDGE BIRO: Okay. | 24 | densely wooded area that the channel is hard to make |
| 25 | MR. BIERI: Okay. Can you come stand by me? | 25 | out, and so I wouldn't want to overreach and say I can | ponds frequently. It's like a shallow trench, and so

actually see it on this, you know, print right now.
Q Okay. And when you're talking about the presence of water, how do you -- how do you delineate water versus shadows?

A Well, so, you know, shadow can definitely obscure the presence of water and can make it -- fool you to think there is water there. So, what I did -with that in mind, I look for other evidence of water. Like in this instance, I see it flowing across what I believe it to be water flowing across the road. That's not shadow. And I would also look at the direction the shadows have been cast in general when determining if I saw the presence of water.

So, it was a process of trying to eliminate other things like shadow and determining, well, hey, I think that in this instance that's water.

Q And are you ever able to compare what is easier to identify as water with, you know, what might be in a stream?

A I didn't understand.
Q Are you able -- like this feature that I'm pointing out, which is just north of the exhibit label, what do you believe that to be?

A Oh, right, right. So, that's an area that

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that -- it's exhibiting dark photograph tones, there's standing water in that. That feature appears with standing water on several aerial photographs.

Q Okay. And are you able to compare the color or the features of that with water in the channel to determine whether -- whether you see water in the channel?

A Well, it's generally dark photographic tone. In this case there is some other greens, light greens in there, but mainly it's the cl -- the linear, curvilinear dark-tone feature.

Q Okay. Do you have any other observations about this photograph?

A Those are the main ones. I mean, we can still see the different wooded areas and the confinement barn footprint and those type of things.

Q Okay. And is this an oblique image?
A Yes.
Q Okay. All right, I'm going to show you now --

MR. McAFEE: Excuse me. Excuse me, Britt. MR. BIERI: Oh, sorry.
MR. McAFEE: Sorry to interrupt, Your Honor.
There are some arrows on there that he has described things, but they're in his testimony and I'm not sure
it will show up in the transcript what -- how they relate to the arrows.

JUDGE BIRO: Right, they're just all arrows.
MR. McAFEE: Right.
JUDGE BIRO: So maybe you can mark them as A or B or put a written description on them.

MR. BIERI: Yeah.
MR. McAFEE: If you would. Thank you. BY MR. BIERI:
Q Why don't you mark that as A and describe what it is again, the first one? Describe what you're marking as A.

A Right. What I'm marking as A is an arrow pointing to a meandering channel segment on the unnamed tributary. What I'm marking as B is an arrow pointing to the location of a channel within the sort of dense, herbaceous and shrubbish vegetation that's in that area, and that's B.

And C, I believe what I was pointing to was my interpretation that there is water flowing next to the channel. There may be water in the channel, but there appears to be flowing in the channel or next to the channel as well for some reason in that date. And then $D$ is just that sort of prominent ponded area, depression.

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MR. BIERI: Thank you. Judge, I remarked this as AX-10, 5A. I would like to admit it into evidence.

JUDGE BIRO: We already have an AX-10, 5A.
MR. BIERI: B. Sorry. AX-10, 5B.
MR. McAFEE: No objection.
JUDGE BIRO: Okay.
MR. BIERI: Thank you.
JUDGE BIRO: AX-10, 5B is admitted into the record.

> (The document referred to was marked for identification as
> Agency's Exhibit No. AX-10, 5B, and was received in evidence.)

BY MR. BIERI:
Q Okay, Mr. Stokely, I am now handing you what's been marked as AX-10, page 7. Can you describe what we're looking at here?

A Yes, this is a vertical satellite image dated March 14, 2010.

Q All right. And what do you see with respect to the tributary in this photograph?

A Well, you can see it again flowing diagonally from the upper left to lower right. I'm
going to mark a -- and again, that curvy meandering channel is clear in that area. You can also -- you can also see that, you know, fairly well see the channel -- and this is just a paper print, by the way. You can still fairly well see the channel through the wooded area because the leaves are off, the leaves off, and you can make out the channel characteristics better in that case.

And you can see -- if you look closely you can see the connection. The channel in this case is right here, B. You can observe the channel as it connects to Deep Creek.

Q Okay. And were you able to observe water in this photograph when you looked at it on ArcGIS, at least?

A Yes. I'm trying -- you know, trying to differentiate between what could be shadow up in the upper part. I looked closely down the lower part, and I think in this instance -- and it's not super-clear from this print, but the water that I believe I saw is what I'm marking as C, and it's sort of a gray-tone signature similar to what Deep Run was exhibiting -Deep Creek was exhibiting at the same time. So, that was how I concluded water in this image.

Q All right.

MR. McAFEE: I was making some notes here.
I want to make sure.
MR. BIERI: Sure. Can you see that?
MR. McAFEE: Yes, thank you. No objection, Your Honor.

MR. BIERI: All right.
JUDGE BIRO: AX-10, 7B is admitted into the record.

MR. BIERI: Yes.
(The document referred to was marked for identification as Agency's Exhibit No. AX-10, 7B and was received in evidence.)
BY MR. BIERI:
Q All right, I want to look now at AX-10, page -- excuse me. Page 8. What's the date of this photograph, sir?

A This is July 3, 2010.
Q All right. And can you describe for us what you're seeing in this photograph?

A Yes, there are some markings on here that I'm not sure how they got there.

Q Oh, those are -- bleeding through. Hold on. Hold on while we get that fixed.

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A Present in this image.
Q And are you seeing what you would term to be a defined bed and bank in this photograph at this tributary?

A Yes.
Q And is that throughout?
A Yes.
Q Okay. So, from the approximate starting point of the impacted stream segment flag all the way to Deep Creek.

A Right, with, you know, the caveat that it's always been hard to see the actual channel in the wooded zone of Deep Creek.

Q Sure. If there is a defined bed and bank channel running from basically BB Avenue (phonetic) all the way to just before it enters into Deep Creek, would you expect that channel to go all the way through to Deep Creek?

A Yes.
Q Okay. All right, I'm going to mark this
Exhibit as AX-10, 7B, and we would move to admit that into evidence, Your Honor.

MR. McAFEE: Your Honor, could I just see it quickly again?

MR. BIERI: Yes.
(Pause.)
Sorry about that. Okay, that is a clean copy of AX-10, page 8. Can you describe for us what you're seeing there, Mr. Stokely?

A Yes. This is a digital blowup satellite image dated July 3, 2010.

Q Okay.
A The tributary is readily visible on this one. I'll point to some of the features again. At A, approximately A is the meandering section of the tributary in the upper wooded area.

Q And can you -- we have a clean copy of this already in the record. So, can you kind of draw in where you see the complete curvilinear section?

A Actually trace over it?
Q Yes. All right. What else do you observe?
A And you can see that, you know, that the channel doesn't stop there. It continues to flow in a straighter manner at B. There's the channel clearly visible at B. And you can almost make it out all the way to the Deep Creek in this particular instance.

Q All right. And do you see a defined bed and bank running all the way from the -- where you've marked A, pretty much all the way to Deep Creek?

A Yes.

|  | Page 335 |  | Page 337 |
| :---: | :---: | :---: | :---: |
| 1 | Q All right. Does there appear to be less | 1 | that channel? |
| 2 | vegetation in the lower portion of that unnamed | 2 | A I would expect to see that channel flowing |
| 3 | tributary in this photograph? | 3 | there, be flowing in there, yes. |
| 4 | A Yes. This is not quite as heavily vegetated | 4 | Q Flowing into Deep Creek? |
| 5 | as it was historically. | 5 | A Yes. |
| 6 | Q Okay. Can you see a high, ordinary high- | 6 | MR. BIERI: Okay. Judge, I've marked this |
| 7 | water mark on aerial imagery looking straight from | 7 | as AX-26, 2A, and would move to admit it into |
| 8 | above typically? | 8 | evidence, please. |
| 9 | A No. | 9 | MR. McAFEE: No objection. |
| 10 | Q Okay. But if you see a defined bed and | 10 | MR. BIERI: All right. |
| 11 | bank, would that be indicative that there probably is | 11 | JUDGE BIRO: Okay. Agency Exhibit 26, 2A is |
| 12 | a high-water mark? | 12 | admitted into the record. |
| 13 | A Yes. | 13 | (The document referred to was |
| 14 | MR. BIERI: Judge, I've marked this as AX- | 14 | marked for identification as |
| 15 | 10, 8B. Mr. McAfee, I'll show it to you again. I | 15 | Agency's Exhibit No. AX-26, |
| 16 | would like to move that into evidence, please. | 16 | 2 A and was received in |
| 17 | MR. McAFEE: No objection. | 17 | evidence.) |
| 18 | JUDGE BIRO: Okay. Agency Exhibit 10 at | 18 | MR. BIERI: Thank you, Judge. Okay, I've |
| 19 | page 8 B is admitted into the record. | 19 | got a few more to go through here. |
| 20 | (The document referred to was | 20 | BY MR. BIERI: |
| 21 | marked for identification as | 21 | Q I'm going to show you now what's been marked |
| 22 | Agency's Exhibit AX-10, 8B, | 22 | as AX-10, page 9. Can you tell us the date of that |
| 23 | and was received in | 23 | image, please? |
| 24 | evidence.) | 24 | A This is December 18, 2010. |
| 25 | MR. BIERI: Yes, thank you. | 25 | Q All right. And what are your observations |
|  | Page 336 |  | Page 338 |
| 1 | BY MR. BIERI: | 1 | with respect to the tributary here? |
| 2 | Q I want to show you, Mr. Stokely, what's been | 2 | A Well, the similar observations as before. |
| 3 | marked as AX-26, page 2, which I believe to be a | 3 | There is -- the upper reach of the tributary is an |
| 4 | closeup of the last photograph that we looked at, but | 4 | area where I'm marking A. The little meanders are a |
| 5 | let me know if you agree. | 5 | little bit harder to make out on this particular |
| 6 | A Yes, it is. | 6 | print, but they're up there. You can see some more |
| 7 | Q All right. And can you describe for us the | 7 | channel, I guess, characteristics at B . At C is that |
| 8 | features that you see in this photograph? | 8 | road crossing I mentioned. This time the water |
| 9 | A Well, this is the -- this is the closeup of | 9 | doesn't appear to be flowing over it. There must be a |
| 10 | the lower end of the tributary where it enters into | 10 | culvert there. And then you can see the straighter |
| 11 | Deep Creek, and what -- what you can see is the | 11 | section of channel at $D$. |
| 12 | defined channel A, where I'm annotating A, a linear | 12 | Q All right. Can -- sorry, go ahead. |
| 13 | straight channel. In this instance, I believe there | 13 | A Yeah, that's it. |
| 14 | is water. That's not shadow, that's water in there. | 14 | Q And can you see the channel all the way to |
| 15 | You can make out, let's say B, where it appears that | 15 | Deep Creek there? |
| 16 | water is crossing that road crossing. That road | 16 | A With the exception of the, you know, the |
| 17 | crossing has been there historically and it was sort | 17 | area that's hidden in the shadow and the dense trees |
| 18 | of a permanent feature and it looks like a road is -- | 18 | along Deep Creek, yes. |
| 19 | water is flowing across it at B. | 19 | MR. BIERI: Okay. All right, I'm going to |
| 20 | And you can see the channel almost all the | 20 | mark this as AX-10, 9A, and move to place that into |
| 21 | way to just before it hits the wooded area. | 21 | evidence, Judge. |
| 22 | Q And that's what you marked as C? | 22 | MR. McAFEE: No objection, Your Honor. |
| 23 | A Yeah, that's C. | 23 | MR. BIERI: Thank you. |
| 24 | Q All right. And were it not for the wooded | 24 | JUDGE BIRO: AX-10 at 9A is admitted into |
| 25 | area, what would you expect to see with respect to | 25 | the record. |


|  | Page 339 |  | Page 341 |
| :---: | :---: | :---: | :---: |
| 1 | (The document referred to was | 1 | BY MR. BIERI: |
| 2 | marked for identification as | 2 | Q Mr. Stokely, we're now looking at AX-10, 14, |
| 3 | Agency's Exhibit No. AX-10, | 3 | page 14. What's the date of this image? |
| 4 | 9A and was admitted in | 4 | A September 16, 2014. |
| 5 | evidence.) | 5 | Q All right. And do you have any observations |
| 6 | MR. BIERI: Do you mind if we take a five- | 6 | about this one? |
| 7 | minute break, Your Honor? | 7 | A Well, this is a, you know, growing season, |
| 8 | JUDGE BIRO: No, of course not. We'll stand | 8 | mid-growing season aerial photograph, so everything is |
| 9 | in recess for five minutes. | 9 | vegetated pretty well. The forest canopy in the upper |
| 10 | MR. BIERI: Thank you. | 10 | reach is hiding the channel pretty well. That would |
| 11 | (Whereupon, a short recess was taken.) | 11 | be like at A. You can't really see it because of the |
| 12 | JUDGE BIRO: Okay, Mr. Bieri, please | 12 | trees, but where the trees diminish where I sort of -- |
| 13 | continue. | 13 | where I drew that line, you can pick up the defined |
| 14 | MR. BIERI: Thank you, Judge. | 14 | channel once again at B and C , indicating the presence |
| 15 | BY MR. BIERI: | 15 | of a channel through that lower section of the |
| 16 | Q Okay, Mr. Stokely, I am going to hand you, | 16 | tributary. |
| 17 | or display what's been marked as AX-10, page 12. | 17 | Q All right. And when you say the lower |
| 18 | What's the date of that image? | 18 | section, do you mean south of the line you drew all |
| 19 | A This is June 28, 2013. | 19 | the way to Deep Creek? |
| 20 | Q All right. And can you describe what you | 20 | A Yes. |
| 21 | see in this photograph with respect to the tributary? | 21 | MR. BIERI: All right. Judge, I've remarked |
| 22 | A Well, similar to previous photos, it's | 22 | this as AX-10, 14A, and would move to admit it into |
| 23 | flowing from the northwest to the southeast across the | 23 | evidence. |
| 24 | middle portion of the photograph, fairly dense | 24 | MR. McAFEE: No objection. |
| 25 | vegetation up in that area obscuring the channel | 25 | JUDGE BIRO: AX-10 at 14A is admitted into |
|  | Page 340 |  | Page 342 |
| 1 | characteristics, except it may be right there at A. | 1 | the record. |
| 2 | But as you move further downstream where the | 2 | (The document referred to was |
| 3 | vegetation becomes less, you can see the channel again | 3 | marked for identification as |
| 4 | at B , and again it's a defined channel visible at C . | 4 | Agency's Exhibit No. AX-10, |
| 5 | So, similar to some of the previous years. | 5 | 14 A and was received in |
| 6 | Q All right. Is that a defined channel | 6 | evidence.) |
| 7 | throughout, or can you tell from this picture? | 7 | BY MR. BIERI: |
| 8 | A Right. You can't see it throughout because | 8 | Q All right, I'm now showing you AX-10, page |
| 9 | of the obscuring vegetation, but it's -- you know, | 9 | 15 , Mr. Stokely. What are we looking at here? |
| 10 | it's my opinion that there is a defined channel | 10 | A This is a March 9, 2015, image from Google, |
| 11 | throughout. | 11 | Google Earth, and again this is a -- being March, |
| 12 | Q Throughout from the top of the photograph | 12 | early March, the leaves are not out on the trees and |
| 13 | all the way to Deep Creek? | 13 | it is very -- the channel characteristics are very |
| 14 | A Yes. | 14 | clear at this tributary. You can see them at A. You |
| 15 | MR. BIERI: Okay. I'm going to mark it as | 15 | can see where I'm drawing at B, and all -- you know, |
| 16 | AX-10, page 12A. Judge, I'd move to admit this into | 16 | down in the lower reach before it flows into Deep |
| 17 | evidence. | 17 | Creek at C. So, you can see the defined channel. |
| 18 | MR. McAFEE: No objection, Your Honor. | 18 | I also believe this is about the time when |
| 19 | JUDGE BIRO: Okay. AX-10 at 12A is admitted | 19 | some of the vegetation is being cleared away from |
| 20 | into the record. | 20 | the -- the trees are being cut and cleared away from |
| 21 | (The document referred to was | 21 | the channel. |
| 22 | marked for identification as | 22 | Q And you're pointing kind of on the channel |
| 23 | Agency's Exhibit No. AX-10, | 23 | between A and B? |
| 24 | 12A and was admitted in | 24 | A Yeah, sort of in this area, it seems like -- |
| 25 | evidence.) | 25 | from looking at the image closer up, not this, you |

know, paper print, it looked like you could see some of the vegetation being cleared at $D$.

Q At D?
A Yeah.
Q Okay. And can you just kind of describe for us the difference between looking at these maps here and drawing on them versus actually looking at them how you would normally do your work in ArcGIS?

A Yes. I mean, this is a paper print, a
xerox. It's already -- you know, the resolution is diminished significantly. But when using the software, you can view -- you know, zoom in and zoom out, and you can zoom in to the point that -- beyond the resolution of the photograph and if that's not helpful you can zoom out. But zooming in, zooming out and just panning around is -- it's a better way of doing this than simply looking at this paper print.

Q But, again, you had done that with every single photo which led you to your conclusions?

A Yes.
MR. BIERI: Okay. All right. Judge, I marked this exhibit as AX-10, 15A. I would move that into evidence.

MR. McAFEE: No objection.
JUDGE BIRO: Agency Exhibit 10 at 15 A is

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admitted into the record.
(The document referred to was marked for identification as Agency's Exhibit No. AX-10, 15 A and was received in evidence.)
MR. BIERI: Thank you. BY MR. BIERI:
Q All right, Mr. Stokely, we are getting down to the end here. Showing you what's been marked as AX-10, page 17. Is this one of those oblique images you were talking about?

A Yes. This is -- the source is Pictometry, the date is March 20, 2015.

Q Okay. Before you mark on that, let me ask you a couple questions, because there's a page on the other side. I don't know if I'm going to have you mark on it, so.

Can you just describe for us what you're seeing in this photograph?

A Yes. It's the channel in question. In the upper left-hand corner of the photograph, you can see the meandering channel through the -- you know, this area is being cleared of vegetation so it's helping view the channel, and you can see that meandering
channel as a clear defined feature all the way through, all the way down to the lower right. There's a road crossing where I'm pointing right now. There is a culvert underneath there, and then the defined channel picks up and goes to Deep Creek.

Q Okay. Do you see a defined bed and bank throughout the run of this tributary to Deep Creek in this photograph?

A Yes. Well, I'm seeing the channel very clearly, and that would be indicative of bed and bank feature.

Q Okay. Are you aware of any photographs, aerial photographs or other photographs that were taken between March 20, 2015, and the time of the fill later in 2015?

A I did not obtain any, so I don't know if there were --

Q Okay.
A -- any taken but probably not.
Q Did you look?
A Yes.
Q Okay. And so these would be the last photographs that we see existing before the tributary was filled?

A Yes. I would definitely -- I'd like to look

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at my reference section to make sure that's the case, but that's my recollection.

Q Okay. Now I'm going to show you what's been marked as Exhibit 10, page 18.

A Yes.
Q So what are we looking at here?
A It's another Pictometry image. The characteristic of Pictometry is they fly every area from four different angles, so this is the same tributary, but instead of looking sort of obliquely up the tributary. we're now sort of looking obliquely down in the direction of flow.

So, the upper left in this instance is the junction with Deep Creek, and the lower right is the upper reaches of the tributary.

Q All right. And do you see a defined channel throughout in that photograph?

A Yes.
Q All right. And can you kind of -- can you draw an arrow where that defined channel starts and where it ends? It's okay, you can draw on this photograph.

A Okay. Well, I mean, I would mark -- I mean, I'm looking at this paper print again -- at A would be where it's -- you know, becomes apparent as it sort of

|  | Page 347 |  | Page 349 |
| :---: | :---: | :---: | :---: |
| 1 | departs the trees, and then you can see it, you know, | 1 | from the bottom right to the upper left, and you can |
| 2 | all the way down just meandering through the little | 2 | see in this case a light-toned linear, curvilinear |
| 3 | valley and then -- | 3 | feature, which is the tributary, and it's clearly |
| 4 | Q You're pointing meandering through about to | 4 | visible and you could also see Deep Creek as a light- |
| 5 | the middle of the photograph? | 5 | toned feature clearly visible. |
| 6 | A Yeah, through the middle of the photograph | 6 | Q And does -- this portion of the tributary |
| 7 | on downstream following that dark linear feature | 7 | that's visible going into Deep Creek, does that |
| 8 | underneath the road crossing and then down to Deep | 8 | exhibit the characteristics of an intermittent |
| 9 | Creek. | 9 | tributary on the photo? |
| 10 | Q All right. And would you expect there to be | 10 | A Well, after looking at all the photos and |
| 11 | a defined bed and bank throughout this stretch from A, | 11 | all the evidence, I conclude that this is an |
| 12 | where you marked on A, all the way to Deep Creek? | 12 | intermittent tributary. |
| 13 | A Yes. | 13 | Q Okay. |
| 14 | Q And would you put a B where you believe the | 14 | A So this is consistent with an intermittent |
| 15 | trib enters Deep Creek? | 15 | tributary. |
| 16 | A Somewhere right in this general area. | 16 | Q All right. And can you mark for us kind of |
| 17 | Q Okay. Looking back at Exhibit, or AX-10, | 17 | the start of where the flow would be as A, and then |
| 18 | page 17 , looking at the lower portion of the tributary | 18 | where it would enter into Deep Creek as B, please? |
| 19 | south of the road crossing. | 19 | A It becomes visible where I'm drawing the |
| 20 | A Um-hmm. | 20 | arrow A , it becomes visible on the frame of the |
| 21 | Q Do you see any break or what you would deem | 21 | photograph. And then it -- it looks to me like it |
| 22 | to be a break in the physical connection of this | 22 | flows into Deep Creek where I'm drawing that arrow at |
| 23 | tributary to Deep Creek? | 23 |  |
| 24 | A No, I see a dark curvilinear feature the | 24 | Q All right. And do you see a continuous |
| 25 | entire length. | 25 | physical connection between A and B ? |
|  | Page 348 |  | Page 350 |
| 1 | Q Okay, thank you. | 1 | A Yes. Yes. In this case, you can almost |
| 2 | MR. BIERI: Judge, I've remarked AX-10, page | 2 | make out the whole connection through that wooded area |
| 3 | 18 as AX-10, 18A, and would move to move that into | 3 | where I'm indicating near B , to the right of the arrow |
| 4 | evidence. | 4 |  |
| 5 | MR. McAFEE: I'm sorry, Britt. Could I see | 5 | Q All right. What is this feature right here |
| 6 | it one more time? | 6 | that I'm kind of circling? |
| 7 | MR. BIERI: Certainly. | 7 | A This is a road. This is that, you know, |
| 8 | MR. McAFEE: I was taking a note. | 8 | road crossing that's been there for quite some time. |
| 9 | MR. BIERI: Yes. | 9 | Q Okay. And that's just -- just up the |
| 10 | MR. McAFEE: So, the only marking is A and | 10 | photograph from A, or up the tributary from A? |
| 11 | B. Okay. No objection, Your Honor. | 11 | A Yes. Downstream. |
| 12 | JUDGE BIRO: Okay. AX-10 at 18A is admitted | 12 | Q Downstream. Thank you. |
| 13 | into the record. | 13 | JUDGE BIRO: This would be AX-10 at 19B. |
| 14 | (The document referred to was | 14 | MR. BIERI: Correct. Move to move that into |
| 15 | marked for identification as | 15 | evidence, Judge. |
| 16 | Agency's Exhibit No. AX-10, | 16 | MR. McAFEE: What was the letter now? |
| 17 | 18A and was received in | 17 | JUDGE BIRO: B. |
| 18 | evidence.) | 18 | MR. McAFEE: B. Okay, because we have an A, |
| 19 | BY MR. BIERI: | 19 | correct? |
| 20 | Q Mr. Stokely, we are now looking at AX-10, | 20 | JUDGE BIRO: Right. |
| 21 | page 19. What is that a photograph of? | 21 | MR. McAFEE: Do we have an AX-10 -- |
| 22 | A It's another oblique aerial photograph of | 22 | MR. BIERI: We do. |
| 23 | the lower section of the tributary. In this instance, | 23 | MR. McAFEE: -- 19A? Okay. Thank you. |
| 24 | in the lower section of that tributary centered in the | 24 | Sorry. No objection. |
| 25 | photograph and it's -- in this instance, it's flowing | 25 | JUDGE BIRO: Okay. AX-10 at 19B is admitted |


|  | Page 351 |  | Page 353 |
| :---: | :---: | :---: | :---: |
| 1 | into the record. | 1 | even in this year of 2015, and historically. It's now |
| 2 | (The document referred to was | 2 | -- this area has been leveled and smoothed where I put |
| 3 | marked for identification as | 3 | the letter A, and the tributary has been put |
| 4 | Agency's Exhibit No. AX-10, | 4 | underground, and likewise down here where I'm marking |
| 5 | 19B and was received in | 5 | B , the defined channel that was once there is no |
| 6 | evidence.) | 6 | longer present or visible. |
| 7 | BY MR. BIERI: | 7 | Q All right. And can you -- where you marked |
| 8 | Q All right, Mr. Stokely, AX-10, page 20, is | 8 | A, what was that again? |
| 9 | what I'm showing you. What is this image? | 9 | A That's sort of the location of the former |
| 10 | A It's another one of the series of Pictometry | 10 | tributary. |
| 11 | images of the tributary dated March 20, 2015. This | 11 | Q Okay. And you said that had been smoothed? |
| 12 | one is looking, I guess, sort of from the southeast | 12 | A Yes, smoothed. |
| 13 | towards the northwest. It's an oblique image. And | 13 | Q What does that mean? |
| 14 | it's showing the tributary once again, very similar to | 14 | A Well, it appears that the tributary has been |
| 15 | those others. | 15 | buried and then, you know, equipment run on top of the |
| 16 | Q You can draw on this one. | 16 | land just to smooth it out. |
| 17 | A Okay. I'll draw the channel as best I can | 17 | MR. BIERI: Okay. Judge, I marked this as |
| 18 | but it's relatively distinct. There is places where, | 18 | AX-10, 21B, and would like to move that into evidence. |
| 19 | you know, you can't be certain whether it goes around | 19 | MR. McAFEE: No objection. |
| 20 | that way or that way, but then it continues to flow or | 20 | JUDGE BIRO: AX-10 at 21 B is admitted into |
| 21 | be distinct to the road crossing and then picks up | 21 | the record. |
| 22 | again after the road crossing and down towards Deep | 22 | MR. BIERI: Thank you. |
| 23 | Creek. | 23 | // |
| 24 | Q All right. So, these last few images we've | 24 | // |
| 25 | seen, 17, 18, 19, and 20, have all been from the same | 25 | // |
|  | Page 352 |  | Page 354 |
| 1 | date but just different angles. | 1 | (The document referred to was |
| 2 | A Different angles. | 2 | marked for identification as |
| 3 | Q All right, thank you. | 3 | Agency's Exhibit No. AX-10, |
| 4 | MR. BIERI: Judge, I've marked this as AX- | 4 | 21B and was received in the |
| 5 | 10,20A. I would ask to move it into evidence. | 5 | evidence.) |
| 6 | MR. McAFEE: No objection. | 6 | BY MR. BIERI: |
| 7 | MR. BIERI: Thank you. | 7 | Q This photograph you don't need to mark on, |
| 8 | JUDGE BIRO: AX-10 at 20A is admitted into | 8 | it's already into evidence. This is AX-10, page 22. |
| 9 | the record. | 9 | So, disregard the bleeding through, but I just want to |
| 10 | (The document referred to was | 10 | have you describe what you're seeing on this |
| 11 | marked for identification as | 11 | photograph, which is June 8th of 2016. |
| 12 | Agency's Exhibit No. AX-10, | 12 | A Yes. So, what's interesting about this |
| 13 | 20A and was received in | 13 | photograph is it's after the initial piping and |
| 14 | evidence.) | 14 | filling of the tributary. You can see, once again, a |
| 15 | BY MR. BIERI: | 15 | linear, dark-tone feature on the surface of the land |
| 16 | Q All right, Mr. Stokely, we are now moving on | 16 | in the area where the tributary had been filled and |
| 17 | to September 20th of 2015, and this is AX-10, page 21. | 17 | grading had occurred. And it -- I interpreted that to |
| 18 | Can you tell us what you are viewing in this | 18 | be the tributary, you know, sort of like trying to |
| 19 | photograph? | 19 | reestablish itself, daylighting, come back onto the |
| 20 | A Yes. This is the area of the tributary once | 20 | surface because that light -- that dark-tone linear |
| 21 | again. Should I mark or not? | 21 | feature is likely water. |
| 22 | Q Sure. | 22 | Q All right. I'm going to have you mark that |
| 23 | A Okay. Up here where it says the approximate | 23 | up. I've got a clean copy of it. Can you mark on the |
| 24 | starting point of the impacted stream segment, is | 24 | map where you think the tributary appears to be |
| 25 | where we once saw the meandering patterns earlier, | 25 | reforming? |

A Yes. At A it looks -- I probably marked over it but in that area, also at B.

Q And this feature in the center, what is that?

A What I'm indicating then with the arrow and $C$ is what $I$ interpret to be what $I$ call like a check dam. It's a little berm that was placed on the surface of the ground, and at times there is water collecting behind it.

MR. BIERI: Okay. I'm going to move this into evidence real quick. Judge, I've marked this as AX-10, 22A, and would like to move it into evidence.

MR. McAFEE: No objection.
JUDGE BIRO: AX-10 at 22A is admitted into the record.

> (The document referred to was marked for identification as Agency's Exhibit No. AX-10, 22A and was received in evidence.)

MR. BIERI: Thank you, Judge.
BY MR. BIERI:
Q Now, I'm showing you which is AX-31, this is page 18. This is a part of your expert report, and I believe is from the same or similar image, is that
the top of my head, but they appear to be pointing to the filled stream channel.

Q Okay, and we can look in your report and figure that out.

Now, in this figure AX-31, page 17, we actually see the new barn, the confinement barn, don't we?

A Yes.
Q All right. That was not superimposed,
correct? That just came from a -- from a photo?
A Yes, that's the photograph of the barn.
Q Okay.
A I labeled it new barn.
Q All right. All right, I'm handing you now, placing on the Elmo what's been marked as AX-29, page 1. What's the date of this image, sir?

A This is March 20, 2018.
Q All right.
A I believe that was the most recent photograph I've obtained.

Q Okay. Of 2018, you said?
A Yes.
Q All right. And do you have any observations about this photograph? And we have a -- we have a closeup on page 2 , sorry, if you want to talk about
right?
A Yes, Exhibit 16.
Q Okay. And can you describe for us what you were indicating with the red arrows, first of all?

A Right. So, the red arrows are pointing to what -- I'm interpreting it to be a surface water drainage feature, you know. reappearing after initially being buried on the surface, on the land.

Q All right. And there's two black arrows. What are those?

A So, they're pointing to what looks like to me to be surface flow coming from these little ravines, these rough-textured areas or little shrubby, woody ravines where it appears that water is flowing out of them.

Q Okay. And those are each to the left of the two black arrows?

A Yes.
Q All right. I'm showing you AX-31, page 17. This is where you've actually identified the check dam, is that right?

A Yes.
Q All right. And what do those red arrows mean there?

A I don't remember how I described them off

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that as well, so.
A Well, first on page 1 , you can see the -this is sort of zoomed out now, and you can see a longer length of the tributary from the upper reaches through the wooded area and near the upper left of the photograph, and then in the area where I'm indicating now is where the disturbance begins, and the tributary is not very evident in through that area because it's piped and not a lot of surface flow on top, and the old channel, the old tributary is obscured in this -you know, actually being, you know, cropped.

But if you flip over to a closeup of that lower section of the tributary.

Q This is AX-29, page 2?
A Yes.
Q All right.
A I believe the old tributary was located maybe where I'm tracing my --

Q Do you want to mark just kind of approximately where you thought it was?

A Yeah. It's a little hard to know for sure with these oblique aerial photographs because they don't overlay one on top of the other, but I believe that the dotted area is where the old tributary was, but what's interesting is there is a new surface
erosion drainage feature forming next to it, you know, as if, you know, the tributary is sort of like trying to reestablish itself again.

Q And what does the tributary trying to reestablish itself again tell you about the tributary?

A Well, you know, my view is it's been there since the 1930s and there were some impacts to it, but it's -- you know, it has enough flow that it wants to keep on, you know, coming out of its pipe maybe and reestablishing a flow on the surface.

MR. BIERI: Judge, I marked this exhibit as AX-29, 2A and would move to admit it into evidence. MR. McAFEE: No objection.
JUDGE BIRO: AX-29 at 2A is admitted into the record.

> (The document referred to was marked for identification as Agency's Exhibit No. AX-29, 2A and was received in evidence.)

BY MR. BIERI:
Q All right, I want to show you, Mr. Stokely, another exhibit. Let me ask you a couple questions before, though. What is LIDAR?

A LIDAR is -- it's a laser mapping technique

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where the landscape is -- an aircraft flies in the air shooting a laser beam down onto the ground and the laser beam bounces back up to the aircraft and the sensor records the returning laser.

Q All right. And did you view any LIDAR imagery in this case?

A Yes.
Q All right. And how many images did you review?

A There weren't -- there might have been two or so but they were basically the same data; just depicted in different ways.

Q Okay. And do you remember the date of that image?

A I believe the LIDAR was flown in 2008.
Q All right. And do you remember what month in 2008 ?

A May, possibly.
Q May. Do you remember -- how did you find out the month of the LIDAR image? Was that from Iowa State?

A Yeah, there was a reference to it on the Iowa State's webpage, I believe.

Q Okay. And you recall it being May.
A That's what I recall, yes.

Q Okay. I'm going to show you what's been marked as Agency Exhibit 24. This is that -- well, tell me, what is that?

A So, this is a -- this is a product of the LIDAR post-product, post-processing product of LIDAR.
This is what we call digital elevation model or a bare- earth model where the LIDAR is -- the data is processed in such a way that it only depicts largely the ground surface, and then it's given sort of a hill-shaped effect of like a shadowy -- sun-angle effect and then shadow.

So, it's a digital elevation model, it's a rendering of what the ground surface looks like from the LIDAR data.

Q Are there resolution limitations with respect to LIDAR, or do you know?

A Yes.
Q Okay. And do you know what they are?
A I don't know what this is.
Q Okay.
A But, you know, it has to do with the height of the aircraft, the number of pulses, and then also the denseness of vegetation.

Q All right. And how did you view this image? You're looking at it on paper now, but did you look at

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it in a different format before?
A Yes. This was also served up in Geographic Information System format from Iowa State, so I viewed it with my software.

Q Okay. And the portion that starts -approximate starting point of the impacted stream segment, if you follow the channel down to about the middle of the photo, it appears different as you go further towards Deep Creek. Do you see that?

A Yes.
Q Okay. And can you describe what your impressions are of that area?

A Well, it's similar to what we saw in the aerial photography.

Q You can draw on this.
A At least particularly the LIDAR aerial photography where I was able to point out the channel characteristics, the meandering channel at various places, at A and B , for instance. This is a topographic rendition of the channel.

And then as you get down towards the area I'm going to mark C , the channel becomes straighter. So, meandering and more deeply incised up by A and B and then straighter and not so deeply incised at C .

Q How does the resolution of this image AX-24,
page 1, compare with what you're able to look at on your computer?

A Well, with the computer you can zoom in, get a little bit closer look, and it's generally higher resolution than a paper print.

Q And did you do that? Did you zoom in on the portion downstream from C on this map?

A Yes.
Q Okay. And do you believe that the portion of the LIDAR downstream from C towards Deep Creek shows a lack of physical connection?

A No. In my mind, it's actually showing the connection as a nice, straight line.

Q Okay. And if the tributary were manipulated, the lower part of the tributary below C towards Deep Creek were manipulated just before this LIDAR image was taken, could that impact what the LIDAR image would show?

A Yes. I mean, the LIDAR image is going to show the condition at the time of the -- that it was flown.

Q Okay. And if the conditions were changed, then you would expect the LIDAR image to at least reflect that.

A Yes.

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Q Okay. Do you find this LIDAR image to be definitive one way or another as to whether this is a, you know, relatively permanent water?

A Well, it's what it is. The LIDAR image, to me, is just another depiction of the same thing I've been seeing in the aerial photography all this whole time. It's just a different way of imaging.

Q All right. And did you see evidence prior to the date of this letter, photo May of 2018, that indicated to you that there was a defined channel?

A Yes.
Q Okay. And afterwards as well?
A Yes, from the series of photographs we've been through.

Q Okay. I think you can return to the witness stand, actually.

A Okay.
Q Thank you.
JUDGE BIRO: Could you write the date on this document, this photograph was May 2018?

MR. BIERI: The date is not on the document, but he looked it up.

JUDGE BIRO: Right, could you just write it on there?

MR. BIERI: Yes, I'll write it.

JUDGE BIRO: Yes.
BY MR. BIERI:
Q May 2008, correct?
A Yes.
Q Okay. Sorry, I said 2018.
MR. BIERI: And, Judge, I've remarked this
LIDAR image, I've written May 2008 and remarked it AX-
24 A , and would ask that that be moved into evidence.
JUDGE BIRO: Okay.
MR. McAFEE: No objection.
JUDGE BIRO: AX-24A is admitted into the record.

## (The document referred to was

 marked for identification asAgency's Exhibit No. AX-24A
and was received in
evidence.)
MR. BIERI: Thank you.
BY MR. BIERI:
Q Mr. Stokely, did you look at the report of the Respondent's expert, Mr. Hentges?

A Yes.
Q Okay. And did you see the LIDAR image that he produced with his report?

A Yes, but you can bring it, show it to me
again.
Q All right, I'm going to show it to you.
Showing you what's been marked as
Respondent's Exhibit 3.
A Yes.
Q Do you remember looking at this?
A Yes.
Q All right. And how does the resolution of
this image compare to what you were able to view on your computer when you were analyzing this image?

A Well, this is -- you know, this is a xerox print so it's -- the resolution is less.

Q Okay. So, do you agree with the conclusion or the statement that was put on there? It says,
"Locations where channel is not apparent along grass drainage way."

A No, I don't agree. I agree that the channel isn't as apparent as it is in other places, but I don't agree that there's not a channel there.

Q Okay. Mr. Stokely, did you map the flow path from this unnamed tributary to Deep Creek and then to other bodies of water?

A Yes.
Q All right. And that's shown as Figure 10 in your report. We don't need to look at it.

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| :---: | :---: | :---: | :---: |
| 1 | Did you also look at other similar | 1 | Q All right. You talked about the geomorphic |
| 2 | tributaries in your analysis of this case? | 2 | features and the impression in the landscape. Just |
| 3 | A I did. | 3 | briefly, can you summarize what you mean by that? |
| 4 | Q All right. Can you kind of tell me what you | 4 | A Right. Once again, that's the -- you know, |
| 5 | concluded there? | 5 | the curvilinear pattern of those -- of the meanders |
| 6 | A Well, I concluded that based on the length | 6 | deeply incised. The deeply incised nature of that |
| 7 | of the tributary in question, there's -- I don't know | 7 | became apparent once we looked at the LIDAR. It |
| 8 | the exact numbers, but there was five or six hundred | 8 | enhanced that part of it, so that's the geomorphic |
| 9 | similar tributaries in number, five or six hundred | 9 | characteristics incised into the landscape, you know, |
| 10 | similar tributaries like that one in the English River | 10 | relatively permanent incised geomorphic features. |
| 11 | watershed. | 11 | Q All right. And did anything else you |
| 12 | Q All right. And what significance does that | 12 | reviewed other than aerial images support your |
| 13 | have with respect to your opinions in this case? | 13 | conclusion that this is a seasonal tributary? |
| 14 | A That was just pointing out some factual | 14 | A Well, the U.S. Geological Survey mapping as |
| 15 | information. One of the -- you know, one of the | 15 | intermittent, the watershed size, the rainfall, all of |
| 16 | factors in jurisdiction is, you know, does this water | 16 | that together; the images, you know, consistently |
| 17 | body alone or in combination with others have the | 17 | seeing it in the images, all of that combined. |
| 18 | requisite nexus to a traditional amount of the water | 18 | MR. BIERI: All right. Thank you. I have |
| 19 | as I understand it. So, this was just factual | 19 | nothing further. |
| 20 | information for you. | 20 | JUDGE BIRO: Mr. McAfee, would you like to |
| 21 | Q Okay. I want to just try to, as best we | 21 | take a break or do you want to proceed on? |
| 22 | can, summarize your opinions and a brief summary of | 22 | MR. McAFEE: Well, Your Honor, I guess as I |
| 23 | the basis for same because you've testified to a lot | 23 | could kind of sense Britt was -- Mr. Bieri was nearing |
| 24 | of this, but according to your report -- well, tell me | 24 | the end of his direct, I guess we have several |
| 25 | what you concluded with respect to the permanency of | 25 | options. I think my cross-exam is going to be a |
|  | Page 368 |  | Page 370 |
| 1 | the geographic feature, that is, the tributary. | 1 | little longer than it has been of the previous |
| 2 | A Right. Well, based on all the aerial | 2 | witnesses. I could either start now -- I guess I'm |
| 3 | photographs I looked at from 1930 onwards, I see that | 3 | laying out options for the Court, your discretion, or |
| 4 | tributary there. So, I'm concluding it's, you know, | 4 | we could go to lunch early and maybe beat a few of the |
| 5 | relatively permanent based on time feature. | 5 | crowds, if there are crowds, and then be back here and |
| 6 | I also observed the topography, the | 6 | then it will be a longer afternoon, or I could -- |
| 7 | geomorphic characteristics of it, and the watershed | 7 | anyway, I'm open to -- I guess you're asking me. I'm |
| 8 | size, the precipitation, and the amount of | 8 | thinking if I start now, there will be a break, likely |
| 9 | precipitation, the averaging of precipitation, and | 9 | be a break in my cross-exam, which is okay with me |
| 10 | then the way the U.S. Geological Survey mapped it, | 10 | too, or we could break for lunch now and then just |
| 11 | along with my own experience looking at tributaries | 11 | start in. |
| 12 | like this in size, that I concluded that it's a | 12 | JUDGE BIRO: Well, why don't we try going |
| 13 | relatively permanent geographic feature. I agree with | 13 | for another -- |
| 14 | the U.S. Geological Survey's interpretation that it's | 14 | MR. McAFEE: Okay. |
| 15 | intermittent, and as you can see in my report, I | 15 | JUDGE BIRO: -- hour or so, so we don't have |
| 16 | further concluded that it is likely a seasonal flow, | 16 | quite a continuous long afternoon as we otherwise |
| 17 | relatively continuous seasonal flow. | 17 | might have. |
| 18 | Q All right. And you said flows continuously | 18 | MR. McAFEE: Okay. In that -- I'm sorry to |
| 19 | during the spring, and what do you mean by spring when | 19 | interrupt. |
| 20 | you use that term in your report? | 20 | JUDGE BIRO: So, let's move on if you're |
| 21 | A You know, late February, March, April, May. | 21 | ready to start. |
| 22 | Q Okay. And then you said it would flow | 22 | Mr. MCAFEE: I am ready. Could I have just |
| 23 | intermittently after that based on precipitation | 23 | a few minutes to maybe -- |
| 24 | events. | 24 | JUDGE BIRO: Oh, of course. So, we'll take |
| 25 | A Yes. | 25 | a five-minute break and come back. |

$$
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$$

MR. McAFEE: That would be great. Thank you.
(Whereupon, a short recess was taken.)
JUDGE BIRO: Okay, Mr. McAfee.
MR. McAFEE: Thank you, Your Honor.

## CROSS-EXAMINATION

BY MR. McAFEE:
Q Mr. Stokely, I briefly introduced myself during the break. I'm Eldon McAfee. I represent C\&S Enterprise, and I'd like to go through some questions with you.

Let's start with, I guess, a basic question -- and I don't know that Mr. Bieri asked you this, but could you briefly give me your interpretation or definition of what is a jurisdictional water or water of the U.S.?

A Well, the interpretation now is post-
Rapanos, so it's a relatively permanent body of water or a wetland or water that has a significant nexus to traditional navigatable water, alone or in combination have a significant nexus.

Q Okay, now you say now. As opposed to Rapanos, did you --

A No, I meant that our -- currently we are operating under the post-Rapanos rule.
geographic features, relatively permanent waters. And then the other dealt with bodies of water, wetlands, and waters that have a significant nexus to a traditional navigable water.

Q Okay. And I think the factors that you have mentioned during your testimony today are -- what are they? I would call them factors anyway, a bed and a bank? Is that right?

A I testified to the presence of a channel, defined channel which I believe if you -- if I went out there, I would see the bed and bank features.

Q Are there any others? Ordinary high-water mark, is that part of your analysis, too?

A An ordinary high-water mark is something you make in the field, not from aerial photography. But based on the signature that I've seen of the channel, I believe there would be an ordinary high-water mark.

Q Okay.
A Or would have been.
Q Anything else?
A Not in response to that question, I guess.
Q Okay. I'll put your CV, which I believe is -- your CV, I'm looking here, is AX-6, and I just wanted to ask you not a lot of detail, but a question that Mr. Bieri asked you about one of your recent

Q Post-Rapanos rule.
A Yes.
Q Okay, I just want to make sure we're all on the same page here. We're good with what --

A Well, you know, post-Rapanos --
Q Yes, please explain that.
A -- it came out in 2006, and the agencies interpreted the Rapanos ruling with some agency guidance in 2006. I think it was revised in 2008. So, that's the rules we're operating under.

Q Okay. We're not talking about the rule that is the subject of litigation currently in many courts in the country, is that --

A That's my understanding, we are not talking about that.

Q Right, we're not talking about that here today.

A Yes.
Q You're not. Okay. I'm sorry if I caused any confusion. Just wanted to make sure that we're all on the same page.

Okay, could you tell me again what are the factors under that interpretation?

A Well, as I understand it, there were two interpretations. One dealt with relatively permanent
publications, and I'll try and turn to that page.
It's an ABA publication, is that right?
A We talked about that earlier, yes.
Q Okay. I'm putting up AX-6, page 4. Can you see that?

A Yes.
Q Okay. And is that publication that Mr.
Bieri asked you about, is that on there?
A Yes.
Q And is that under Stokely, P.M., 2013?
A Yes.
Q Okay. And as I understand that publication, it's -- well, the title is "Using Aerial Photography, Geospacial Data in GIS to Support the Enforcement of Environmental Statutes". Is that correct?

A Yes.
Q And did you author that solely by yourself or did you have a co-author?

A Solely by myself.
Q Okay. And the procedures you've talked about today in going through your opinion, what led you to your opinion, did you utilize that publication?

A Well --
Q And maybe -- I'm sorry. Go ahead.
A Not -- I didn't reference -- I haven't

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| :---: | :---: | :---: | :---: |
| 1 | referenced that publication in a while actually. I | 1 | but you go into, for instance, third sentence -- well, |
| 2 | haven't looked at it in a while, so I didn't reference | 2 | second sentence, 17 of those dates you were precluded |
| 3 | it during this work. | 3 | from seeing the stream channel, and then the remaining |
| 4 | Q Okay. Maybe I should have asked that | 4 | 18 years, I could easily make out the channel. |
| 5 | better. The procedures you used in your, formulating | 5 | And help me understand how that jibes with |
| 6 | your opinions in this case, are they the same | 6 | your statement on page 3 where you saw it |
| 7 | procedures you lay out in that article for enforcement | 7 | continuously. I just want to make sure I understand. |
| 8 | actions? | 8 | A Okay. The distinction I am making there is |
| 9 | A Well, it's been awhile since I've read that | 9 | that I was able to observe the tributary, what I |
| 10 | but they should be generally parallel to that. | 10 | interpret from all the evidence that I looked to be |
| 11 | Q Okay. All right, thank you. | 11 | the tributary on all the dates of aerial photography. |
| 12 | (Pause.) | 12 | But as I think I said earlier, in some of those dates, |
| 13 | Mr. Stokely, I'm putting on the screen | 13 | 17 of those dates, the tree canopy prohibits the -- |
| 14 | Agency Exhibit 18. Are you familiar with that? And | 14 | observing the stream channel in any detail, but that |
| 15 | I'll put on the second page if you need to see that. | 15 | doesn't -- you know, it doesn't say that I couldn't |
| 16 | A I am not familiar. | 16 | see a tributary. |
| 17 | Q You have not reviewed it? | 17 | Q So, if you couldn't see the channel, you |
| 18 | A No, I don't recall having read it. | 18 | could still see the tributary. |
| 19 | Q Okay. | 19 | A Yes. The location of the tributary, yes. |
| 20 | A Yeah. | 20 | Q And how could you see it if you couldn't see |
| 21 | Q All right, thank you. | 21 | the stream channel? |
| 22 | I'd like now to put up your opinion, which | 22 | A The other signatures: the riparian |
| 23 | is Agency Exhibit 31, your report, and I'd like to ask | 23 | vegetation, the consistent riparian vegetation, the |
| 24 | you a few questions about that, and then we may go | 24 | curvilinear pattern of the vegetation, you know, |
| 25 | into the specific photos through the exhibits and as | 25 | coming down through the watershed. |
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| 1 | you've testified to this morning. | 1 | Q Okay. Let's go to -- I have a specific |
| 2 | First of all, I'm going to put up page 3 of | 2 | question up here, and maybe you've covered this. Some |
| 3 | your opinion, okay? I want to make sure I understand | 3 | of this I have in my notes and there may have been |
| 4 | this page 3 where you have under Roman Numeral III, | 4 | testimony to that effect this morning, but I want to |
| 5 | letter A, background data analysis. I won't read it | 5 | make sure I cover it. |
| 6 | all there. You state here, "I first observed the | 6 | Top of the page in your report, the first |
| 7 | unnamed tributary to Deep Creek on the 1930, and | 7 | partial paragraph and the last sentence where it says, |
| 8 | that's Figure 2 imagery, and it was continuously | 8 | "The incised nature and topographic expression of the |
| 9 | present and visible on every date of aerial | 9 | stream are clearly visible in the one-meter digital |
| 10 | photography until the tiling." | 10 | elevation model created from LIDAR CAX 24," and Mr. |
| 11 | A Yes. | 11 | Bieri had you testify to that. |
| 12 | Q Okay. And I believe you've testified to | 12 | What do you mean if I -- the incised nature, |
| 13 | that this morning, correct? | 13 | what does that mean? |
| 14 | A Yes. | 14 | A Well, the tributary, particularly the upper |
| 15 | Q You didn't see any images that you reviewed | 15 | part, was incised into the ground, cut into the |
| 16 | where the unnamed tributary was not present | 16 | ground. |
| 17 | continuously from what you have often marked as point | 17 | Q I think I'll pull up 24 so we can look at it |
| 18 | A on your maps today down to Deep Creek. | 18 | together. Okay, and I believe you just referred to |
| 19 | A Yes. I mean, the 1930 image, it's not quite | 19 | the upper portion, is that correct? |
| 20 | as clear in that lower section, but every image after | 20 | A Yes. |
| 21 | that, it was. | 21 | Q And I know there's been testimony and you've |
| 22 | Q Okay. Now let's go to page 4 of your | 22 | looked at Mr. Hentges's report and you have a |
| 23 | opinion, second, well, second full paragraph, okay? | 23 | different opinion. But on the lower portion, are you |
| 24 | And you state, "I observed the unnamed tributary on 35 | 24 | testifying that there's a -- I want to use the right |
| 25 | dates," and you're welcome to explain some of this, | 25 | language here -- the incised nature there? |

> know, zoomed-in image of that part of the topo map,

A Yes. In a general sense, my interpretation is that -- this LIDAR image is depicting the stream channel. As I mentioned earlier, it's not quite as clear, the incised nature isn't quite as clear in the lower reach, but that's generally what I was referring to in that sentence. This is how the tributary is being depicted on this LIDAR image, and it's deeply incised in the upper portion.

Q Okay. Also, you refer in that first sentence to the topographic expression of the stream. What do you mean by that?

A That's sort of a general term that I use. You know, streams cut themselves into the landscape and they create, you know, topographic expression. It's not flat, it's down into the landscape. And if you, you know, some of the map contour lines, you would see the contour lines follow the -- it would outline the stream course. And so that's what I mean by topographic expression.

Q Okay. Since we're talking about topographic expression, and if I can -- I believe in your report, you include a topographic map. This is AX-31, page 13. Is that what that is?

A Yeah, that's in my report. That's a, you

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the USGS topo map.
Q Okay. And there are lines on there that come from the top, and I'll quit using my finger if I can find my pen. I'm pointing to a line that comes from the top of the map, comes down and goes off to the right as you read the map. Is that the road?

A Yes, that's a road.
Q And did you -- you placed that there or does that come on the topographic map?

A It came with the topographic map.
Q Okay. So, I guess what I want to talk about briefly and have you explain what the lines mean. I know you understand this. I think a lot of us do, maybe. Maybe I don't. But what do the lines mean on this topographic map relative to the slope? Is that what those are about?

A So, the brown lines are lines of equal contour, and some of them have elevations associated with them like in the lower right-hand corner, 800 feet above sea level. So, those are lines of equal elevation, and by mapping contour lines the way the USGS does, it helps you envision the topography and the landscape.

And we can see here fairly clearly is that this tributary is running down the valley between two
higher hills. That's what this is indicating. The contour lines that are, you know, let's say near the upper red arrow line, that contour line that's right next to that, so that's one elevation. I'm not sure what it is. And then each consecutive ring of contours moving north or moving west is a higher elevation. So, it's outlining these like, you know, small ridges with a valley in between.

The contour lines also point up the valley. The V of the contours point up the valley, and you can see that there, and that's generally what I refer to when I say the topographic expression of a stream.

Q Okay. So, as I understand it, the closer the lines are together, the steeper the hill.

A Correct.
Q All right. So, you have two red arrows on this exhibit, page 13 of AX-31. Do you see those?

A Yes.
Q And maybe you explain them in your report, and I don't have that section right in front of me, but could you tell us what those red arrows are?

A That's pointing to the U.S. Geological Survey's annotation of an intermittent stream -- the dash, dot, dot, dot, dash.

Q Okay. Also there, about in the area where

A Yes, the 2017 email, correct.
Q Yes. And why don't I make sure that we're looking at the -- okay, I put up AX-13, page 1 of 2, and that email is dated December 18th of 2017, correct?

A Yes.
Q And prior to that, were you aware of this case at all?

A Prior to the 14th, no, that's when I received the email from her.

Q Correct.
A Okay. Prior to the 14th, no. I don't have any recollection.

Q Okay. And as she indicates, they were in pre-filing status, I'll call it. Do you ever get involved in these cases prior to this or is this the normal time you would get involved in cases you've worked on for the EPA?

A I'm not sure what the pre-filing -- the prefiling, you mean pre-complaint filing or --

Q I'm just referring to her --
A Yeah.
Q Down at the bottom where she -- her email to you on December 14th says, "Pete, we are in pre-filing with an individual out of Iowa County."
tributary flowing. Can you tell from an aerial or those photos if there is actual water movement or can you just tell, as you've testified, the presence?

I just know you used the term "flowing" several times, and I want to make sure I understood what you meant.

A Yes, I did not mean to imply that I could see water flowing, but I was referring to the direction of flow from the upper, you know, higher elevations to the lower.

Q Okay. Well, let's -- I may have some other general questions but I'll catch those as we go through each one. I'd like now to put up Agency Exhibit 10, and I want to go through those photos with you, okay?
(Pause.)
Okay, I'm sorry. I just need to get organized here a little bit before we start through them. I want to put up Agency Exhibit 10, page 1, okay?

You testified you didn't put those labels on there on any of these photos. I believe, and I don't -- maybe over lunch, I'll find and have the exhibits that you marked on, and if I have any questions about those. But here on Agency Exhibit 10,

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Do you know what that means?
A No, I don't really know exactly what that
means, but I do get involved in cases across the spectrum from early on to sometimes, you know, postcomplaint filing, so.

Q And I guess I'll submit to you that the record here shows that a letter was sent to my client, C\&S Enterprise, with a proposed penalty on October 11th of 2017. So, EPA -- what I'm trying to determine is were you involved in any decision, and by your testimony I take it you weren't, prior to receiving your email from Ms. Garcia?

A This December email --
Q Right.
A -- is what triggered my involvement.
Q I understand. I don't mean to beat that issue to death but, okay, thank you.

Okay, I think what we'll do now is I'd like to, if I can get my notes organized here -- well, I have a few general questions and then I think we'll start in through the photos, and I just wanted to ask you about a few things as we went along.

You testified, and I'm looking for my note. Well, several times during your testimony, you -- in looking at the exhibits, you talked about the unnamed

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page 1 , I believe you indicated where you -- you thought where the channel was down here in the lower portion that I'm pointing to.

I believe you marked it somewhere to the left of this, what appears to be a white line. Do you see what I'm pointing to?

A Yes.
Q Do you know what that white line is?
A That white line, I interpret that to be a road, like a dirt road or a road through the field.

Q Pardon me?
A A road through the field.
Q Okay. And you don't believe it's any part of the channel or anything.

A No. No, I don't.
Q Okay. Let me ask a few general questions as I have found them in my notes here as I turn to this page.

You were not able to be there before the work was -- well, first of all, you haven't been to the site at all, is that correct?

A That's correct.
Q Okay. Is that common for the cases you work on that you don't go to the site?

A No, it's actually less common.

Q Explain. Be more common for you to go to the site?

A Yes.
Q And do you know why you didn't go to the site here?

A There were -- there were issues of, you know, timing and the ability to get out here before, I guess, court filings. But then, you know, in the end I wrote a report that I felt like it could stand on its own without me being out there.

Q Do you believe it would have helped you in your opinions had you been able to go to the site?

A It would have -- it would have given me, you know, the eyes on the ground to see some of these features for myself, although a lot of them are -- part of the tributary has been eliminated. So, I wouldn't have been able to really see the historical features as much. But I'm not going to tell you it's not helpful to go out in the field.

Q Sure.
A Yeah.
Q I understand, and I understand it wasn't possible for you to be there before the work was done. I'm just trying to get a sense of how you usually conduct your investigations.

How prevalent when you started were the tools that you had available to you on the internet or electronically? Give me a sense of when you -- how much different is it today with what you have available versus when you started.

A Well, yes. I mean, there was no internet.
There were very few computers, and, yes, it's dramatically different today.

Q When did that change? I know it's evolved over time, just like my use of computers has, but was there a marked change in those 30 years where you had a lot more resources available to you?

A Well, I mean, for my own experience, I mentioned earlier, somewhere, I guess, around the year 2000, let's just say 2001, I obtained the first copy of my Geographic Information System software. And that -that was a change. That was a helpful change particularly when it comes to viewing, annotating and making maps.

The way I used to do it would be to take a piece of acetate and overlay it on an aerial photograph and then Sharpies like that and annotate features and label the photograph. And with the advent of ARC-GIS, I was able to now create maps much easier, much faster. So, that was a marked change.

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And obviously, I may be stating the obvious here, but if you could have been there before any of the work was done by my client in 2015, would that have been very helpful?

A Well, it certainly would have enabled me to document and photograph in other ways what the tributary looked like.

Q And would you have been able to determine from being there even what -- you know, that's only one point in time, but would that have helped you to look at those other photographs of earlier years?

A Well, it would have informed me of the conditions of the tributary, and there are things you can learn about that tributary by looking at it in the field. But it wasn't necessary for me to, you know, do the report, write the report that I wrote.

Q Okay. You've been doing this for how many years you said? When I say "this", let me be fair to you. The work that you've testified to today, how many years have you been doing that?

A Since about 1988 is when I got involved in my first Clean Water Act case.

Q Okay.
A So, that's 30 years now. Yeah.
Q Thirty years on the nose.

And then I guess more gradually after that
until, you know, really now, it's just the vast availability of data on the internet that wasn't as easy to research and obtain when I first started out.

Q And that's kind of where my next question was going, availability of data which you've just testified to, but also like there -- I think you said you had the 1930s photos. Do we have a lot more photos now, you know, like for each year versus back then they weren't -- you don't have access to as near as many photos from the '30s. Is that correct?

A Correct.
Q And the quality is not as good.
A Correct.
Q Forties, I don't know that I saw anything in here from the '40s.

A Yes, I don't recall anything from the '40s either.

Q Okay. Fifties?
A There was an image, I believe.
Q Okay. And I guess what I'm trying to get at here, when we get to -- was it in the 2000s when we start seeing them about every year?

A I mean that's -- I mean that's a fair assessment, yeah.

Q I'm not going to hold you exactly --
A Right.
Q -- to the year. I guess what I'm trying to get, make sure I understand anyway, is that you -- when we don't see near as much information or photos from earlier years, it's because they are not available, is that correct?

A Yes.
Q And now do we have an aerial photo available of this farm just about every year?

A Yes.
Q Okay. And did you review -- let me ask it this way. Are there any that you reviewed from any of these years that you decided not to use in your report or in any discussion today that you can think of?

A No. I looked at every one of them, but since there were 35 or thereabouts I did not create 35 figures. I didn't reproduce every single one of them in my report, but I looked at every single one of them in forming my opinions.

Q Do you recall in any of those that you observed and didn't use where there was -- you couldn't see a channel or you couldn't see water?

A Well, I've already mentioned, couldn't see water and couldn't see a channel on a lot of them, but
rephrase that.
You know, this case is about whether this unnamed tributary, as we're calling it,, is a jurisdictional water, right? That's what this case is about and whether my client violated Section 404, correct?

A Yes.
Q Okay. If you had been able to be there and at one point in time had not seen a channel or any water but your photos showed you something different, would that one time being there, seeing that have influenced your opinion?

A I'm sorry. I'm not exactly sure what you're asking.

Q What I'm asking is if you had been able to be there -- this is a hypothetical, I understand it, but you're an expert witness and expert witnesses deal with hypotheticals.

If you had been able to be there and at one point in time you saw -- you observed the conditions but the conditions were different than what you saw in your photos, historical photos that don't cover every year, would that have influenced your opinion?

A If you're asking me if I had seen something in the field that I couldn't see on the aerial

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I used -- I'm going to discuss that in my report.
Q Okay. Maybe what I'm trying to ask is, what is your litmus test, so to speak, for what photo to use and what photo not to use?

A Well, again, I used them all. I looked at them all to form my opinion, but the litmus test in order for me to decide what to use like to make a figure out of it in my report is usually when it's showing something that is specific to the case that needs to be shown, you know -- particularly when it's been alleged violations, you know, I'll put a figure in my report that shows those.

But I don't usually -- like, the vast array of aerial photographies, I don't usually re-create them as figures in my report, but I looked at all of them.

Q If you saw photos like, as you just said here, or that show an alleged violation, if you saw photos that showed there was no violation, would you have included those?

A If this was an alleged filling of a stream and I never saw it because like -- you know, yes, I would -- that would be a big red flag for me, and I'm not sure where I would go with that.

Q Okay. Had you been able to make a site visit even after the work was done, but -- well, let me

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photography, would that influence my opinion?
Q Yes.
A Well, I would certainly factor that in, yes.
Q Okay. Has that occurred in any of the cases
where you have been able to make a site visit, where you saw something that, hey, that didn't show up in the photos?

A Well, I mean, as a matter of course, you always can see more features in the field than you can on an aerial photograph; more detail, yes.

Q And I understand, and I'm asking you in any of your other cases, has your site visit changed your opinion?

A Well, there's been cases I've worked on where I provided wetland mapping and stream mapping, for instance. I went out in the field and we found more tributaries than I could -- than I initially saw on the aerial photography.

Q Has there been times where you saw less?
A Yes, actually there has been. I had a case in West Virginia where there was a tributary, you know, alleged, but I never saw it on the aerial photography so I didn't include it in my report.

Q But you did see it when you went out there?
A When I went out there, yeah.

Q Okay.
A It had been destroyed, but you could see the valley.

Q I'm asking the other way, where if you saw something -- when you went out there, something was not there that you thought you saw in the aerial photography.

A If that was ground truth and I was -- and I was convinced that what I saw on the photography was in error, I would have changed my view at that point, yeah.

Q Yes, and I'm asking has that ever happened with you?

A Oh, I don't know. You know, we adjust boundaries for ground truth, wetland boundaries. Yeah, I'm sure there has been times when I've overestimated wetland boundaries, or got in the field and say, oops, that little piece didn't meet the criteria so I truncated. Yes, I mean, that's -- that's part of business, part of doing the ground truth in the report.

Q So, is it fair to say ground truthing, as you've called it, serves some purpose and some value in cases like this?

A Yes.
Q Okay. Based on what you've reviewed and

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your testimony, would you expect there to be times, not necessarily shown in the photos, but would you expect there to be times when there would be no water in this channel that you say has been continuously present?

A Yes.
Q Okay. I'm now going to show you AX-10, I think it's on the back side here, page 2, and I'm looking at my notes from your testimony here. I think you referred to a branching pattern at the creek.

A At some point in my testimony I did, yes.
Q Yes, and according to my notes, it was on this one, but you may have said it several times. What does that -- is that branching pattern an indication of anything regarding the, as we're calling it, the unnamed tributary regarding whether it exists or not?

A Well, I mean, it does in a sense. If you zoom out and look at the landscape and look at the dendritic and branching-like signature of the tributaries in the area, and you can map them in a larger area and sort of see their pattern, their branching pattern, that's very common. Dendritic drainage is a very, very common drainage pattern.

And in this case, you can see it at one scale, you know, zoomed way out indicates sort of the regional drainage pattern, and then more specifically
in this case, this tributary fits right into that pattern, exhibits the same sort of branch-like pattern.

Q Does the branching indicate that the water may not be channeled?

A Does the branching indicate the water may not be channeled?

Q Correct.
A Yes, it can indicate that it's not channelized.

Q And do you see that in this photo?
A I see both. You know, non-channelized and then perhaps an historically channelized segment.

Q And I guess I'm referring specifically where you noted the branching pattern by the creek.

A Oh, what I was referring to there is basically how that -- how the unnamed tributary sort of branches off a deep creek like a branch, and then there's another tributary to the right of that image that's straighter but it sort of branches off, and if you zoomed out you would see that repeated, you know, in the overall watershed.

Q Okay. So, by branching, you don't mean widening out, is that --

A Yes, not widening out but like a branch-like pattern, like dendritic, like trees, twigs --

Page 398
Page 3

Q Right.
A -- that, you know, all the twigs lead to a larger stem and the larger stem leads to a trunk. That's dendritic and that's a typical drainage pattern.

Q Okay. By branching, are you indicating like one tributary is a branch and another tributary is a branch?

A Yeah.
Q Versus what I was thinking you may have said was it indicates where you noted there was a branching pattern that I'm pointing to there, that this one unnamed tributary we have been discussing today has branched out and may not be centralized flow.

A No. I meant it was a branch on the Deep Creek --

Q Okay.
A -- trunk.
Q All right, that's why I ask these questions.
Okay. Here is, I guess, another general question. You've testified as to AX-10 and then also AX-26, these aerial photos that you've seen the channel, I think, I think you've said repeatedly or continuously, sometimes water, sometimes not based on the photo, et cetera, but can you tell from these photos if these -- this channel has been altered by man, manmade activities? Can you
tell that?
A Yes, you can frequently tell that, yes.
Q Have you seen that here?
A This channel, the lower section is fairly straight, which is kind of typical that it may have been straightened at some point.

Q Okay. And do you have an opinion as to how that affects a determination of jurisdictional waters if that manmade activity occurred prior to the Clean Water Act going into effect?

A You know, I guess my opinion is more based as, you know, photo interpreter and working on sites enforcement cases. It's hard to find a landscape that there hasn't been some manmade straightening of tributaries. So, it doesn't have an influence on the jurisdiction. It's just a factor in the landscape.

Q Okay, and that's the opinion you're testifying to, is that correct?

A The jurisdictional aspect doesn't have so much to do with whether it was straightened or not, it's just now we're looking at relatively permanent flow and similar situated wetlands and significant nexus. Those are the jurisdictional factors.

Q Okay, thank you.
Okay, we're going to $\mathrm{AX}-10$, page 3 . I

## Page 400

believe this is where you might have referred to flowing, Several times you've used that term, but you've clarified that for me. You didn't mean to indicate water was flowing, you meant the tributary was traversing the landscape? Is that the way to say it?

A Yeah, from higher elevation to lower, yes.
Q Okay, thank you. Okay, this is page 5 of AX-10, and I'm looking at my notes here, but -- I believe you may have testified to this later but we have this straight line I would call it to what you testified to being the channel. Do you know what I'm referring to?

A No.
Q Do you see this dark area right here I'm pointing to?

A Yes.
Q Okay. Does that appear to you to be water?
A Yes, that's my interpretation, that that's water flowing. Yes.

Q And I believe to the right of that, you testified what you thought looked like the old channel, is that correct?

A Yes.
Q Okay. Do you have an opinion as to -- well, first of all, do you see any water in the old channel?

A Well, I can't really make out the channel that well because of the vegetation. But, no, so I didn't see water in the old channel.

Q In the straight line I will call it where we see the dark area, would that appear to you to be manmade?

A Which you pointed to earlier -- that? What I testified to is, what I think has happened right before this image was taken was that the flow coming down the watershed for some reason didn't go underneath the culvert and down the channel. Maybe it was blocked, and it sort of jumped over, jumped over the road and then flowed parallel to the old channel. That's my interpretation of what I'm seeing from this one single photo.

Q Okay. And, again, do you have an opinion as to whether -- you've just testified, I believe, that you thought you had seen manmade activity in these photos, right?

A I believe I testified that the straightened, the tributary being straightened is consistent with having been straightened by somebody --

Q Okay. And is that what --
A -- yes.
Q I'm sorry if I interrupted. Is that what
you see here in that straight line, is manmade activity?

A What I'm seeing is the channel in 2009, I'm not sure when it was straightened, but I don't -- the manmade activity would have been previous, I'm guessing.

Q Okay, thank you.
MR. McAFEE: Your Honor, I think it would be helpful if I had those marked on exhibits that have been entered into evidence. I think it may help some of my questions here. Would now be a good time to maybe break so I can have a chance to look at those exhibits? I think it might speed things up a little.

JUDGE BIRO: Sure.
MR. McAFEE: It's up to you, Your Honor.
JUDGE BIRO: No. Of course. How much time do you think you need in addition to like an hour for lunch?

MR. McAFEE: Oh, that will be fine.
JUDGE BIRO: Okay. So, can we break for lunch 'til 1:20?

MR. McAFEE: Sure.
JUDGE BIRO: Okay, we'll stand in recess 'til 1:20.
//

|  | Page 403 |  | Page 405 |
| :---: | :---: | :---: | :---: |
| 1 | (Whereupon, at 12:20 p.m., the hearing in | 1 | opinion is it possible that that dark color is |
| 2 | the above-entitled matter recessed, to reconvene at | 2 | something else other than water? |
| 3 | 1:20 p.m. this same day, Wednesday, October 3, 2018.) | 3 | A Well, I mean, I've looked at it, I've looked |
| 4 | // | 4 | at the way the water seems to cross the road, and that |
| 5 | // | 5 | was -- that was just my finding. It looks to me like |
| 6 | // | 6 | it's water. |
| 7 | // | 7 | Q And the reason I ask, and I realize I |
| 8 | // | 8 | haven't been trained in aerial imaging analysis, but is |
| 9 | // | 9 | it similar to some of the color of the vegetation in |
| 10 | // | 10 | that photo also? It's in a straight line. Again, I |
| 11 | // | 11 | just thought while we were on it, I'd ask if there was |
| 12 | // | 12 | any doubt in your mind as to what that might be. |
| 13 | // | 13 | A Well, also it's hard to reexamine the issue |
| 14 | // | 14 | at all from this particular picture. But, no, I mean, |
| 15 | // | 15 | I looked at it for awhile and I went back and forth, |
| 16 | // | 16 | and I -- you know, I believe that that's a reasonable |
| 17 | // | 17 | explanation for that dark signature. |
| 18 | // | 18 | Q Okay. Then let's move to AX-10. Just a |
| 19 | // | 19 | minute. I believe when you testified this morning, you |
| 20 | // | 20 | went through AX-10, 5, with Mr. Bieri, but then I don't |
| 21 | // | 21 | believe we -- he looked at AX-10, 6 , with you, which is |
| 22 | // | 22 | on the back side of that. Could you take a look at |
| 23 | // | 23 | that for me, since you didn't look at it this morning? |
| 24 | // | 24 | A Okay. |
| 25 | // | 25 | Q All right. Now, I'm sorry, I'm going to |
|  | Page 404 |  | Page 406 |
| 1 | AFTERNOONSESSION | 1 | flip it back. That has a date of April 4, 2009. |
| 2 | (1:30 p.m.) | 2 | That's the same date as AX-10, page 5. Now that's a |
| 3 | JUDGE BIRO: Mr. McAfee. | 3 | different angle, is that correct? |
| 4 | MR. McAFEE: Thank you. | 4 | A Yes. |
| 5 | JUDGE BIRO: Did you have enough time to | 5 | Q Well, let's -- here I am interrupting |
| 6 | prepare? | 6 | myself. Let's talk about those angles a minute. This |
| 7 | MR. McAFEE: I did. Thank you, Your Honor. | 7 | is what's called an oblique aerial, correct? |
| 8 | JUDGE BIRO: Okay, then let's proceed again. | 8 | A Yes. |
| 9 | Whereupon, | 9 | Q And it's done by Pictometry? |
| 10 | PETER STOKELY | 10 | A Yes. |
| 11 | having been previously duly sworn, was | 11 | Q Is that the name of a -- tell me a little -- |
| 12 | recalled as a witness herein and was examined and | 12 | you testified this morning, I don't mean to repeat it, |
| 13 | testified further as follows: | 13 | but explain that a little more to me. |
| 14 | CROSS-EXAMINATION (Resumes) | 14 | A Well, that's the name of their -- that's the |
| 15 | BY MR. McAFEE: | 15 | name of the firm, and they fly in the United States |
| 16 | Q Mr. Stokely, I want to, of course, move | 16 | various places, and they fly with a plane that |
| 17 | forward with our review of exhibits in AX-10, but I | 17 | apparently has five cameras in it. They're looking out |
| 18 | wanted to put back up for you -- I think we had | 18 | the four cardinal directions and then straight down as |
| 19 | discussed AX-10, page 5, and we were looking at this, | 19 | well, and that's how they get these angles. |
| 20 | what I'll call a straight line that's dark next to what | 20 | Q Okay. And using Pictometry, is it -- do |
| 21 | I believe you testified was the old channel. Is that | 21 | they give us the time of day here when they take these |
| 22 | correct? | 22 | photos because of the -- due to the effect of the sun |
| 23 | A Yes. | 23 | on shadows? |
| 24 | Q Is it possible -- maybe that's not a fair | 24 | A The time of day is not -- as far as I know, |
| 25 | question, a lot of things are possible -- but in your | 25 | is not something they would deliver to you when you get |

your -- when you download the photos. They likely have that metadata somewhere as a record.

Q Okay. And would it be fair to say that the time of day would have an effect on shadows if the sun is out?

A Yes.
Q Okay. Also, is there some type of scale to these so we know, you know, when you take some at an angle, does it change the trajectory, the scale, et cetera?

A Yes, the scale varies across the image.
Q Okay. So, these aren't really -- well, are these to scale where you can take a ruler and say it's this far away or --

A Right. So, these prints, you wouldn't be able to, and I can't do it either viewing it in my GIS, but their website where they deliver these photographs, and they also allow you to view them, they have tools that allow you to make those measurements.

Q And have you done that in this case?
A No.
Q Okay. Now, to AX-10, page 6, that I have on the screen, do you see in the area, the lower portion of the unnamed tributary as we've been calling it, do you see water in that -- in this exhibit?

## Page 408

A Well, I don't see it on this print.
Q And that's what I'm asking.
A Yeah.
Q I understand.
A Nothing that I can be sure about.
Q Okay, thank you. Okay, then moving on to
No. 7. Okay. In this photo, I guess the only question I have -- well, again, I think you testified this morning according to my notes that you did see water in this aerial, and I won't make you go back through that because I think you marked -- just to refresh your memory here, I'm showing you AX-10, 7B. Do you see that?

A Yes.
Q And you marked it A, B, and C, and according to my notes, you noted C is where you saw water.

A Yes.
Q Okay. And B is where you saw the channel to what would be east, the old channel I guess is what I'd call it.

A Yes, that seems to be my recollection of what I said about B.

Q Yes. Okay, on either one of these, I'll put the Exhibit AX-10, page 7, back up. Do you see those lines in the fields -- and I'll point to some of them,
do you see those lines I'm pointing to?
A Yes.
Q And for the record, I don't think we need to mark them. I think they're pretty apparent. They are lines throughout the fields both on the -- as you look at the photo on the left-hand side of the unnamed tributary and on the right-hand side, some of them are going straight north and south, some of them are at an angle it looks like with the slope of the field.

Do you know what those lines are?
A Well, they look like they're -- you know, they're made by passing machinery, and I wasn't sure if it was like a plow or maybe it was spreading manure, but I never really formed a final opinion about what those are, but it does look like to they're made by passing machinery.

Q Okay. And I'm just asking you if you know, and you see there is a line also kind of goes up on each side of the ditch of the tributary.

A Yes.
Q Do you see that?
A Um-hmm.
Q Okay. All right, thank you.
Moving on to AX-10, 8, I think you testified here in response to a question from Mr. Bieri that -- I

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don't know if it was specific to this photo, but that if you -- you can't tell an ordinary high-water mark from these photos, correct?

A Correct.
Q Okay. All right, thank you.
At this point, I want to go to AX-26, page
2 , I believe is a closeup, and I believe, according to my notes anyway, this is a closeup of AX-10, 8 , and I believe you testified that you can see water over the road crossing. Is that correct?

A Yes.
Q Okay. And again, that's based on the darkness, right?

A Yes, the dark-tone signature.
Q The question I have also -- and I think I'll ask this -- we'll see this in several of these photos, if that is in fact water, as you've testified, does it get broader and that would be the channel? Have you seen any of these photos where the channel showing the darkness gets wider as it gets closer to Deep Creek?

Now, I realize I -- I'll ask you the broad question at this point. Have you seen that in any of these photos that you can remember?

A Now, I sort of recall that the channel is narrow the way it appears on this one --

|  | Page 411 |  | Page 413 |
| :---: | :---: | :---: | :---: |
| 1 | Q Okay. | 1 | crossing like we had seen in a previous photo. |
| 2 | A -- when it could be seen. | 2 | A I said that earlier today? |
| 3 | Q Pardon me? | 3 | Q I believe -- at least my notes indicate |
| 4 | A When it could be seen. | 4 | that. |
| 5 | Q Right, I understand. Would that be typical | 5 | A Well, I mean, I would agree that looking at |
| 6 | where you are draining an area like, I think you said | 6 | this now, I don't see water going over that. |
| 7 | it's -- the watershed is about 100 acres? | 7 | Q Okay. And I need to ask. Could that also |
| 8 | A Yes, the watershed is about 100 acres. | 8 | be because there is no water, you don't see anything |
| 9 | Q And you've indicated there is the channel | 9 | over the road crossing? |
| 10 | upland and it comes down to Deep Creek. Would that be | 10 | A Well, again, I don't remember what I said |
| 11 | typical for it to not get any wider? And I think in | 11 | specifically about this photo, and whether that |
| 12 | this case, we can see it got narrower as more area is | 12 | signature is shadow versus water. So, I mean, if you |
| 13 | drained. | 13 | showed my report, maybe that would clarify it, but I |
| 14 | A Well, I mean, so the 100 acres is from the | 14 | interpret that to be the culvert is functioning there |
| 15 | point where it enters Deep Creek. I mean, I guess to | 15 | in that particular image. |
| 16 | answer it the other way, it's not -- it doesn't seem | 16 | Q Pardon me? I'm sorry. |
| 17 | unusual to me that this channel would be these | 17 | A I said I interpret that to be that the |
| 18 | dimensions and all throughout. I mean, I wouldn't | 18 | culvert is functioning in that particular -- on that |
| 19 | necessarily expect it to widen to 10 feet wide or | 19 | particular date in that particular image. |
| 20 | something like that. | 20 | Q Okay, thank you. |
| 21 | Q Okay. All right, thank you. | 21 | All right, now I want to move on to AX-10, |
| 22 | I'd like to move now back to AX-10, and | 22 | page 10 , which is a photo you weren't shown this |
| 23 | we'll go to AX-10, page 9, and again this photo has a | 23 | morning, and I wanted you to take a look at that. |
| 24 | date of December 18, 2010. It is light-colored on the, | 24 | A Okay. |
| 25 | at least the farm ground portion, does that appear to | 25 | Q All right. First of all, do you see a |
|  | Page 412 |  | Page 414 |
| 1 | be snow-covered or do you know? | 1 | channel in that photo? |
| 2 | A That's what I thought it was, snow cover. | 2 | A Well, I see -- and, you know, again this is |
| 3 | Q Okay. And there are -- the unnamed trib -- | 3 | like -- not the greatest quality image, but I can see |
| 4 | or I guess I don't need to keep saying "unnamed". The | 4 | the meandering portion in the upper left a little bit |
| 5 | tributary that we've been discussing, it is not white, | 5 | just like we've seen fairly often, and I can maybe see |
| 6 | is it? | 6 | pieces of channel as we go down, and even, I don't |
| 7 | A Well, some of the banks are, but there is, | 7 | know, below that road crossing there seems to be a |
| 8 | you know, sort of -- the dark-tone curvilinear feature | 8 | fairly linear dark-tone feature which, you know, could |
| 9 | is still visible. | 9 | be the channel. |
| 10 | Q Okay. If there were a channel there, would | 10 | Q Okay. Do you see -- let's see, this photo |
| 11 | you expect there -- if there is snow on the farm | 11 | is January 4, 2011. You see white areas that could be |
| 12 | ground, would you expect there to be snow in the | 12 | snow? |
| 13 | channel? | 13 | A Yes. |
| 14 | A Well, I mean, I guess not necessarily if it | 14 | Q And do you see any of those white areas in |
| 15 | wasn't particularly cold and, you know, the water was | 15 | what you have described as the channel? |
| 16 | still flowing. | 16 | A No. |
| 17 | Q Okay. | 17 | Q All right. Then AX-10, page 11, you were |
| 18 | A You know, snow wouldn't accumulate, or if it | 18 | not shown this morning, and I'd like to have you take a |
| 19 | was wet and above freezing, the snow wouldn't | 19 | look at that. This has a date of July 19, 2011. |
| 20 | accumulate. | 20 | First of all, do you see this kind of white |
| 21 | Q Do you see water in this photo? | 21 | line I'm pointing to that goes -- for purposes of the |
| 22 | A I don't recall what I said about this photo. | 22 | record, I would describe it anyway as a -- it looks |
| 23 | Q Okay. I think you also -- I'm trying to | 23 | like a white line from going straight south from what's |
| 24 | look at my notes. You indicated you saw the road | 24 | been superimposed as a confinement building footprint, |
| 25 | crossing but you didn't see any water over the road | 25 | comes down to the what has been labeled as the |

crossing, and then goes off to what would be the southwest? Do you see that?

A I do.
Q Do you have an opinion as to what that would be?

A I believe it's a road.
Q Okay. Now, looking at the portion of the tributary, as we're calling it, to the -- between that area that we just described and Deep Creek in this photo, again which you did not see this morning, do you see a channel?

A You mean downstream from the road crossing?
Q Yes, please.
A Well, what I see on this photo here, this copy, the xerox copy, is again a dark-tone linear feature extending from the road crossing. I would interpret that to be the channel, the channel we've seen before.

Q And do you see any water in that area?
A I don't recall what I said about this one but I'm pretty sure I did not state that I saw water in this image.

Q Yes. Well, again, according to my notes, you were not shown this this morning, so.

A Well, I looked at it.
crossing, what do you see?
A Well, I see the straightened channel. I see a very dark-tone linear feature, sort of corresponds with the culvert but -- and then I see, you know, the riparian vegetation. And this, of course, is a leafon, you know, mid-growing season aerial photo.

Q Do you see water in this photo?
A I don't believe I claimed there was water in that photo from my analysis and in my report.

Q All right, thank you. I don't believe I have any questions for you on AX-10, page 14 .

Okay, AX-10, page 15, I believe you testified this morning that, of course, this is March 9,2015 , and we're coming up on a series of photos March 20th that we're going to spend some time with, but here this is previous to that. I believe according to my notes you did see water in this channel. Is that correct?

A I would want to look back at my report to see what I said.

Q Okay, I understand. I believe you testified this morning, where I'm pointing with my pen is where some clearing has occurred from trees that were previously there.

A Yes.

Page 416
Q Oh.
A I mean, it's in part of my report.
Q I understand. Thank you. Okay.
Okay, I don't think I need -- here's No. 12
of AX-10. I don't think I have any further questions
and, unless you have something you want to add. All right.

This is AX-10, page 13. This was another one that was not shown to you this morning. Would you take a look at that, please?

A Yes.
Q All right. This is dated July 12, 2013, and tell me what you see here regarding the issues we've been talking about, how's that?

A Well, so, you know, once again you can see that vegetative riparian corridor diagonally coming from the upper left towards the lower right. You can see the road crossing near the middle, which is what we were talking about just a few minutes ago, and then below that road crossing is the more straightened part of the tributary.

Q Okay. I don't mean to interrupt if you're still looking.

A Well, I mean, that's all I was --
Q Okay. And then downstream from the road

Q Well, as you look at this photo now, do you see water?

A I see dark-tone linear and curvilinear feature, yes, which could be water, but I don't remember, you know. I'm looking at this print and I did a more thorough analysis and I wrote it in my report what my conclusions are about this image.

Q Okay. Let's talk -- kind of take a step back and talk in general. When you see water in the photos you've testified that you have seen water, again I think you had indicated you could not tell whether it was flowing or not, correct?

A Correct.
Q And we've looked at the topography of these farm fields and I think it's understood as you testified they -- at least on both sides of this tributary, the farm fields drain towards the tributary, right?

A Yes.
Q Okay. If the water -- well, strike that. Could the water that you've seen based on these photos, could it be runoff from those farm fields directly into that channel that's there instead of water that's coming down from, as you've testified, groundwater from up above?

A Well, I'm not sure that I testified that it was groundwater from above. But, no, I believe that it's a combination of both. It's water from the watershed both above and perhaps right next to that tributary.

Q Okay. All right, that's No. 15, and then let's go to 16 , which is a photo you weren't shown this morning, and this is March 20. Now we're into the March 20, 2015, photos which are coming up. There's about four different angles to this one. This is Pictometry, right?

A Yes.
Q All right. Kind of have to get our bearings here because it's coming -- this is taken looking -well, would you tell me?

A It's looking eastward.
Q Okay. And the closest part of the photo is where -- is the upper portion of the tributary, right?

A Yes.
Q Tell me what you see here.
A In the upper portion?
Q Anywhere, please.
A Yeah, you can see -- I pointed this out
earlier on the same year but, you know, a different angle. You can see the meandering channel in the upper

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portion. You could also see the evidence of vegetation being cleared, the ground being, I guess, smoothed out a little bit, and you can see the straighter part of the channel down below the culvert.

Q In this photo, everything is brown, right? Is this black-and-white?

A No, it's a color.
Q Okay. All right. So, let's then go to AX-
10. That was page 16 . Here is page 17 , same date. You testified about this photo this morning, correct?

A Yes, I believe so.
Q Okay. And I believe you testified, again page 17 according to my notes. Let's go to page 18. I seem to have better notes on that unless there is something you want to see there.

According to my notes on page 18 , you see some dark areas in that channel, is that correct?

A Yes, you can see the signature, the curvilinear dark-tone signature of the channel.

Q And it's your testimony you believe that's water.

A I don't recall what I said about water.
Q Does it appear as you look at it here to be water?

A This is -- you know, again, it's not a very
good copy, it's a copy of an image, and my opinions were formed after more thorough analysis. They were written down, and I don't recall if I was, you know, thinking what I was seeing was water or shadow. In order for me to make a statement about water, I needed to rule out shadow, and I don't remember what I did with this one.

Q Okay. Let's go to the next one, AX-10, page 19 , which is the same date, a different angle. Is that correct?

A It's the same date, and I -- yeah, it probably is a different angle, slightly different angle.

Q I want to go -- and again, I don't mean to hide your report from you, I'll be glad to pull that up, because I believe in your report -- all right, where did I set your report? Okay, here it is.

In your report on page -- it's AX-31, page 15 is Figure 5. Do you recognize that?

A Yes.
Q Okay. And there's no date on this figure. I think it is in your report, but that does appear to be the same photo, correct?

A The same one that you just had on there, yes.

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Q Yes, AX-10, page 19. I guess my question is in your report, you indicated this appeared to be ice in the channel. Do you recall that?

A Yes.
Q Then my question is why, and here's AX-10, page 20, same date, different angle Pictometry, is dark there.

A Yes.
Q Okay.
A Yes. So, that was a puzzle, and, you know, when I first saw that white signature, to me it was like classic ice, you know, smooth, white-toned, you know, bright-toned, uniform. And then I saw these other pictures. You have to scroll around and zoom around with the software to capture these different images, and that one with what I called ice is like a barely -- it just appears at one scale, one instant.

But after reviewing all of this, I am not sure that that's ice or if it's actually sunlight reflection on the water.

## Q Okay.

A So, it's either ice or sunlight, or sunlight reflection, and right -- I'm thinking that the -- you know, contrary to what I said in my report, I think maybe it's more plausible that it's reflection because
it's just the angle it was captured was perfect for reflecting the sun, and it was the only image in that series that was that way. So.

Q All right. Well, I guess I shouldn't feel bad I was puzzled by that, should I?

A Okay. No.
Q And I need to ask you this. Is it possible that it's something other than water?

A Well, I believe if it's -- if it's sunlight reflecting, it's reflecting off of water. So, no, it's either ice or sunlight reflecting, and either way to me it's indicating the presence of water pretty clearly.

Q Okay.
(Pause.)
Okay. Sorry. As I look through my notes here, I want to look at -- make sure I cover everything.

Oh, on these Pictometry photos, and that's the company that takes those, is that correct, versus the government?

A Correct.
Q Okay. Do you know how they decide what dates they take these photos or is it just random?

A No, I don't know. They are contracted by local governments to fly the area, and so there is

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probably something in the specification with the local government -- scale, time, you know, that kind of thing.

Q So, by local government maybe, and if you don't know I understand, but the county or?

A County, cities, fire departments, various organizations contract them.

Q Okay.
A Tax assessors' offices.
Q Okay, thanks. I think I just want to go now to AX-10, page 22, and this is -- all right, this will be maybe a dumb question, but this is taken June 8 , 2016, and if I hadn't seen the date on that photo, I would think there was snow on the ground in places. Is that -- I'm pretty sure that didn't occur on -- we didn't have snow on June 8. Do you know what those light-colored areas are?

A Yes. This is a black-and-white photograph. So, it's -- everything is in gray-shade. That is very brightly reflecting, in the case of the area right around the confinement building is dry soil, just bright reflecting soil, bare soil.

Q And would that be the case also like, you know, down in the field, as you can see, there's some areas below the confinement building footprint and
various places out in the field?
A I'm not 100-percent-sure about that. It kind of has the signature of maybe soil eroding down that slope or washing down that slope, but I didn't spend a lot of time trying to answer that question.

Q Okay. Okay, I think I'm done with dragging you through those photos again.

I now want to turn to your report. I think I just have a few questions, go through your report on some attachments. Let's go to AX-31, page 12.

Okay, do you recognize that photo, Figure 2 from your report?

A Yes.
Q And it is the 1930 photo as I understand it, and there are two red arrows there that I don't believe I saw an explanation of. I just wondered -- in your report, and I may have missed it, but could you tell me what those arrows are depicting?

A Well, yeah, without the text in front of me, I think they're pointing to the channel.

Q Okay. The bottom red arrow is -- there's a white line, and maybe this is what you've testified before this afternoon or maybe this morning before lunch. There's a white line there that is -- the arrow is pointing over top of. Is that -- you don't believe
that's the channel, correct?
A You know, this is the poorest resolution image and the one that depicts the channel the least clearly. So, it's difficult to know exactly where it is, but I believe I'm pointing to sort of the darker signature in between those white lines.

Q Okay. I'm just looking through your report here if I had any other questions. I think you've answered some of them previously with your -- when Mr. Bieri was asking you questions. I may just have one more.

I'd like to turn to -- maybe you can tell
I'm used to -- I'm more used to trials where the witness has a witness book up there with him and we both --

A Right.
Q -- have to turn to the page at the same time. So, I realize you don't have to turn to anything.

Okay, I'm looking at RX-5 -- it's the wrong
page. Okay, Mr. Stokely. Sorry for the delay. RX-5, which is Respondent's Exhibit 5, page 22. Now, I believe -- I will represent to you anyway that these photos are from the EPA's PowerPoint, and I believe it was the one that was provided to you initially. I can't say that for sure, but this is the PowerPoint we
have anyway. And this is -- 2014 it's dated, and I realize it's not very close, right?

A Right. It's zoomed out.
Q First of all, can you get your bearings as to where everything is?

A Yes.
Q If I can point, and maybe we can mark on this if we need to, but do you see this area my pen is pointing to that appears to be to the west of the main channel, we'll call it, do you see a little darker area there?

A Well, I do, yeah.
Q When you have the PowerPoint photos, you could probably enlarge them and take a closer look, but does that appear to you like that could be another area where drainage is channelizing?

A You know, I don't know. That wouldn't be my interpretation just because the way it's like dots, dots, and it's not a linear feature, but there is a series of dots and there is some more in that field to the north and east.

So, I didn't look at that very closely to try to figure out what that is, and so I also didn't look at in, you know, the original imagery that I have on my computer.

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-
Q Okay.
A Not that particular issue that you're asking me right now.

Q Okay, thank you. Oh, I shouldn't have turned the page in my notes. I found a couple more questions, not about this; just a couple more general questions.

Deep Creek appears to be a fairly good-sized creek, right?

A Yes.
Q And would you anticipate it would -- I didn't see this in your report nor has it been discussed -- that it would flood at certain times of the year, or do you know?

A Well, I don't know, you know, specifically. But I would guess that it does flood.

Q Did any of the information you looked at regarding that creek, did it -- anything indicate that it has flooded or floods?

A I never saw an image that showed it over its banks or anything like that.

Q That's a better way to say it than flooding. If it did, and I think you indicated you had seen some, like -- I don't know if damage is the right word -- on the creek banks. If it did, could some of that be
caused by, you know, if it floods and comes back, it goes back in its banks, could some erosion be caused by that typically?

A Oh, yeah. When a stream floods, it typically moves sediment around, drops sediment in places, maybe erodes the bank a little in places.

Q Okay. Also, I don't believe I saw in your report or have heard you testify today about -- in any of the photos or anything about wetlands, is that correct?

A Correct.
MR. McAFEE: Thank you. No further questions.

JUDGE BIRO: Any redirect?
MR. BIERI: Just a few. Thank you.
MR. McAFEE: Do you want me to leave the exhibit book there?

MR. BIERI: Sure. Yes, if you don't mind. Thank you.

MR. McAFEE: Sure.

## REDIRECT EXAMINATION

## BY MR. BIERI:

Q Mr. Stokely, just a couple questions for you. Did you produce -- attach to your report every single photograph that you could acquire that was
related to this case?
A I produced a list of them all.
Q Okay.
A And I don't remember if I sent you like a copy of every single photo.

Q Okay, that's fair. You produced a list and it's referenced in your report, correct, of every single photograph you could acquire, is that right?

A Yes.
Q Okay. And that was regardless of what the photograph showed, correct?

A Yes.
Q All right. And it would be incorrect to state that you only referenced in your report photographs that, or that you cherry-picked photographs, correct?

A It's the complete list of aerial photos that I obtained.

Q All right, thank you. Did you review the photographs that Dr. Garcia took on her site visit in 2018 from the ground?

A Right. I reviewed ground photographs, but I don't remember who took them.

Q Okay. And I realize that might not have been a perfect surrogate for being on the ground, but

|  | Page 431 |  | Page 433 |
| :---: | :---: | :---: | :---: |
| 1 | did those assist you in seeing what the conditions | 1 | A Yes. I factored in the sun angle, the time |
| 2 | looked like on the ground? | 2 | of day when I was concluding about the presence of |
| 3 | A Yes. | 3 | water, and there are times when the sun angle is such |
| 4 | Q All right. | 4 | that the shadow is casting clear across that tributary, |
| 5 | A As a photo interpreter, we can rely on other | 5 | and that would make it difficult for me to establish |
| 6 | peoples' information, ground information. | 6 | whether there is water in there. |
| 7 | Q All right. And did anything in those | 7 | There are other times when the shadows were |
| 8 | photographs make you question your opinions or | 8 | pointing more in a northern direction, and I felt in |
| 9 | conclusion you've reached in this case? | 9 | that case, in those cases that the dark tone that I'm |
| 10 | A No. | 10 | seeing, it may not be obscured by shadow; that that |
| 11 | Q I want to just ask you briefly about AX-10, | 11 | could be water. |
| 12 | page 5 . We've seen this a few times, and this will | 12 | Q Very good. Do you remember the photograph |
| 13 | just take a second. This is a Pictometry image, sir, | 13 | that Mr. McAfee showed you that was -- it was a -- |
| 14 | from April 4, 2009. | 14 | well, I'm just going to show it to you. |
| 15 | Mr. McAfee asked you if that dark signature | 15 | This is the black-and-white photograph from |
| 16 | here could be something different than water, and my | 16 | June 8, 2016, AX-10, page 22. Remember that one? |
| 17 | question for youis, if that dark signature was not | 17 | A Yes. |
| 18 | water, does that in any way change your ultimate | 18 | Q Could the white tones that we see around the |
| 19 | opinions in this case? | 19 | confinement building footprint, could that be gravel |
| 20 | A No. | 20 | too, or do you know? |
| 21 | Q Now, you talked a little bit about shadows | 21 | A If it's reflecting -- if it's dry and it's |
| 22 | and water, and I just want to be clear. Are there ways | 22 | bright, then it could be gravel, yes. |
| 23 | as a photo interpreter to tell, at least in some cases | 23 | MR. BIERI: Okay. Just a moment. Nothing |
| 24 | to tell the difference between what's a shadow and | 24 | further, Mr. Stokely. Thank you for your time. |
| 25 | what's water? | 25 | JUDGE BIRO: Any recross? |
|  | Page 432 |  | Page 434 |
| 1 | A Yes. | 1 | MR. McAFEE: I don't have anything further, |
| 2 | Q Okay. Can you just describe that? We don't | 2 | Your Honor. Thank you. |
| 3 | need to show a photo to do that, but can you just | 3 | JUDGE BIRO: Mr. Stokely, if you would just |
| 4 | describe for us how you do that? | 4 | give me a minute, please. |
| 5 | A Well, frequently the shadow is almost always | 5 | THE WITNESS: Okay. |
| 6 | black, and water can also be almost always black, but | 6 | JUDGE BIRO: Mr. Stokely, you used the term |
| 7 | there are instances where the water with a color | 7 | "check dam". What's a check dam? |
| 8 | photograph for instance may not be black. It may be a | 8 | THE WITNESS: A check dam as I'm referring |
| 9 | greenish-brown color like, you know, somewhat like | 9 | to it, it's a berm, you know. |
| 10 | sediment-laden water, and you can distinguish that from | 10 | JUDGE BIRO: I don't even understand that |
| 11 | shadow. That's one example. | 11 | term. |
| 12 | There was a color infrared aerial photograph | 12 | THE WITNESS: Like a pile of soil across a |
| 13 | that I looked at where water that has some sediments in | 13 | swale or across a drainage-way. It could be gravel, it |
| 14 | it appears to be more of a baby-blue color, and that -- | 14 | could be dirt, and it's a, you know, a linear pile or |
| 15 | and the shadow will be black, and so you can | 15 | berm, if you will, across a drainage swale, and the |
| 16 | distinguish water from shadow in that instance. | 16 | purpose for them that I've seen in different places is |
| 17 | And then, also, if you see something that | 17 | to slow the water down that's coming down and slow it |
| 18 | looks like patterns flowing across the land, that is | 18 | down and hold it and keep the velocity from getting too |
| 19 | more characteristic of water even though it's dark- | 19 | high so it erodes. That's the purpose, one of the |
| 20 | toned, than shadow. | 20 | purposes of a check dam. |
| 21 | Q Okay. And sometimes can you look at a | 21 | JUDGE BIRO: Are they manmade or naturally |
| 22 | reference like a building and see where the shadow is | 22 | made? |
| 23 | pointed and be able to take that information to the | 23 | THE WITNESS: Manmade. |
| 24 | tributary and tell whether something is a shadow or | 24 | JUDGE BIRO: And if you want to slow down, |
| 25 | water? | 25 | what would be the purpose for building one of those on |

farmland?
THE WITNESS: In this instance, I think I would probably be speculating if I said why.

JUDGE BIRO: Just generally on farmland if someone wanted to do that.

THE WITNESS: Well, so to slow the water down, hold it back a little bit, reduce the velocity of it so that it doesn't erode.

JUDGE BIRO: The farmland?
THE WITNESS: Yeah.
JUDGE BIRO: In a lot of these pictures, they had a box labeled "farm containment area". On the pictures, except for one, am I correct that that was superimposed; that in fact the hog farm containment area didn't exist in that location?

THE WITNESS: Historically. That's correct. That was superimposed back onto the historical pictures as I understand it.

JUDGE BIRO: Okay. And is that superimposed by virtue of some program that you were able to use to geographically locate it by latitude and longitude onto all those other pictures?

THE WITNESS: I believe you're referring to an exhibit from the region.

JUDGE BIRO: It was on all those photographs

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you looked at.
THE WITNESS: Yes, yes. And I didn't create that label that said "containment barn" or whatever the words were. I did not create that. But I would be -I'm guessing -- it is better than guessing -- that exactly what you said is true. You can label something in a mapping software and it retains its geographic coordinates, so when you put an older image or something underneath it, it will be -- the label will be in the same place even though the -- even though the object may not be there.

JUDGE BIRO: When you looked in your software at those photographs, were those labels on it?

THE WITNESS: No.
JUDGE BIRO: There were a few questions asked about a photograph where there seemed to be lines running through the farmland. They appeared as sort of dotted lines running either north to south or east to west through the farmlands.

Can you give me an idea of what those would be? Would they reflect water in the farmlands or --

THE WITNESS: Was that on the crossexamination?

JUDGE BIRO: And I think you suggested they were made by farm machinery.

THE WITNESS: Right.
JUDGE BIRO: But what was the farm machinery
doing that reflected, that created those exactly even lines?

THE WITNESS: So, one of the explanations would be that it was some sort of gang plow or plow being pulled behind a tractor, and as it turns up the soil and buries the thatch from the year before, it creates a -- you know, sort of moist, wet soil signature in behind the machine, which would create these lines of tones that differ from the surrounding area.

So, it could have been fresh soil that was dug up by some sort of gang plow or -- you know, and I've also seen it in other places, and I don't know if these guys do it here, but they will spread manure over their cornfields in patterns like that, and then that's the manure you're seeing.

JUDGE BIRO: Okay. So, this dark would reflect the moisture level.

THE WITNESS: Right, and the manure being dark, you know, darker than the soil sometimes. But I didn't really examine that to come to any type of conclusion, but it's pretty clear that those are lines made by machinery because you can even see where they

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turn around at the tops of some of them.
JUDGE BIRO: Okay. Okay, I don't have any further questions. Mr. Bieri, do you have any questions?

MR. BIERI: None, Judge. Thank you.
JUDGE BIRO: Okay. Mr. McAfee?
MR. McAFEE: No, thank you, Your Honor.
JUDGE BIRO: Okay.
MR. McAFEE: Thank you.
JUDGE BIRO: Thank you, Mr. Stokely. You may step down.

THE WITNESS: Yes. May I stay in the courtroom?

JUDGE BIRO: It's up to your counsel.
THE WITNESS: Okay.
(Witness excused.)
JUDGE BIRO: Of course we can. We're going to stand in recess for five minutes. Thank you.

MR. McAFEE: All right, thank you.
(Whereupon, a short recess was taken.)
JUDGE BIRO: Mr. Bieri, do you have another witness you would like to call?

MR. BIERI: No other witnesses, Your Honor. Plaintiffs rest.

JUDGE BIRO: Thank you.

MR. BIERI: And we may, if time permits today or tomorrow, we may want to do like a minute closing, but we would prefer to do that at the end of this.

JUDGE BIRO: Okay.
MR. BIERI: Thanks, Judge.
JUDGE BIRO: Before we leave the hearing, I want to make sure we go over all the exhibits, that we're all on the same page of everything that's been admitted into the record so we know the whole universe of the documents that can be relied on.

Okay, Mr. McAfee, would you like to call your first witness?

MR. McAFEE: Yes, I would, Your Honor, and we call the Respondent, Scott Morrow.

JUDGE BIRO: Good afternoon, Mr. Morrow.
MR. MORROW: Good afternoon.
THE NOTARY PUBLIC: Could you raise your right-hand, sir?

Whereupon,

## SCOTT MORROW

having been duly sworn, was called as a witness and was examined and testified as follows:

THE COURT REPORTER: Can you spell and state your last name for the record?

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THE WITNESS: Scott Morrow, M-O-R-R-O-W. THE COURT REPORTER: Thank you.
JUDGE BIRO: Yes, please begin.
MR. McAFEE: Okay.
THE WITNESS: Pardon?
JUDGE BIRO: I'm just talking to Mr. McAfee. Go ahead.

MR. McAFEE: Just wanted to make sure everyone was ready.

DIRECT EXAMINATION
BY MR. McAFEE:
Q Mr. Morrow, Scott, please would you give us your date of birth?

A 8-7-1958.
Q Okay. All right, I'm going to jump ahead and then come back. I have a habit of doing that.

C\&S Enterprises is the Respondent in this matter, correct?

A That's correct.
Q And I think I put an "s" on the end of it, but technically is it C\&S Enterprise?

A Yes.
Q Who are members, it's an LLC, who are the members of C\&S Enterprise?

A My wife Carol and myself.

Q Okay. And your testimony today will be on behalf of C\&S Enterprise, correct?

A Correct.
MR. McAFEE: I have to get out of cross-exam mode. Sorry, Your Honor. I'll try and be a little more open-ended in my questions.

JUDGE BIRO: That's all right. These are preliminary questions. Go ahead.

MR. McAFEE: All right, thank you.
BY MR. McAFEE:
Q Where did you go to school? Well, did you grow up in -- what area did you grow up in?

A I grew up south of Victor, about 11 miles, in a little area on a farm.

Q Okay. And what kind of farm?
A Livestock, grain farm, poultry, we raised everything and made our own stuff, so.

Q What did you do after high school at Victor?
A I went into construction work for different employers, plus I helped my dad farm. In 1978, me and my wife got married -- and actually had a farm of my own at that time in the '70s, and I farmed with my dad up to 1986.

Q Okay. And tell us a little bit about that farm.

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A That farm there, we raised -- on my dad's farm, beef, confinement hogs, different livestock. On my farm, raised hogs, sold feeder pigs and market pigs, and then I grain-farmed also.

Q About how many acres?
A I farmed 150 .
Q And what crops did you raise?
A Corn and beans.
Q Have any hay?
A Yup, we had hay occasionally after we had, we would have oats.

Q Okay. What year did you graduate?
A 1976.
Q Okay. So, 1976 you graduated, did construction work if I understood you right, and then when you were farming, were you still doing construction work?

A Yes, I've always did construction work when I was farming.

Q At that time, what kind of construction work?

A Concrete construction.
Q Is that similar to what you in fact -- we'll get to that -- do today?

A Yes.

Q And tell us about what kind of concrete construction work you do?

A House foundations, footings, basements, the concrete portion of them, driveways, sidewalks, foundations for buildings.

Q Okay. All right. So, we go ' 78 to ' 86 , you farm with your dad, and then what in ' 86 ?

A Back up a little bit. October 1st of 1983, I went out on my own in the construction world, and from then to even present day, I am a concrete contractor.

Q Does C\&S Enterprise do construction work?
A No.
Q Or is that a different company?
A That's a different company.
Q What's the name of that company?
A Morrow Construction Company.
Q Was that the name of the company when you started it in ' 83 ?

A Yes.
Q Okay. So, anything else before we get into what you did come 1986 ?

A Not previous, no.
Q All right. So, you quit farming in 1986?
A In 1986, yes.

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Q And then what did you do?
A Did construction work full time until 2006 and had the opportunity also to get back into the farming aspect and elected to do so.

Q All right. So, that's a period, according to my math, of 20 years where you weren't actively farming, is that right?

A That's correct.
Q Were you helping anyone farm or --
A No.
Q Did your father farm at the time?
A Yes.
Q Okay. What changed that you wanted to get back into farming?

A Time had healed, I guess, from the '80s, the recession time. I've always had the love to farm, but just had a bitter taste in my mouth, I guess, because of the ' 80 s recession that - about lost my shirt.

Q Okay. In 2006, what did you do then as you got back into farming?

A We had purchased a farm -- not C\&S, another -- me and my wife and another guy and his wife had a chance to purchase a farm, so we did so.

Q Maybe I should ask, when was C\&S Enterprise formed? Do you remember?

A 1984.
Q Okay.
A Or'94. Excuse me. 1994.
Q Okay. We'll come back to that maybe, but go ahead. You started farming again in 2006.

A Yes, and then C\&S purchased a farm in the fall also of 2006, another property, and got back into the farming aspect.

Q We'll, of course, go through this in more detail, but what year did you, or did you buy the farm that we've been talking about for the last day and a half?

A We took possession in March 1st of 2008.
Q Before I move on from your background into more the details of this case, when you were growing up, did you have any interaction, I'll call it, or relationship -- I don't know if those are the right words -- with the farm that we've been -- again, I'll call it -- as we've been talking about for the last day and a half?

A Yes, I did. Back in the mid-60s, my dad rented this farm for a couple years. This farm also adjoins my parents' farm. So, it was something that I was familiar with pretty much all my life, and from about 1974, it is a farm that -- I'm an avid hunter and

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I hunted this farm every year.
Q And by "avid hunter," what are you -- what do you hunt?

A Deer, pheasants, squirrels, rabbits.
Q And for those who aren't hunters, that involves walking?

A Yes.
Q Over the entire farm?
A Farm, yes.
Q Okay. So, while you were growing up, in addition to your dad farming for a couple of years, and how old were you then? Do you remember?

A I would have been probably eight or nine.
Q Okay. So, did you help him on this farm?
Do you remember?
A I'm sure I did. I can't remember specifically back to eight or nine years old what I did day to day.

Q And that was in the ' 60 s?
A Yes.
Q So, if I were to ask you did you ever see water in the -- okay, okay. If I were to ask you if you did, did you ever see water in the tributary here when you were eight or nine years old, what would your answer be?

A I can't answer that because I don't recollect what I did day to day. It wasn't important what I did day to day at eight, nine years old.

Q That was more tongue-in-cheek than anything. I imagine an eight or nine-year old, you weren't paying too close attention to --

A No.
Q But on a more serious note, when you hunted this area over the years, as you've indicated, do you have -- do you have any recollection of what we've been talking about, and we'll go through this in more detail maybe -- but do you have any recollection of the condition of this tributary?

A Yes.
Q And tell us that.
A There would be water in it at times, not all the time. In places, like I said, I would not call it a bank or bed. You could walk through it, but other than that, I mean, it was very neglected.

Q And who owned the farm at that time?
A Leonard Sims (phonetic) owned the farm.
Q Okay. And was he farming it himself?
A No, he rented it out.
Q Do you know who rented it? And I know I'm talking about a span of years.
it. It also adjoins my dad and mom's farm to the east, so we could tie them together.

Q Are your parents still living?
A My mom is. My dad passed away two years ago in February.

Q But the farm is still --
A Yes.
Q Does your mom still own that farm?
A Yes.
Q Okay. When it came up for sale, I think you said you bought it from an estate. Mr. Sims had passed away?

A Yeah, I bought it, purchased it from Leonard Sims' estate.

Q Okay. Tell us what you did when you bought it. I think you had just testified it was run-down. First of all, what do you mean by run-down?

A They didn't do a whole lot of maintenance on it. The landlord would not spend any money to maintain this farm. The tenants that took care of it didn't take care of it. If a tree fell down in a field that was planted, they combined around it and the next year they planted around it, and that continued.

So, after I bought it and got possession March 1st of 2008, with approval of the NRCS, which I

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A Yeah. A neighbor back in the '70s, Bill
Kuesel (phonetic), and then his sons rented it from then up to the time I bought it.

Q When you bought it in 2008.
A That's correct.
Q As a boy or even now, did you or anyone ever fish in Deep Creek?

A No.
Q Have you ever seen anyone fishing there?
A No.
Q Does anyone trap it or trap -- you know, trap for raccoons, et cetera?

A No.
Q I mean, if you know.
A Yeah. No, not to this day. Maybe years ago, but we don't have really many people that do that in our area.

Q Okay. All right. What interested you in purchasing this farm in 2008?

A As I grew up, I had two to three farms that -- I always knew some day I'd like to own a farm again. From a young boyhood age even, this was one of the two or three farms that I had interest in purchasing if I was able to, and the timing was right. It came up for sale. It was on the market for 18 months and I bought

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worked with quite often, we did a lot of clearing of scrub brush, trees, took out some fencerows and just then cleaned the place up.

Q And you say "we". Who is that?
A C\&S Enterprise.
Q Okay, but did you have help or --
A I have -- at that point -- I have two sons so I would ask them to help me as much as I could and then I hired a construction company or excavating company to come in and help clean -- clean up the trees.

Q Now, to farm people, cleaning up a farm means something to, I'll say us, but explain a little more about what you mean by cleaning up a farm.

A Two different things. Along all the fencerows from where the fence runs, trees are growing in the fencerows. The trees were falling over out in the fields. They were canopied over out into the fields to the point of taking up valuable farm ground where by just trimming the trees, you could gain 20 to 24 rows of additional grain.

Other places we would -- we would clean up areas where scrub brush had been growing out in the middle of -- in the middle of a field. Also, it might have a lot of little fields and to no avail I had -- I

|  | Page 451 |  | Page 453 |
| :---: | :---: | :---: | :---: |
| 1 | had no livestock, so we would remove the fence, the | 1 | A Yes. |
| 2 | fencepost, and then remove the trees, and the fence- | 2 | Q Anyway, I don't mean to -- I just wanted to |
| 3 | rows to kind of open it up into bigger fields. | 3 | explain or have you explain why we would see fields and |
| 4 | Q I'd like to show you what's been marked as | 4 | fencerows where maybe we don't today. |
| 5 | AX-10, page 4. Can you see it there in your monitor? | 5 | Also, while we have this photo up, up where |
| 6 | A Yes. | 6 | the -- where that yellow box is superimposed, what was |
| 7 | Q Now, as has been pointed out, there is some | 7 | there when you bought it,the farm? |
| 8 | text boxes or superimposed boxes here that aren't | 8 | A Up by the curve, by the road there? |
| 9 | really part of the photo, but are you talking about | 9 | Q Well, over here where it says "confinement |
| 10 | like -- well, I think you can point -- you haven't | 10 | building -- |
| 11 | done this yet but I think you can point to it on that | 11 | A Oh, up there. That is -- that's the old |
| 12 | monitor to show like taking out trees, what you're | 12 | homestead building site right there. When I bought it, |
| 13 | talking about? | 13 | there was an old wire corncrib, a couple old concrete |
| 14 | A Okay. For instance -- can I touch it? | 14 | foundations, dilapidated. There was a pole barn there. |
| 15 | Q Yes. | 15 | Q Was there a house? |
| 16 | JUDGE BIRO: Yes. | 16 | A No, the house had been removed previous to |
| 17 | BY MR. McAFEE: | 17 | my buying it. |
| 18 | Q Yes, you can touch it. | 18 | Q And I think the question may have come up |
| 19 | A Okay. This area like right here is a fence- | 19 | also -- while we're on this subject. Across the road |
| 20 | row that comes over, this right -- not that one, that | 20 | just to the northwest is another farmstead, right? |
| 21 | one is Deep Creek. But at that time, there was a | 21 | A That is correct. |
| 22 | fencerow that come across there. There was another one | 22 | Q And that isn't associated with your place, |
| 23 | that come down here and across that we cleaned up. | 23 | is it? |
| 24 | Q Do you recall -- and again, it's been | 24 | A No. |
| 25 | discussed a lot, but the trees that are in the | 25 | Q And is there a house there currently? |
|  | Page 452 |  | Page 454 |
| 1 | tributary there, was that a fencerow too at any time | 1 | A No, there is not. |
| 2 | that you remember? | 2 | Q Has there been for since you can remember? |
| 3 | A There was a fencerow that was down here that | 3 | A No. |
| 4 | kind of come down like that. | 4 | Q All right. Okay, so anything else you did |
| 5 | Q Okay. And that was at the time you bought | 5 | to clean up the farm at the time you bought it? |
| 6 | it? | 6 | A No, just basically clean up trees and fence- |
| 7 | A Yes. | 7 | rows. |
| 8 | Q Okay. | 8 | MR. McAFEE: Okay. Now, I'm not sure, how |
| 9 | A It was not a fencerow that would probably | 9 | does he erase that? |
| 10 | hold anything in it, but portions of that old fence was | 10 | (Pause.) |
| 11 | still there. | 11 | BY MR. McAFEE: |
| 12 | Q And maybe just for a little bit of | 12 | Q You mentioned NRCS. |
| 13 | explanation -- it might not be central to the issues in | 13 | A Um-hmm. |
| 14 | this case, but maybe you can explain why in the past | 14 | Q Tell us about your involvement, discussions |
| 15 | farms had more fences on them. | 15 | working with, however you want to say it, with NRCS. |
| 16 | A They would have -- they might milk cows, | 16 | Start with when you bought the farm. |
| 17 | they may have what they call stock cow herds that | 17 | A I was in the NRCS and FSA office quite often |
| 18 | raised beef. They had some calves, some hogs, horses, | 18 | checking with them what I could do, seeing what |
| 19 | and they had smaller fields to move them around to | 19 | programs were available, and when I would go into one |
| 20 | pasture them and to keep them out of their grain -- | 20 | of them, they're in the same building in Williamsburg, |
| 21 | fields that they grained. | 21 | Iowa, or Iowa County, they were in the same building. |
| 22 | Q So, maybe one year, one field would be | 22 | So when I would stop at one, I would always stop at the |
| 23 | pasture and the next year, or a couple years later a | 23 | other one. But I worked with them a lot from when I |
| 24 | different field would be pasture, and then they would | 24 | bought the farm going forward with other projects on |
| 25 | plant corn in the previous field. | 25 | the farm. |

Q Had you had -- let's see, you started farming again in 2006.

A Um-hmm.
Q Had you had interaction with NRCS between then and when you bought this farm on your other farms?

A Yes.
Q And what about back -- let's see. You farmed from '78 to '86. Was NRCS in existence then?

A Yes, they were but they weren't -- the programs weren't as available as they are today, I guess.

Q Okay. Now, you've mentioned FSA -- and I believe you said FSA, correct?

A Um-hmm.
Q And NRCS. Maybe just briefly explain what you understand to be the difference.

A NRCS, it is Natural Resources Conservation Service. The FSA is Farm Service Agency. The FSA, that's where we -- we work with what we plant every year because we have to certify our crop, sign up for programs, government programs there.

NRCS, they kind of handle the actual land part of agriculture along with FSA, because there has been times where I've went in to do a sod-bust, and I have to start that paperwork on the FSA side, and then
other ones also that I -- I don't remember their name. I worked with Regina a lot.

Q And I guess the reason I'm asking you those questions is the -- we're going to talk about the issue here in this case of the tiling and other work you did, and those names, I assume, will come up. But had you worked with them before this work in 2015 that's at issue in this case?

A Yes.
Q Okay. I think you've testified to, what, clearing brush, is that right?

A Yes.
Q Okay. Did you also at some point do some tiling work?

A Yes. Through working with the NRCS in November of 2009, we did some tiling in the area of what is south of the hog building across what we're calling it that unnamed tributary, up along that, and south on that hill. Those little --

Q If I can ask you.
A Okay.
Q Had you done any tiling on this farm before that?

A Yes. The fall before, we did tiling on the other side of Deep Creek.

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it would go to the NRCS, and it might come back to the FSA to get the approval.

Q Can you tell us what a sod-bust is?
A It is -- if you tear up to farm, something
that's been grassed for a long period of time or if you tear out a fence -- the strip between two fields, believe it or not, that is a grass area, and you have to have the approval to farm that $10,15,20$ foot, and they call that a sod-bust.

Q Okay. And have you gotten approval from NRCS to do that?

A Oh, yes, many times.
Q Who did you work with or correspond with at NRCS at the time you bought this farm?

A In the office, it would be Steven Johnson (phonetic) was the head person in the NRCS.

Q Do you know his title?
A Director maybe. I don't know.
Q Okay. Is he still there?
A No, he's not. He's retired.
Q Okay. Who else at that office have you worked with?

A I also worked with numerous field agents in that office. One in particular is a Regina Leer (phonetic) that I had worked with, and there are some

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Q And by -- well, a couple of questions here, make sure we understand what we mean by tiling.

A You place a tile, a tile with slots in it, it's a plastic tile. You place that tile anywhere from three to five-foot deep to drain, help drain the soils. It also adds a great -- enormous benefit to the crop and its growing. The other thing it does is it -- it dries out areas so that when it does rain, the soil is dry. A tile kind of works like a sponge. It absorbs it and then releases it, where wet soils stay wet, when it rains and you get your big rains, wet soils move easier.

So, we do this to -- I do this -- I consider myself a steward of my farm. I value the topsoils. I value my whole farm. So, I try to protect and keep what I have there because you can -- you can't make more of it or replace it. But you put that tile three to five-foot deep, depending on where you're at, to drain the soils.

Q First of all, do you do the tiling work yourself?

A I don't do it myself. I have helped do it before.

Q And on this farm, who did the tiling work that --

|  | Page 459 |  | Page 461 |
| :---: | :---: | :---: | :---: |
| 1 | A Seaton (phonetic), Seaton Construction. | 1 | correct? |
| 2 | Q And do you know him pretty well? | 2 | A That's correct. |
| 3 | A Yes. | 3 | Q Tell us specifically how the tile is placed |
| 4 | Q Okay. So, you don't do that at least with | 4 | in the ground and what would make those lines we see. |
| 5 | your own equipment. | 5 | A There's different methods to put tile in the |
| 6 | A No. | 6 | ground. We use a tile plow, which has a big knife on |
| 7 | Q Do you have any -- let me back up. Does | 7 | it, the tile comes in the top and inserts the tile at |
| 8 | your construction business do what I'd call dirt work? | 8 | a certain level that you want to put it in at. |
| 9 | A No. The only dirt work we do is for ourself | 9 | It's pulled with -- this one here is pulled |
| 10 | of maybe rough backfilling a basement. | 10 | with a bulldozer, and that's what we do to put the tile |
| 11 | Q Related to your concrete work? | 11 | in the ground. It knifes it in, kind of lifts the soil |
| 12 | A Yes. | 12 | up and sets it in a bed down below into a V, and then |
| 13 | Q Do you have any equipment that you use on | 13 | it just follows along and buries the tile. |
| 14 | your farm to do any of this work we've talked about? | 14 | Q And as Mr. Stokely noted, I don't know -- he |
| 15 | A Yes. I mean, I use my skid-loader to do | 15 | noted that these lines appear to be made by a machine |
| 16 | what I can do to keep the cost as low as I can to | 16 | that has disturbed the soil. So, that would be |
| 17 | maintain it. | 17 | correct, right? |
| 18 | Q Okay, back to the tiling. I think you said | 18 | A Yes. |
| 19 | before this work we're going to talk about in 2009, you | 19 | Q But that machine here is the tile plow and |
| 20 | tiled some other areas of the farm. Did you contact | 20 | the reason there are lines there like that is -- where, |
| 21 | NRCS first? | 21 | every line, there is there's a tile underneath it. |
| 22 | A Yes. | 22 | A That is correct. |
| 23 | Q And tell me about that. | 23 | Q And in fact, do many people that -- farmers |
| 24 | A Anytime we did, we'd go in and contact NRCS, | 24 | you know use a photo like this as their tile map? |
| 25 | get the approval of what we're doing. So, I went in | 25 | A Yes. |
|  | Page 460 |  | Page 462 |
| 1 | and contacted them. A lot of what we did, too, if the | 1 | Q Okay. Now, these tiles, you use the term |
| 2 | project started out smaller, we had the availability of | 2 | "pattern tile". What do you mean by that? |
| 3 | contacting them and they may send out a field agent to | 3 | A If you notice, the tile are put in in a |
| 4 | okay something else out in the field. | 4 | sequence pattern parallel to each other, spaced apart |
| 5 | Q And you've done that? | 5 | evenly. It's called pattern tile. Otherwise you would |
| 6 | A Yes. | 6 | see lines going kind of all over in certain places. |
| 7 | Q On this farm? | 7 | Q And are these tile put everywhere or do you |
| 8 | A Yes. | 8 | put them in areas where you only need them? Explain |
| 9 | Q Okay. Fall of 2009, you said you decided to | 9 | that. |
| 10 | do some tiling, and I'd like to show you what's been | 10 | A In this day and age, a lot of people are |
| 11 | marked as AX-10, Agency Exhibit 10, page 7. | 11 | putting them everywhere because one thing it does do, |
| 12 | Okay. I think you're going to be able to | 12 | it adds a great value to your farm. The productivity |
| 13 | solve a mystery for us. Could you tell us what you see | 13 | level is much higher. The erodability is lower. Farm |
| 14 | on Agency Exhibit 10, page 7? | 14 | auctions that I have went to that have had pattern- |
| 15 | A Are you talking about those little lines | 15 | tiling are much more valuable than ones that aren't. |
| 16 | that go all over? | 16 | Q Okay. Now, these tile have to release |
| 17 | Q Yes. | 17 | somewhere, right, or outlet? |
| 18 | A Those are actually what you call pattern- | 18 | A That is correct. |
| 19 | tiling a field. Those are the actual tile lines that | 19 | Q And can you show us on this? |
| 20 | were installed. | 20 | A Let me think. There are four -- three |
| 21 | Q Okay. And let's talk about this a minute. | 21 | different outlets. One is down in this area by the box |
| 22 | First of all, the date on this aerial photo is March | 22 | there for the hill. The one that goes up the southwest |
| 23 | 14, 2010. | 23 | side of the unnamed tributary outlet is right there. |
| 24 | A Um-hmm. | 24 | The one on the other side that goes up along the |
| 25 | Q Now, this tiling was done the fall before, | 25 | tributary and those -- the tile lines that come off of |


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| :---: | :---: | :---: | :---: |
| 1 | it, an outlet right there. And then there is another | 1 | Q Okay. While we're on this, if you see, it |
| 2 | one, I believe, somewhere up in this area. | 2 | appears there is two lines that go right alongside the |
| 3 | Q Okay. And there you marked up -- and maybe | 3 | tributary on each side. Is that right? |
| 4 | we'll -- we'll decide. We might want to mark this | 4 | A That's correct. |
| 5 | exhibit. I have a few more questions, so. | 5 | Q Okay. Tell me about your work with NRCS on |
| 6 | First of all, by outlet we mean -- | 6 | those and other tile lines. |
| 7 | JUDGE BIRO: Wait, wait. Wait, Mr. McAfee. | 7 | A Those two tile lines, we were doing the |
| 8 | MR. McAFEE: Oh, I'm sorry. | 8 | other pattern-tiling. We did -- this whole project was |
| 9 | JUDGE BIRO: Before we leave, we've got to | 9 | not totally approved. They come out and approved some |
| 10 | say the record reflects that they -- | 10 | more out in the field. These two lines were part of |
| 11 | MR. McAFEE: Okay. | 11 | that approval out in the field; as a matter of fact, |
| 12 | JUDGE BIRO: That the witness has imposed on | 12 | recommended by the field agent. |
| 13 | the Exhibit AX-10, page 7, four dots indicating four | 13 | The one on the southwest side was |
| 14 | outlet points. One directly on the termed "Deep Creek" | 14 | recommended to put in there for future use. I had |
| 15 | on the east side of the photograph. And another one on | 15 | applied for Equip cost/share project with the NRCS, and |
| 16 | the south termed "Deep Creek". | 16 | she said put those -- that in there for future use and |
| 17 | MR. McAFEE: Whoops, sorry. My mistake, I | 17 | at that same time, we had talked about -- I asked a |
| 18 | didn't mean to do that. | 18 | question about this so-called unnamed tributary. We |
| 19 | JUDGE BIRO: One more or less on where it | 19 | discussed, and I said, is this area able to be closed |
| 20 | says "approximate point of the impacted stream | 20 | and put what we call basins or terraces in to make it |
| 21 | segment", and then one in the lower right corner of the | 21 | more manageable. And she said yes, it would be. Just |
| 22 | reference box, adjacent to the lower right corner of | 22 | make sure that you have enough capacity to handle the |
| 23 | the reference box. | 23 | water to transfer it from top to bottom. |
| 24 | Am I correct, Mr. Morrow? | 24 | So, we did that one. The same way with the |
| 25 | THE WITNESS: Yes. | 25 | one on the other side, was for future use. |
|  | Page 464 |  | Page 466 |
| 1 | JUDGE BIRO: Okay. Go on. | 1 | MR. MUEHLBERGER: Objection, Your Honor. |
| 2 | MR. McAFEE: Thank you, Your Honor. I | 2 | Respondent has listed as a witness Regina Leer to whom |
| 3 | apologize for that. What I think we'll have him do is | 3 | I think he is referring to right now in this |
| 4 | do what we've -- I'll have him mark on this exhibit | 4 | conversation where she's allegedly giving permission |
| 5 | here, actually put a mark on there, would that be okay? | 5 | for him to do this tiling work. They did not call Ms. |
| 6 | JUDGE BIRO: Fine. He can come stand with | 6 | Leer as a witness, so Complainant has no opportunity to |
| 7 | you. If you would like to do that, that's fine. | 7 | cross-examine this conversation or anything that Ms. |
| 8 | MR. McAFEE: Yes, I appreciate that. | 8 | Leer might have said in approving this project. |
| 9 | BY MR. McAFEE: | 9 | JUDGE BIRO: Yes. |
| 10 | Q Let me, and first of all, when I moved it | 10 | MR. BIERI: And, Your Honor, just to add to |
| 11 | just now, did I change it much? | 11 | that. She was on their witness list up until the time |
| 12 | A No. | 12 | we learned yesterday when Mr. McAfee said, oh, we're |
| 13 | Q Okay. I apologize for that. | 13 | not going to call Ms. Leer. And so we had no |
| 14 | That was in 2009. | 14 | opportunity to call her ourselves. We had this |
| 15 | A Correct. | 15 | situation with Bert Noll,(phonetic) and we told the |
| 16 | Q Are those tile outlets still in those | 16 | other side, hey, we don't plan to call him. They said, |
| 17 | locations? | 17 | oh, we'd like to question him. It's like, okay, we'll |
| 18 | A Two of them may not be. The two off the | 18 | go ahead and call him. |
| 19 | unnamed tributary. | 19 | So, I think this is going to get into an |
| 20 | Q And when did those change? | 20 | area that we should have been able to cross her on, and |
| 21 | A In 2015. | 21 | I understand hearsay rules over the last year, but I |
| 22 | Q When you did the tiling -- | 22 | really just want to make it known it would have |
| 23 | A Yeah. | 23 | been -- I don't know when they found out that she |
| 24 | Q -- that we'll be talking about. | 24 | wasn't going to be called, but it would have been nice |
| 25 | A Correct. | 25 | to know before the eve of the hearing, especially if |


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| :---: | :---: | :---: | :---: |
| 1 | Mr. Morrow is going to say the whole reason I did this | 1 | MR. MUEHLBERGER: Okay. |
| 2 | is because a person that was on my witness list told me | 2 | BY MR. McAFEE: |
| 3 | to, and, oh, by the way, we're not going to call her. | 3 | Q Okay, and then maybe we should take this pen |
| 4 | JUDGE BIRO: Okay. So, hearsay is | 4 | and draw a circle around each one of those, if you |
| 5 | admissible, so I'm going to overrule your objection, | 5 | would. |
| 6 | but I'll give you the opportunity to request a subpoena | 6 | And for purposes of the record could you, or |
| 7 | and we could subpoena her to appear. | 7 | I can do it for you, if we could write at the bottom |
| 8 | MR. BIERI: Okay. | 8 | here, and then I'll put it back up on the screen, "2009 |
| 9 | JUDGE BIRO: And if we can get her here | 9 | Tile Outlets". Would that be accurate? |
| 10 | while we're here this week, you know, we'll have her | 10 | A Yes. |
| 11 | testify, and if not, we will either come back or do her | 11 | Q Okay, those green dots are still there, so I |
| 12 | testimony by video-conferencing if you feel the need to | 12 | hit "clear", I believe. |
| 13 | call her when we're done. | 13 | A Sure. |
| 14 | MR. BIERI: Okay, thank you. | 14 | Q Did that get rid of them? All right. I'll |
| 15 | MR. McAFEE: Your Honor, all I would add, | 15 | let everybody take a look at that. I think you can go |
| 16 | and I wanted to check my -- the prehearing conference | 16 | back to the stand, Scott. |
| 17 | notes of Mr. Barnwells (phonetic), but I believe I | 17 | MR. McAFEE: Let's see, to mark this as an |
| 18 | indicated at that time that I didn't plan to call Ms. | 18 | exhibit, Your Honor, I think we are -- our last one was |
| 19 | Leer or Mr. Seaton, but I need to check those notes | 19 | RX-5. |
| 20 | just so I -- I don't believe I sprung this on him at | 20 | JUDGE BIRO: I don't know that we admitted |
| 21 | the last minute. | 21 | any Respondent's exhibits up to now, but what have we |
| 22 | JUDGE BIRO: Okay. Well, we'll check too. | 22 | numbered them as? |
| 23 | MR. McAFEE: Yeah. | 23 | MR. McAFEE: Okay, Your Honor. We had |
| 24 | JUDGE BIRO: And we can revisit the issue if | 24 | stipulated to all of the Respondent's exhibits, |
| 25 | that turns out to be the case. | 25 | correct? |
|  | Page 468 |  | Page 470 |
| 1 | MR. McAFEE: Right. All right. Thank you. | 1 | JUDGE BIRO: Okay. |
| 2 | JUDGE BIRO: Go ahead. | 2 | MR. MUEHLBERGER: That's right. |
| 3 | BY MR. McAFEE: | 3 | JUDGE BIRO: Okay, and how many were there? |
| 4 | Q Okay, Mr. Morrow -- well, maybe we had | 4 | MR. McAFEE: Five. |
| 5 | better, if you would come back here with me, and let's | 5 | JUDGE BIRO: RX-1 to 5 is admitted in the |
| 6 | mark this exhibit so we have those tile line outlets | 6 | record, and I think we -- that one in addition to the |
| 7 | marked. | 7 | Agency's Exhibits 1 through 32. |
| 8 | Okay, we're on the record here. Mr. Morrow, | 8 | MR. McAFEE: Correct. |
| 9 | if you could place the -- similar to where you put them | 9 | JUDGE BIRO: Is that correct? |
| 10 | on the overhead up there, if you could mark them and | 10 | MR. MUEHLBERGER: That's correct. |
| 11 | make round dots with that pen, we'll see if it shows up | 11 | JUDGE BIRO: Okay. Okay, those are all |
| 12 | okay. | 12 | admitted. |
| 13 | (Pause.) | 13 | (The documents referred to |
| 14 | Okay, I better get a Sharpie and make them a | 14 | were marked for |
| 15 | little darker. I'm going to move this so I can check | 15 | identification as |
| 16 | the back side. I don't think it will bleed through. | 16 | Respondent's Exhibit RX-1 |
| 17 | Just a minute. | 17 | through 5 and were received |
| 18 | (Pause.) | 18 | in evidence.) |
| 19 | Okay, Scott, maybe if you could -- you know | 19 | JUDGE BIRO: Okay, so this would be |
| 20 | where you just made a -- make a dot with that Sharpie. | 20 | Respondent's Exhibit 6? |
| 21 | MR. MUEHLBERGER: It's going to bleed | 21 | MR. McAFEE: Yes. |
| 22 | through on that white thing, so -- | 22 | JUDGE BIRO: Okay. |
| 23 | MR. McAFEE: Okay. | 23 | MR. McAFEE: I'll mark RX-6 on it. |
| 24 | MR. MUEHLBERGER: You can have the back. | 24 | JUDGE BIRO: And would you like to move that |
| 25 | MR. McAFEE: Here, we'll let him do it here. | 25 | into evidence or are you going to continue working with |


|  | Page 471 |  | Page 473 |
| :---: | :---: | :---: | :---: |
| 1 | it first? | 1 | MR. BIERI: Okay, thank you. |
| 2 | MR. McAFEE: I'm sorry, Your Honor? | 2 | JUDGE BIRO: So, we're going to move on. |
| 3 | JUDGE BIRO: Would you like to move that | 3 | MR. BIERI: Sorry, I didn't mean to |
| 4 | into evidence now? | 4 | misrepresent that conversation. That was different. |
| 5 | MR. McAFEE: Yes, I would. Yes. | 5 | JUDGE BIRO: No problem. Okay, Mr. McAfee. |
| 6 | JUDGE BIRO: Okay. | 6 | BY MR. McAFEE: |
| 7 | MR. McAFEE: I move to admit RX-6. | 7 | Q Okay. Mr. Morrow, after the tiling in the |
| 8 | MR. MUEHLBERGER: No objection. | 8 | fall of 2009, what -- I hate to just say what did you |
| 9 | JUDGE BIRO: Okay, RX-6 is admitted into the | 9 | do next, but did you do any further work in the farm |
| 10 | record. | 10 | after that prior to the 2015 work? |
| 11 | (The document referred to was | 11 | A Yes. We did some tiling up to the -- clear |
| 12 | marked for identification as | 12 | to the east part of the farm at a later date. We did |
| 13 | Respondent's Exhibit No. RX-6 | 13 | some clear -- tree-clearing straight south of this. I |
| 14 | and was received in | 14 | believe it was in 2011. But, yes, we did other |
| 15 | evidence.) | 15 | projects. |
| 16 | JUDGE BIRO: And just to go back to the | 16 | Q Prior, and we'll get into your 2015 work and |
| 17 | point we were making about the testimony, my staff | 17 | what led up to it here in a minute, but did you -- I |
| 18 | attorney in the interim has checked his notes, and in | 18 | guess we can use AX-10 while it's up there, and you've |
| 19 | fact Mr. McAfee was correct in his recollection. He | 19 | marked the tile outlets. At any time prior to placing |
| 20 | did indicate in the prehearing conference that he may | 20 | the tile in that drainage-way in 2015, did you do any |
| 21 | not call Ms. -- | 21 | work on that area at all? |
| 22 | MR. McAFEE: Leer. | 22 | A Yes. In the lower, where the crossing is, |
| 23 | JUDGE BIRO: -- Leer as a witness, which | 23 | from there upward probably 20-30 feet, and downward |
| 24 | gave you a time to subpoena her if you wanted or list | 24 | from there, I did some reshaping, reshaping to -- |
| 25 | her. You didn't do it. | 25 | maintenance of waterway on it a couple of different |
|  | Page 472 |  | Page 474 |
| 1 | MR. MUEHLBERGER: Your Honor, Mr. McAfee was | 1 | times with the approval of the NRCS. |
| 2 | not clear during the prehearing conference as to which | 2 | Q By approval, do you mean you asked them |
| 3 | witnesses. He said he may not call some witnesses, but | 3 | ahead of time? |
| 4 | I don't -- | 4 | A Yes. The first time would have been, I'm |
| 5 | JUDGE BIRO: Yes, he listed two he said he | 5 | going to say in the spring of 2010, we shaped below it |
| 6 | was going to not call, may not call. | 6 | a ways right before -- around planting time, threw some |
| 7 | MR. BIERI: And listed them by name? | 7 | seed on it. Did I make it very far down? No, but |
| 8 | JUDGE BIRO: Yes. | 8 | that's the only times that I did some work on it. |
| 9 | MR. BIERI: And then was his response "I'll | 9 | Q And we're talking about the area, if we look |
| 10 | let you know" or it's just "I may not call these | 10 | at AX-10, page 7, the area that would be below what's |
| 11 | witnesses"? That was my recollection. | 11 | been referred to as a crossing? |
| 12 | JUDGE BIRO: The notes we have, he indicated | 12 | A Yes. |
| 13 | he may not call these specific witnesses, including Ms. | 13 | Q But not that entire area. |
| 14 | Leer. | 14 | A No. |
| 15 | MR. MUEHLBERGER: So, Your Honor, I guess | 15 | Q You did some shaping. Explain what you mean |
| 16 | the point is if someone says they may not call someone, | 16 | by shaping. |
| 17 | that wouldn't really prompt us to try to subpoena that | 17 | A With the skid-loader, like we do on a |
| 18 | individual if it's a may or may-not appear. I just | 18 | waterway, reshape it so the water drains into it from |
| 19 | want to make that clear for the record. | 19 | the existing fields, can get into that area to drain it |
| 20 | JUDGE BIRO: I understand that's how you may | 20 | and carry it on to Deep Creek. |
| 21 | view it, but that would give you an indication that he | 21 | Q Do you remember, did you do that work |
| 22 | might not call them, and then if you really wanted to | 22 | yourself? |
| 23 | have them there, you needed to subpoena them. | 23 | A Yes. |
| 24 | MR. MUEHLBERGER: Understood. | 24 | Q You actually ran the skid-loader and did it. |
| 25 | JUDGE BIRO: If only as a backup measure. | 25 | A Yes. |


|  | Page 475 |  | Page 477 |
| :---: | :---: | :---: | :---: |
| 1 | Q And do you remember was there water present | 1 | you heard about her testimony about the size of the |
| 2 | when you did that work? | 2 | tile. |
| 3 | A The one time there was minimally. The one | 3 | A I heard that she had testified that the tile |
| 4 | time there was not. | 4 | were undersized for the area that they drained, and |
| 5 | Q When you say -- were those two times close | 5 | that's what I heard. |
| 6 | to each other? | 6 | Q And what's your thought about that? |
| 7 | A No, they were probably 18 to 20 months | 7 | A I believe they're very adequate. As a |
| 8 | apart. | 8 | matter of fact, they are oversized for the area that |
| 9 | Q Okay. Okay, let's talk now about your work | 9 | those pipes drain. |
| 10 | that you did in 2015. Did your planning for that work | 10 | Now, on a big rain, I'm not sure we make a |
| 11 | or -- did it start sometime previous, or explain the | 11 | big enough pipe to handle that or area, and we have |
| 12 | process? | 12 | some big rains anymore. But I can say this. To my |
| 13 | A The plan was already in place actually in | 13 | knowledge, water has only went over that berm two times |
| 14 | 2009, but, yes, the planning was before that because | 14 | since it has been installed. |
| 15 | one of the tile that is within this project is made up | 15 | Q Okay. So, when did you actually start on |
| 16 | of center coils that come in a big roll of tile. I had | 16 | the work then for this -- I think the aerials show, |
| 17 | collected a bunch of these to help save on cost, and I | 17 | and let's look at AX-10, 21. Excuse me. That's not |
| 18 | would put two of them together and they would make a | 18 | the one I was looking for. |
| 19 | longer tile of about 22 foot, 6 inches. | 19 | Let's look at AX-10, page 17, and that's |
| 20 | Starting in like 2013, I started putting | 20 | dated March 20, 2015, and that's the -- is that the |
| 21 | these together, and as I would get them put together, I | 21 | year you did the work? |
| 22 | would bring them over to this pole barn here and store | 22 | A Yes. |
| 23 | them into there to get enough to reach that distance. | 23 | Q And I believe there's been -- has been some |
| 24 | Q I guess I find the center coil thing, how | 24 | testimony from various witnesses that it appears the |
| 25 | important that is to the issue here. I mean, is it | 25 | trees have been removed in the upper portions. Is that |
|  | Page 476 |  | Page 478 |
| 1 | something that a lot of people do or why do you do | 1 | what you heard? |
| 2 | that? | 2 | A Yes. |
| 3 | A No, a lot of people don't use them because | 3 | Q Okay. Tell us, did you do that? |
| 4 | they are only 7 foot, 7 foot, 6 long, approximately. | 4 | A Yes, I did. |
| 5 | So, they would rather purchase 20 -foot lengths or | 5 | Q And when did you do that? |
| 6 | whatever because they can lay them faster. I took the | 6 | A In March of 2015. May have started in |
| 7 | time to collect them and put together my own lengths of | 7 | February of cutting. |
| 8 | pipe. I collected these from people and they didn't | 8 | Q Did you do anything else besides cutting |
| 9 | cost me anything. | 9 | them up? |
| 10 | Q And what did you do with those once you had | 10 | A We cut -- we cut the trees up once they're |
| 11 | them put together? | 11 | on the ground for firewood. I removed most of the |
| 12 | A I took them -- hauled them over and stored | 12 | trees with my skid-loader. |
| 13 | them in the -- there's an old shed on the site up there | 13 | Q Okay. Then when did you actually do the |
| 14 | along BB Avenue (phonetic), and I stored them in there. | 14 | tiling? |
| 15 | Q Okay. I believe you just mentioned this a | 15 | A The placement of the tile was done in April |
| 16 | minute ago, but tell me how you decided how big a tile | 16 | of 2015 . |
| 17 | to put in there. | 17 | Q And tell us how you did that. |
| 18 | A I contacted a pipe and tile company, and -- | 18 | A I hired an excavator, the operator came with |
| 19 | Midwest Pipe, and told them the area that was above, | 19 | it. When I say "an excavator," that's a big backhoe, |
| 20 | above the farm where the inlet was going to be and the | 20 | and they dug an area to place the tile in for the |
| 21 | actual area within my farm, behind the watershed area, | 21 | project. |
| 22 | and we kind of discussed on what size of tile to use | 22 | Q And did that excavator then have to go the |
| 23 | and I actually increased it from there. | 23 | full length? |
| 24 | Q I believe you were present, of course, | 24 | A Yes. |
| 25 | during the testimony of Dr. Garcia, and tell me what | 25 | Q There's been testimony about some small |


|  | Page 479 |  | Page 481 |
| :---: | :---: | :---: | :---: |
| 1 | dams, I think they've been called. Did you do that | 1 | did the work in 2015? |
| 2 | work, too? | 2 | A Yes, I did. |
| 3 | A Yes. | 3 | Q And you were aware of this determination |
| 4 | Q Okay. Now I'd like to turn to -- I'd like | 4 | then? |
| 5 | to go to -- I'll put on the screen RX-4. | 5 | A Yes. |
| 6 | Okay, Mr. Morrow, I've put up Respondent's | 6 | Q Okay. Now, you're also aware that Mr. |
| 7 | Exhibit 4, page 1 of 2. This has been discussed before | 7 | Carrington has testified about this, and you're also |
| 8 | in this hearing. But before we get to that, I want to | 8 | aware, aren't you, that there was a final wetlands |
| 9 | ask you before doing this work that you've just talked | 9 | determination that found there was a wetlands along the |
| 10 | about, did you contact NRCS for a wetlands | 10 | full length of this tributary, right? |
| 11 | determination? | 11 | A That's correct. |
| 12 | A Yes, I did. | 12 | Q When did you get that determination? |
| 13 | Q When did you do that? | 13 | A After the project was done. |
| 14 | A In the spring, I believe it was, of 2011. | 14 | Q Now, you've also appealed that and you lost, |
| 15 | Q And how did you make that contact? | 15 | right? |
| 16 | A I went into their office and requested | 16 | A That's correct. |
| 17 | wetland determination of the whole farm. | 17 | Q What else did you do before you started the |
| 18 | Q What did you get in return? | 18 | work that spring? Who else did you contact? |
| 19 | A They had -- they came out. It took awhile. | 19 | A Where the inlets of this project start |
| 20 | They come out the following -- it was probably six- | 20 | actually is not private property. It is actually |
| 21 | eight months maybe, come out and did the actual, look | 21 | county. So, I contacted the county, the supervisor for |
| 22 | over the farm and they made a comment we had to go to | 22 | secondary roads of Iowa County because I did not want |
| 23 | an area and do a field test, take the probe of the | 23 | to do something that I shouldn't do to hurt something. |
| 24 | soil, and as such, I was there present when they did | 24 | So, I contacted him, told him what my plan was, that I |
| 25 | this. | 25 | was going to put the two inlets there to catch that, |
|  | Page 480 |  | Page 482 |
| 1 | So, we went and did that. They said it | 1 | put the cage in front of it, and the stand-pipes, and |
| 2 | would be a while before I got the information back. | 2 | as such like that. |
| 3 | The young man and young lady, they came out of the | 3 | Q All right. Well, let's take a look at AX- |
| 4 | Fairfield office. I can't tell you their name, but | 4 | 10, page 7, and I've got the one -- it has been marked |
| 5 | hadn't heard anything from them for quite some time. | 5 | as RX-6, and I think we'll have you come back and mark |
| 6 | So, I waited and waited, and I received this here in | 6 | it, but maybe explain it there first. Where's the area |
| 7 | the mail. | 7 | you're talking about? Then we'll have you mark it so |
| 8 | Q Okay. And by this here, you're pointing to | 8 | everybody has a record of it. |
| 9 | RX-4, page 1 of 2 ? | 9 | A The area of the inlets are where that little |
| 10 | A Yes. | 10 | green dot is in the upper left-hand corner. |
| 11 | Q Now, you've heard the testimony of Mr. | 11 | Q And is it where the yellow text box that you |
| 12 | Carrington (phonetic) that of course this came from | 12 | didn't place there, but it says "Approximate starting |
| 13 | Farm Service Agency and not NRCS. At the time, did you | 13 | point of impact in stream segment"? |
| 14 | realize the difference? | 14 | A Yes. |
| 15 | A I know there's a difference between FSA and | 15 | Q Now, the road there curves, right, coming |
| 16 | NRCS, but they work hand-in-hand. Because like I said, | 16 | from the north? |
| 17 | to start a wetland determination, I've had to start it | 17 | A Yes. |
| 18 | on the FSA side and then they hand the paperwork over, | 18 | Q And is there a triangle-shaped piece of |
| 19 | relay it over to the NRSC side. | 19 | property there on the southwest side of the road? |
| 20 | Q And did you receive -- well, do you see the | 20 | A Yes. |
| 21 | date on this? | 21 | Q Is that the area you're talking about? |
| 22 | A Yes. | 22 | A Yes. |
| 23 | Q And what's the date? | 23 | Q And who owns that? |
| 24 | A December 13, 2013. | 24 | A Iowa County. |
| 25 | Q Did you have this in your hands before you | 25 | Q Is it your understanding that's where much |

of the testimony has occurred during this hearing about the May 15,2018 , site visit and the stream photos?

A Yes.
Q And so that was actually on county property, not private property, is that your understanding?

A Correct.
Q Okay. All right, why don't you come back and mark that, outline it for the record so we're clear.

JUDGE BIRO: Maybe, Mr. Morrow, if you don't mind, you could also draw an outline of your -- no, no, no, it's fine. Draw an outline of all of your property so we know sort of the boundaries of what your property is since you've mentioned your adjacent parents' property, and county property.

MR. McAFEE: Okay. Your Honor, I'm not sure we can show all of where he -- we'll have him mark what he can on this, and then we'll find another exhibit that might be better, too.

JUDGE BIRO: Okay.
MR. McAFEE: All right. We'll remove it so he can write on it. Okay, why don't I give you this. First, he's going to mark the triangle piece as best he can. Part of it is not on there. That's good.

THE WITNESS: Mark my ground?

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JUDGE BIRO: Yes, mark the boundaries that you can on that exhibit, if you would.

THE WITNESS: Draw through that?
MR. McAFEE: No, I wouldn't.
THE WITNESS: Okay.
MR. McAFEE: We'll show it and see if anybody wants you to do more.

THE WITNESS: And everything that is there.
MR. McAFEE: Yeah, we'll have you testify. If you want to go back up, I'll have you explain this, and then we'll see how we want to mark it.

JUDGE BIRO: I'm sorry, Mr. Morrow, for going back and forth.

BY MR. McAFEE:
Q Okay, Mr. Morrow, if there is -- the triangle piece of property that you've testified to, have you marked that in the upper left-hand corner?

A Yes.
Q And maybe I'll just mark that as county property?

A Yes.
Q Okay, and then the other lines you've drawn on here with a Sharpie are the -- at least what shows on this exhibit are the western boundary, is that correct?

A That would be the western boundary coming out.

Q And then the road is actually the northern boundary, is that right?

A Correct.
Q Except for the triangle piece, you've marked that.

A Yes.
Q And then the eastern boundary you can't see on here, is that right?

A That is correct.
Q And then what is the southern boundary that we can see on this map?

A The ground protrudes south further yet.
Q Okay. So, the creek is not the southern boundary.

A No.
Q Okay. So, you can't mark the southern boundary on this exhibit.

A No.
Q Okay. We'll find a better exhibit for you to mark your property. I think I saw one that someone had already marked for some other purpose, and I can't remember which exhibit that was.

JUDGE BIRO: Mr. Morrow, so the Deep Creek

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is within your property.
THE WITNESS: That is correct.
JUDGE BIRO: It runs within your property.
THE WITNESS: Yes.
JUDGE BIRO: It's not the borderline.
THE WITNESS: It's not border.
JUDGE BIRO: Okay.
MR. McAFEE: I want to check one exhibit
here, and then I think we'll move on to a different subject for now, but I want to check.
(Pause.)
BY MR. McAFEE:
Q I asked you about this already, Mr. Morrow, but just to make the record clear, AX-11, page 6 , has been testified to here today as the NRCS wetland determination. Do you see a date on there? I know it's been testified to already.

A Yes.
Q What's the date?
A There's a couple different dates. 1-21 of 2015, I believe it's 1-21. And 10-29 of 2015.

Q Okay, but what -- I see a request date here. What's that date?

A 7-20-2015.
Q Okay. And then where was the date you just
mentioned?
A On the determination date and then the certification date.

Q Okay. And, again, did you have this determination at the time you did the work?

A No.
Q What determination did you have?
A I had the one that we had on the screen earlier there where it said there was not a wetland on this tract.

Q Okay.
A I'm not sure what form it is.
Q While we're on that subject, since this
determination was made, what have you done in response to this determination, other than appeal it, and it's been noted by Mr. Carrington that appeal was denied?

A Since the latter?
Q Yes.
A I have basically tried to maintain my farm, to be a good steward as well as I can.

Q What have you done -- I'm sorry to interrupt, but what have you done regarding the area that this -- in this determination, it determined 1.3 acres were a wetland, correct?

A Um-hmm.

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Q And as you've seen, that wetland is -pretty much follows the tributary. What have you done with that area?

A Right now it's idle. It's a waterway. It's flagged out and not being farmed.

Q Okay. This determination was received in, I think, what did you tell me, June of ' 16 or sometime in 2016? Did you farm it that year, that area?

A Which year is that?
Q 2016 crop year.
A Yes.
Q And why did you farm it that year?
A I was not told until after the fact that I shouldn't be farming that area, and then they offered to come out in 2017 and flag it out for me.

Q And what do you mean, flag it?
A Kate Timmerman,(phonetic) who works for the Iowa County, NRCS, says you should not be farming that. We will come out and flag the area, and do not harvest off of that area or farm it. And I said that would be great.

Q And are those flags still there?
A Yes. Those flags aren't, but there are flags there.

Q Okay, thank you.

JUDGE BIRO: Could we take a five-minute break, please?

MR. McAFEE: Oh, sure.
JUDGE BIRO: Okay. We'll stand in a fiveminute recess.

Mr. Morrow, please don't discuss your testimony with anyone.
(Whereupon, a short recess was taken.)
JUDGE BIRO: Please continue.
MR. McAFEE: Thank you.
BY MR. McAFEE:
Q Mr. Morrow, I want to now turn to an issue that's received quite a bit of discussion during this hearing, and that is the hog building, okay?

A Okay.
Q All right. When did you first plan to sell off part of your farm, which the record shows you did, for a hog building?

A The end of May.
Q Okay. Now maybe I need -- you know, again I want to make sure I close the loop on when you -- yes, you've testified as to when you did the work and that was in, you testified when?

A April.
Q Okay. At the time you did the work that
we're talking about, had you planned to sell off any land for a hog building?

A No, I had not.
Q Okay. Now, you've just testified end of May you did -- a pretty short amount of time there. Tell us what transpired.

A After I did the work of installing the tile, a gentleman says to me in the end of May, latter part of May, have you ever thought about selling a portion of the ground off for a hog building.

Q I'm sorry to interrupt, but you just said a gentleman. Anybody in particular or what kind of -coffee shop discussion or?

A No. Mark Seaton, which owns Seaton Construction. And I said I have not give a lot of thought to it, and he says, well, there's no one that lives back here. It's a dead-end road. You know, you may look into that. And I says, well, I haven't really looked into it. And he says, I have a person that might be interested. And I says, well, fine. I says, tell that person to give me a call and we'll see where it goes.

Q And what happened then?
A The person was Mike Norman(phonetic). Within a day or two, I had a phone call. Said he was
interested. We set a time to get together. Don't know exact date, but it was either the end of May or the first day or two of June, and we got together, set down and visited for probably about an hour, hour and a half, and when he left that day, we had a verbal agreement.

Q When did you actually sell the building -or the site?

A Around June 28th, end of June is when my wife and I met Mike Norman at his bank to do the closing.

Q And do you know the entity you actually sold it to?

A Don't quote me, but I think it's MCM Pork.
Q And is your understanding that's Mike Norman's entity?

A Yes.
Q Okay. Now let's turn to -- well, I want to put up AX-5. These are emails of Marlin Schaefer (phonetic). You were here during his testimony, and I guess it -- it does show on -- he received emails from a gentleman, I guess, is what I'm trying to say, and who is that?

A Who he received them from?
Q Yes.

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A Lance Schaefer(phonetic).
Q Do you know Lance?
A Oh, yeah.
Q Had you ever had any discussions with Lance about your plans for this farm or a hog building or anything like that?

A No, I have not.
Q Then how did Lance know about it because I think he refers to it in this email?

A I'm not sure.
Q You don't have any knowledge how he found out about it.

A No.
Q Did you have knowledge of him sending these emails at the time he sent them?

A No.
Q He never came to talk to you.
A No.
Q Okay. I'm now going to put up AX-9, page 1 of 2, and this has been introduced into evidence, and it's Mr. Schaefer's telephone notes. In the second paragraph, he says, "Scott explained that C\&S sold the area to MCM who will build a hog confinement and that you installed the large tiles and tilled the channel because it was within the distance for a confinement
unit."
Let me ask you first. Did you clear that area within 500 feet for the hog building?

A I did not solely or particularly clear that area to gain 500 feet.

Q You had in fact -- I mean, I think you've testified you cleared it before you talked to anybody about selling it off for a hog building.

A That is correct.
Q But what about these notes, then? Did you tell Mr. Schaefer something about the distance?

A Yes, we discussed that for legal limits of a hog building, I may have also said something about the 500 feet distance it's got to be from a water source.

Q And how did you know about that distance?
A I've heard that around for, I don't know, two or three years. I have friends that have hog buildings.

Q Have you ever -- had you at the time or have you since then ever talked to Bert Noll about this?

A I have never talked to Bert Noll about anything.

Q Did you request a DNR interpretation about that 500-foot distance?

A No.

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Q While we're on the subject of the hog building, why did you sell off that ground for a hog building?

A For the economics of the -- I get the manure out of that hog building to put on the farm ground to raise crops which -- it is an organic fertilizer versus a commercial fertilizer, which helps the organisms in the ground.

Q There has been, I think, some question about how that manure is applied. Do you take care of that?

A The part I take care of is, I contact the people that actually apply the manure to my farm. That's the only part I take care of, and then I pay them for it. As far as -- and then they contact the manager of the facility for MCM Pork because fans have to be turned on at that time, but I take care of contacting them.

Q Can you explain how it is applied?
A They apply it by injecting it into the ground with a big toolbar and an umbilical cord that's attached on a swivel, and then they knife it in four to six inches into the ground.

Q By an umbilical cord, maybe explain that a little bit.

A It's a hose that attaches to this toolbar
with the knives, and on the other end is attached to a pump that pumps the manure out of the facility into the hose.

Q Has any manure, at least up to this point, been applied on the soil surface?

A No.
(Pause.)
Q Mr. Morrow, I've placed up what has been marked as AX-10, page 14, and that's just one I pulled here to take a look at. Do you see in that aerial, and it's dated September 16 of 2014, so that was after you owned the property, right?

A That is correct.
Q There appears to be, and what's been referred as a crossing over -- do you see where that is?

A Yes.
Q Explain what that is.
A That is the area that we follow to do the spring work, to harvest or anything. That is the path that we follow to get to the southern part of that -of the farm. I'm very adamant about following the same path all the time because of compaction levels and such like that. That is the area that we follow to get to the south part of the farm on the west side of Deep

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Creek.
Q Could that crossing be in other places along that, what I would say the topo map shows as being relatively flat, the lower portion?

A Yes, we -- we have for a short time a little bit lower than that we crossed. I did not like the idea of having a crossing that was 30,40 -foot wide when we don't need it, or wider.

Q Does that crossing have a tube beneath the surface?

A At the time of this picture -- it has had a tube under it. It has been crushed before because of the loads, but at the time of this picture, I can't say whether the tube was round or flat.

Q What kind of tube was it? What was it made of?

A Plastic tile.
Q Okay. All right, let's talk a little bit about what -- you've seen the photos, the aerial photos regarding this portion here on, the lower portion. Have you ever seen water in there?

A In the lower part?
Q Yes.
A Yeah.
Q Have you seen times when there isn't water
there?
A Yes, I have.
Q Do you keep track of when there is water there and when there isn't?

A No.
Q This is a bad -- do you wish you would have?
A Yeah.
Q Okay. What about a channel, is there a channel there?

A I would not call it a channel, as in numerous places on a farm where sometimes -- we're not proud of them, but we have erosion spots. The past, I don't know how many years, it's been really tough trying to hold waterways or anywhere you do work, even visiting with the NRCS because of the big rains. You work your tail off to fix something to make it better, and then we get these big, what we call gully-washers that five to seven inches of rain in a short time that, you just can't control that much water no matter what the purpose is.

Q What about the upper portion that -- you know, above the crossing. You've seen the photos. Well, you've been there yourself. Are those photos correct of the portion above the -- that's on the county property?

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I'm sorry. I didn't word that question very well. Let's start with you've seen the photos of the -- from the Complainant above what you've testified as county property.

A That's correct.
Q Have you walked up in there yourself?
A Yes.
Q And are those photos correct?
A Yes.
Q Okay. There is water there, is that --
A Yes.
Q Okay. Now let's talk about the upper portion on your land that, of course, you have, in 2015, you removed trees and put the tile in. Prior to that, what did it look like?

A Like the pictures. At times there was water in that, in times there wasn't. I mean, I don't know what -- I don't know what you're looking for, but I mean, like I said, it just looked like the pictures.

Q I'm just asking you because I believe you're the only one who will testify who has seen that before you did the work on it.

A Um-hmm.
Q Just what your personal observations were.
A Like I say, sometimes it had water,

|  | Page 499 |  | Page 501 |
| :---: | :---: | :---: | :---: |
| 1 | sometimes it didn't in areas. Yes, there was a bank. | 1 | JUDGE BIRO: Well, unless there is any |
| 2 | Some of it was from neglect. In places, there weren't. | 2 | objection we -- |
| 3 | Q Mr. Morrow, why did you do the work you did | 3 | MR. BIERI: Of course not. |
| 4 | in 2015? | 4 | JUDGE BIRO: -- will accept it as it was. |
| 5 | A I did it -- I consider myself as a farmer | 5 | MR. McAFEE: Okay. |
| 6 | and a steward of the ground. I try to leave it in a | 6 | JUDGE BIRO: Okay, please proceed. |
| 7 | better situation than when I got it. I did it to | 7 | MR. MUEHLBERGER: Okay. |
| 8 | improve it economically and environmentally because, | 8 | CROSS-EXAMINATION |
| 9 | like I say, economically it's more farm-friendly. | 9 | BY MR. MUEHLBERGER: |
| 10 | Environmentally I put in -- we call them basins, and | 10 | Q Good afternoon, Mr. Morrow. |
| 11 | the NRCS uses a lot of those. | 11 | A Hello. |
| 12 | I think I've been -- I've heard it referred | 12 | Q So, I'm putting up on the screen here Agency |
| 13 | to as a check dam, a dam, but they're actually called a | 13 | Exhibit 30, page 6. Was this your response to EPA when |
| 14 | terrace or a basin through the NRCS. They're very | 14 | they sent you a Clean Water Act request for |
| 15 | common. They put them in an area where water flows to | 15 | information? |
| 16 | catch water, to slow it down with stand-pipes up to | 16 | A Yes. |
| 17 | drain it, to help drain it, to help stop erosion. | 17 | Q Okay. And I'm going to read directly from |
| 18 | I also did it because I have seen with my | 18 | this. It says, "Respondent's activities within the |
| 19 | own eyes on big rains coming off -- off of my property, | 19 | drainage-way on Respondent's property prior to July |
| 20 | corn stalks, bean stubble, and grasses that flow | 20 | 2015 were to conduct normal crop farming operations |
| 21 | directly into Deep Creek. Since doing this, that has | 21 | such as tillage, planting, and harvesting." |
| 22 | not been the case --, and even silt. Even with no | 22 | So, based on this document, at various |
| 23 | till, you still get silt. Since doing this, my basins | 23 | points you have cropped over that portion of the |
| 24 | have caught all of this debris and silt where I can | 24 | tributary, correct? |
| 25 | pick that up, take it back up onto the slopes on the | 25 | A Yes. |
|  | Page 500 |  | Page 502 |
| 1 | top of the hill where the bean stubble, the corn stalks | 1 | Q Okay. I'm putting up on the screen Agency |
| 2 | can deteriorate on my property and pick the clean -- | 2 | Exhibit 31, Appendix B, page 13. |
| 3 | you clean out dry ponds to maintain them. Take that | 3 | MR. MUEHLBERGER: And, Britt, would you mind |
| 4 | and put it where it needs to be put back in place. | 4 | zooming in? It's pretty far out, so I'd like to zoom |
| 5 | Before, it was gone. It went into Deep Creek and | 5 | in a little bit closer. |
| 6 | wherever else on downstream. | 6 | MR. BIERI: Tell me when. |
| 7 | MR. McAFEE: I have no further questions at | 7 | MR. MUEHLBERGER: Just go in a little bit |
| 8 | this time. | 8 | more. Okay. |
| 9 | JUDGE BIRO: Okay. | 9 | BY MR. MUEHLBERGER: |
| 10 | MR. MUEHLBERGER: Your Honor, may we just | 10 | Q So, Mr. Morrow, you recognize this as your |
| 11 | have five quick minutes to prepare for -- | 11 | farm property. |
| 12 | JUDGE BIRO: Sure. | 12 | A Yes. |
| 13 | MR. MUEHLBERGER: Thank you. | 13 | Q Okay. And just for purposes -- |
| 14 | JUDGE BIRO: Of course, it's 4:20, and we | 14 | JUDGE BIRO: I'm sorry to interrupt. When |
| 15 | can only stay until about five. So, yeah. | 15 | you say "this," you mean the whole page, or do you |
| 16 | MR. MUEHLBERGER: Five minutes is all I | 16 | recognize your farm property within this photograph? |
| 17 | need. | 17 | THE WITNESS: Yes, I recognize what's in |
| 18 | JUDGE BIRO: Okay. All right. Let's stand | 18 | this photograph. |
| 19 | in recess five minutes. | 19 | JUDGE BIRO: Okay. |
| 20 | (Whereupon, a short recess was taken.) | 20 | BY MR. MUEHLBERGER: |
| 21 | MR. McAFEE: Your Honor, I realized over the | 21 | Q So, do you recognize that a portion of this |
| 22 | break that on RX-6, the witness marked out that county | 22 | image is your farm property? |
| 23 | property after it was admitted. And so I just wanted | 23 | A Yes. |
| 24 | the record to be clear. Should I re-admit now after he | 24 | Q And can you point out on the image where |
| 25 | marked on it? | 25 | Deep Creek would be on this -- on this image? |

A May I draw on the screen?
Q Yes, please.
(Pause.)
Thank you, and could you also draw on the screen here where that tributary that we've been talking about so much the last couple days, where that is located, please?
(Pause.)
Thank you. Okay, I'm going to -- and just for the record, the date of this image is September 14, 2006. I'll go ahead and clear this.

Now I'm going to show Agency Exhibit 31, Appendix B, page 14. The colors are a little bit different but, Mr. Morrow, do you also recognize your farm property on this image?

A Yes, I see the outline of it, yes.
Q Okay. And once again, could you please redraw where Deep Creek would be and where that tributary would be, and take your time?

A 'Cause this is not a very detailed map of the farm, so I'll do my best to draw what --

Q Sure. If it helps, I could zoom in a little bit more. Thanks.

JUDGE BIRO: What exhibit number is this again?

It's not detailed enough, even drawing Deep Creek was tough, let alone the tributary. If you can zoom it in, I might be able to draw.

Q Sure, we can do that. I'll clear the -that's good right there.

Okay, can you make it out a little bit better now?

A I'll -- I'll do my best.
Q Okay. All right. Is it safe to say -- so, the image here is from August 2008, and you testified that you purchased this property in March 2008, is that correct?

A We took possession.
Q Took possession of the property in March 2008. So, is it safe to say that you began doing some of the work on the tributary pretty much right away? I mean, this was within months of you taking possession of the property and there doesn't seem to be hardly any vegetation as compared to two years prior, is that correct?

A I didn't -- I did not work on the tributary in 2008. I worked on the vegetation that came off the tributary and a fence line.

Q Okay. So, you cleared the vegetation around the tributary, correct?

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MR. MUEHLBERGER: This is Agency Exhibit 31, Appendix B, page 14.

THE WITNESS: The tributary is not defined
well enough for me to actually draw it in on this picture.

BY MR. MUEHLBERGER:
Q So, let me ask you a couple of questions about that. Is the reason why it's kind of difficult to point out the tributary on here because much of the vegetation has been cleared at this time?

A What -- I don't understand what you're --
Q Sure. Let me be a little more clear. I'm going to show you the previous image again which is dated September 2006, and this is roughly where you drew where Deep Creek is, and then you drew the tributary.

Would you say that there is a significant amount of vegetation on that tributary going into Deep Creek from this photo in 2006?

A Yes, there's vegetation.
Q Okay. And then is it safe to say -- in this photograph you're saying it was difficult to point out the tributary there. There comparatively is a lack of vegetation on the tributary going into Deep Creek?

A That's not the purpose why I can't draw it.

$$
\text { Page } 506
$$

A Not on the tributary, but the fence line that came into it.

Q Okay. And then you also through your response to EPA's Clean Water Act request acknowledged that at some time, you did plow through the tributary and planted and cultivated on that area, correct?

A Plowed. What do you mean by plowed and cultivated.

Q Let's go back to the 3-08 response. So, on the response you said that you "conducted normal crop farming operations," and previous to that you said, "Within the drainage-way conducted normal crop farming operations such as tillage, planting, and harvesting."

So you tilled through the tributary and planted and harvested in that area, correct?

A I leveled off one time. Other than that, yeah, I planted through and harvested.

Q Okay, thank you. So, when you did that then -- when you leveled it off and planted it and harvested it, at least for that time period, there wouldn't have been a defined channel, correct?

A No.
Q Okay.
MR. MUEHLBERGER: I'm now showing the Respondent --

|  | Page 507 |  | Page 509 |
| :---: | :---: | :---: | :---: |
| 1 | (Counsel confer.) | 1 | have them determine whether or not wetlands existed |
| 2 | BY MR. MUEHLBERGER: | 2 | within any of those areas that you were cleaning up? |
| 3 | Q My co-counsel has just pointed out, when I | 3 | A No, I did not. |
| 4 | asked the question "is that correct", and you said, | 4 | Q Okay. So, you said repeatedly that you have |
| 5 | "No." Just to clarify. | 5 | had a history of working with NRCS, and Mr. McAfee |
| 6 | When I asked "is that correct", are you | 6 | showed you the image of the wetland determination that |
| 7 | agreeing with that statement? | 7 | was eventually made on your property, and that's Agency |
| 8 | A What was the statement? | 8 | Exhibit 11, page 6. |
| 9 | Q The statement was during the time period | 9 | Had you ever seen a document like this |
| 10 | that you tilled through and planted and cultivated the | 10 | before? |
| 11 | crops, there would not have been a defined channel in | 11 | A Prior to? |
| 12 | that lower portion at that time, correct? | 12 | Q Right, prior to getting it for this portion |
| 13 | A There was not a defined channel. | 13 | of your property, had you ever seen a wetland |
| 14 | Q Okay. There was not a defined channel | 14 | determination from NRCS before? |
| 15 | because you plowed through the tributary and planted | 15 | A Not like this. |
| 16 | it, correct? | 16 | Q Okay. Had you seen any wetland |
| 17 | A I planted it. | 17 | determination before? |
| 18 | Q Okay, thank you. | 18 | A Yes. |
| 19 | MR. MUEHLBERGER: I'm now showing the | 19 | Q Okay. Had you received wetland |
| 20 | Respondent Agency Exhibit 8, page 1 of 1. | 20 | determinations on any portions of your property or |
| 21 | BY MR. MUEHLBERGER: | 21 | previous properties you owned before this? |
| 22 | Q In the document you say, and I'm quoting | 22 | A Yes. |
| 23 | here, "All of this is groundwater coming down to the | 23 | Q Okay. |
| 24 | property." Is that correct? | 24 | MR. MUEHLBERGER: I'm going to have you zoom |
| 25 | A Whereabouts am I saying that? | 25 | in a little bit on that one. |
|  | Page 508 |  | Page 510 |
| 1 | Q Let's see. Okay, it starts with | 1 | BY MR. MUEHLBERGER: |
| 2 | "Therefore -- | 2 | Q So, could you read here -- there's a little |
| 3 | A Okay. | 3 | box that says "Remarks" and then it begins with, "Other |
| 4 | Q -- all of this is from groundwater coming | 4 | waters of the U.S." Could you read what that says |
| 5 | down to this property." Is that correct? | 5 | there, please? |
| 6 | A That's what I wrote in this letter. | 6 | A "Other waters of the U.S. as defined in |
| 7 | Q Okay. So, you're saying that, you know, at | 7 | Section 404 of the Clean Water Act, may occur on a |
| 8 | least a source of the water that was coming through the | 8 | tract. Other waters include streams, lakes, ponds, |
| 9 | tributary was groundwater, correct? | 9 | rivers, and ditches that are not wetlands as defined in |
| 10 | A What I call groundwater is drainage water | 10 | the Act. Other waters are subject to the WC provisions |
| 11 | from above me. | 11 | and are not labeled as such on certified wetland |
| 12 | Q Okay. | 12 | determinations." |
| 13 | A That's what I call groundwater. | 13 | Q Okay, thank you. So, just a couple quick |
| 14 | Q Okay. And so one of the reasons why you put | 14 | questions about -- talking about the tiling work and |
| 15 | in drainage tiles was to divert the source of that | 15 | what you did in 2015. |
| 16 | water, correct, coming from above? | 16 | You said that you had worked with a company, |
| 17 | A To pick it up and carry it on. | 17 | that you had hired an excavator in order to place |
| 18 | Q Okay. So, you testified that after you took | 18 | material to cover up the tributary after you had tiled |
| 19 | possession of the property, that you had done a lot of | 19 | it. Is that correct? Did I understand? |
| 20 | cleaning up of the trees, and you explained the | 20 | A I hired the excavator to install the pipe. |
| 21 | cleaning up meant removing a lot of the trees and the | 21 | Q Okay. So, once the pipe was installed, how |
| 22 | shrub on the property, is that right? | 22 | did the -- how did the channel get filled in after |
| 23 | A Correct. | 23 | that? |
| 24 | Q Okay. Prior to doing any of that cleaning | 24 | A I covered up the pipe with my skid-loader. |
| 25 | up, did you ever consult with the Corps of Engineers to | 25 | Q With your skid loader. Okay. And what |

exactly did you cover it up with?
A What do you mean covered it up with?
Q What did you push into the channel?
A Dirt.
Q Okay. All right, thanks.
So, in this whole discussion about all the various tiles that were placed on your property, you had talked about how tiles could be used to lower the groundwater table, is that correct?

A That's correct.
Q Okay. But tiles can also be used to divert surface flow, correct?

A Correct.
Q Okay. You talked about how you had spoken with NRCS and you specifically identified Regina Leer; that she told you that it was okay to go ahead and tile the tributary. Is that correct?

A That's not exactly how I put it.
Q Okay.
A I had discussed at an earlier time with her about doing what I was doing. She said it would be all right, just make sure that you have enough capacity.

Q Okay.
A This was an early plan at that time.
Q Okay. So, NRCS didn't really give you

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permission to do this formally, correct?
A What do you mean by formally?
Q Did you ever get anything in writing saying that you were authorized to do this project?

A No. There's a lot of stuff we didn't get in writing.

Q Okay. And to your knowledge, is Ms. Leer a qualified -- is she qualified to make wetland determinations?

A Not to my knowledge.
Q Okay. And is she authorized to provide permission to landowners to do this kind of work?

A She must be, because she gave us permission on a lot of different situations.

Q Okay. But you didn't get that from her in this situation.

A Not in 2015. I mean, at an earlier time.
Q Okay. Okay, so you had testified that in March 2015 that you had removed trees in the upper portion of the tributary. Is that correct?

A Would you repeat that again?
Q Sure. That in March 2015, prior to doing the tiling work, that you had removed a bunch of trees and vegetation on the upper reaches of that tributary on your property, correct?

A That's correct.
Q And did you contact the Corps of Engineers at that time?

A No.
Q Okay. And I understand that you had asked the NRCS in 2011 to make a wetland determination and you didn't get that until after the work, but did you contact NRCS right before you cleared that vegetation in the upper part of the tributary?

A No.
Q Okay. One thing I wanted to make clear, you said that you had talked to somebody from the county because the county owned the property where you put in the inlet tiles. Is that correct?

A Near where I put in the inlet tiles, yes, the county owns above me.

Q Okay. And one thing that I wasn't clear about is did the county give you permission to go ahead and put in these tiles at that location?

A Yes.
Q Okay. Did you receive anything in writing authorizing you to put in those tiles in that location?

A No.
Q Okay. So, you don't have anything in writing to authorize the tiling work and the fill work
from NRCS, the Corps of Engineers, or the county, correct?

A That's correct.
Q Okay. So, you testified also that when you did the work, when you started doing the tile work, and I believe you said it was April of 2008, that you didn't know yet that you were going to -- that you were going to sell a portion of your property to MCM Pork, is that correct?

A You just said in 2008.
Q I'm sorry. I'm sorry. 2015. You said
that -- I'm sorry -- April 2015, that at the time you did the tiling work that you weren't yet aware that you were going to sell a portion of your property to MCM Pork.

A No.
Q Okay.
MR. MUEHLBERGER: I'm showing the witness Agency Exhibit 11, page 11.

BY MR. MUEHLBERGER:
Q Can you read this okay, Mr. Morrow? Should we zoom in a little bit?

A Yup, I -- yup.
Q Okay. I'm pointing right here to a sentence that said, "He stated". Could you please read what
that says on that sentence, please?
A "He stated he asked NRCS previously if the gully could be closed as the DNR required and limit it in order to put in the hog building, and the percolation was okay."

Q Okay.
A "He would be interested in mitigation and intends to put instructions on the label CW by shaping and putting in the waterway."

Q Right. Okay. So, at this hearing you -according to the NRCS document you testified that you had closed in the gully, and we're referring to the tributary here, correct?

A Um-hmm.
Q Because of the DNR setback regulations, is that correct?

A That is not the total reason I filled it in, no.

Q Okay. But did you testify to that at this particular hearing?

A That that was the sole reason of doing it, no.

Q Did you testify at the hearing that that was a partial reason why you closed up the tributary?

A By the way the letter reads, I would say it

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is.
Q Okay. So, you know, we get a person from the Corps of Engineers and some folks from NRCS, they both have it on their records that at some point you talked to them about closing the gully because of Iowa setback regulations. So, is it safe to assume that that was at least a partial reason why you closed that gully?

A I would have closed that gully even -- that there wasn't a hog building involved.

Q Okay. Okay.
A And that was my intention.
Q Okay. And then to clarify a couple of things about your work with the NRCS and this wetland determination. So, Mr. Carrington testified that to date you have not completed any restoration or mitigation work that was requested by NRCS to change that converted wetlands label. Is that correct?

A That's correct.
Q Okay. Did you ever look into how much it would cost to restore or mitigate the converted wetlands?

A Yes, I have.
Q Okay.
A And I'm working with the NRCS to date to
resolve that.
Q Okay. Is it safe to say that you made more money off of selling the property to MCM Pork than it would have cost in order to complete the mitigation or restoration requirements?

A Would you rephrase that?
Q Sure. So, you sold a portion of your property to MCM Pork, correct?

A That's correct.
Q Okay. And to date you still have not done the restoration or mitigation work required by NRCS, correct?

A That's correct.
Q Is it safe to say that the money you made from selling the property to MCM Pork was more than what you would have to have paid to restore or mitigate the converted wetlands?

A It's not safe to say that from the information I was told.

Q Okay. When you looked into how much it would cost to restore or mitigate how much did they tell you that it would cost?

A Forty to 45,000 dollars an acre.
Q Okay. And so I could ask the question. How much money did you make from selling your property to

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MCM Pork?
A I sold the land for 12,000, and 28,000 was paid to Morrow Construction for cleaning up the site upon it. I said clean up the site, the building, the old foundations, I rock piles, and stuff like that.

Q Okay. And then you also testified that you also get free manure from MCM Pork in addition to whatever proceeds you received for selling the property?

A I get the manure out of the building every year.

Q Okay.
A It's not totally free.
Q Okay. So, just a couple more questions. You know, you talked about that you had filled in the -- partially that you had tiled the tributary in order to protect it. Did you consult with any expert in stream morphology or steam ecology before you filled in that tributary?

A I was not aware I had to.
Q But if you're interested in protecting the stream did you consult with any stream experts prior to filling that in?

A I was not aware I had to. NRCS never brought it forward to me.

|  | Page 519 |  | Page 521 |
| :---: | :---: | :---: | :---: |
| 1 | Q Okay. But, you know, I'm just saying for | 1 | that's kind of when their lease ends, so they can't |
| 2 | purposes of protecting the tributary which you said was | 2 | give it up 'til then. |
| 3 | a goal of yours, you know, did you ever check with an | 3 | JUDGE BIRO: And you didn't purchase it |
| 4 | expert in that area prior to tiling or filling it in? | 4 | subject to lease? |
| 5 | A I -- I feel, yes, I did because I put a lot | 5 | THE WITNESS: Pardon. |
| 6 | of trust in the NRCS. Us as farmers, that's who are | 6 | JUDGE BIRO: You didn't purchase it subject |
| 7 | experts are is the NRCS, the FSA offices. I and a lot | 7 | to it being leased. |
| 8 | of farmers put a lot of trust in them to lead us down | 8 | THE WITNESS: No. |
| 9 | the right trail. So, I thought I was talking to the | 9 | JUDGE BIRO: Okay. And how much did you pay |
| 10 | experts that I needed to talk to. | 10 | for the property in 2008? |
| 11 | Q Right. But you never got a formal approval | 11 | THE WITNESS: I'm going to say $\$ 400,000$, |
| 12 | from the NRCS to go ahead and do that work. | 12 | approximately. That's just an approximate number. I |
| 13 | A I felt I did because I had the wetland form | 13 | don't know the exact, right. |
| 14 | with no wetlands on it, and I had talked to them in | 14 | JUDGE BIRO: Okay. And you purchased it in |
| 15 | previous years. So, I have other files on their -- in | 15 | the name of the LLC? |
| 16 | their office today to do other work that's already been | 16 | THE WITNESS: Yes. |
| 17 | discussed two-three years ago. | 17 | JUDGE BIRO: Okay. And have you and your |
| 18 | Q Okay. Are you yourself an expert in stream | 18 | wife been the only owners of the LLC? |
| 19 | ecology -- | 19 | THE WITNESS: Yes. |
| 20 | A No. | 20 | JUDGE BIRO: And I think you indicated that |
| 21 | Q -- or stream morphology? | 21 | your parents owned the property to the east -- |
| 22 | A No. | 22 | THE WITNESS: Yes. |
| 23 | MR. MUEHLBERGER: Thank you, Mr. Morrow. No | 23 | JUDGE BIRO: -- of yours, is that correct? |
| 24 | further questions. | 24 | THE WITNESS: Yes. |
| 25 | MR. McAFEE: I don't have any further | 25 | JUDGE BIRO: Okay. And what's the boundary |
|  | Page 520 |  | Page 522 |
| 1 | questions. | 1 | between your property and theirs? Is there -- |
| 2 | JUDGE BIRO: Okay. I have further | 2 | THE WITNESS: Today? |
| 3 | questions. | 3 | JUDGE BIRO: Yes. |
| 4 | How many acres was the property when you | 4 | THE WITNESS: A partial of the property, |
| 5 | bought it? | 5 | with the permission of my dad and my mom, we took the |
| 6 | THE WITNESS: How many acres? | 6 | fence out between us for accessibility for farm |
| 7 | JUDGE BIRO: Yes. | 7 | equipment. |
| 8 | THE WITNESS: A hundred and ninety-nine | 8 | JUDGE BIRO: Okay. |
| 9 | point maybe something, 199 acres. | 9 | THE WITNESS: There is a portion still on |
| 10 | JUDGE BIRO: And I think you said you | 10 | the hill in the tree area where there is still a |
| 11 | purchased it in 2008 or you took possession -- | 11 | portion of fence. We have it marked where, if needed |
| 12 | THE WITNESS: Yes. | 12 | to be, the boundary fence could be put back in. |
| 13 | JUDGE BIRO: -- in 2008. Did you purchase | 13 | JUDGE BIRO: Okay. So, there's no natural |
| 14 | it formally like in 2007 but didn't take the -- | 14 | boundary in there other than the fence or -- |
| 15 | THE WITNESS: Yeah, in the fall of 2007, I | 15 | THE WITNESS: Right. |
| 16 | believe. | 16 | JUDGE BIRO: -- markers, boundary markers. |
| 17 | JUDGE BIRO: Okay. | 17 | THE WITNESS: Right, yes. |
| 18 | THE WITNESS: Or early December, January, in | 18 | JUDGE BIRO: Okay. So, how many acres is |
| 19 | that area but we closed March 1, 2008. | 19 | your parents' farm? |
| 20 | JUDGE BIRO: Of 2008. And is that because | 20 | THE WITNESS: The farm is 240 taxable acres. |
| 21 | of crops somebody else was entitled to harvest or -- | 21 | It's 211 crop acres. |
| 22 | THE WITNESS: It just takes time for the | 22 | JUDGE BIRO: And is that going to be your |
| 23 | legalities, to get the abstract up to date and as such | 23 | farm one of these days? |
| 24 | like that, and a lot of farm ground that's sold, the | 24 | THE WITNESS: I hope it to be but that's |
| 25 | old owner or tenant has it leased until March 1st, and | 25 | their decision. |


|  | Page 523 |  | Page 525 |
| :---: | :---: | :---: | :---: |
| 1 | JUDGE BIRO: Well. | 1 | NRCS. |
| 2 | THE WITNESS: Or my mother's now. | 2 | JUDGE BIRO: And you then added that to your |
| 3 | JUDGE BIRO: Are you the only child? | 3 | farmland and you started farming on that property or |
| 4 | THE WITNESS: Oh, no. I have three other | 4 | you were -- |
| 5 | siblings. | 5 | THE WITNESS: Yeah, I was already farming |
| 6 | JUDGE BIRO: Okay. What crops were growing | 6 | that portion. |
| 7 | there when you bought the property? What crops were | 7 | JUDGE BIRO: You were already farming. |
| 8 | growing there when you bought the property? | 8 | THE WITNESS: Yeah. |
| 9 | THE WITNESS: Corn and beans, soybeans. | 9 | JUDGE BIRO: Okay. Did you tile it the same |
| 10 | JUDGE BIRO: And did you continue growing | 10 | way as you tiled in this case? |
| 11 | those crops? | 11 | THE WITNESS: Yes. |
| 12 | THE WITNESS: Yes. | 12 | JUDGE BIRO: Okay. Then I think you said |
| 13 | JUDGE BIRO: Okay. Did you increase the | 13 | you tiled again another year. Was it the next year, |
| 14 | size of the area where those crops were growing? | 14 | 2009? |
| 15 | THE WITNESS: Yes. | 15 | THE WITNESS: That's what we did -- |
| 16 | JUDGE BIRO: Okay. So, how many acres of | 16 | JUDGE BIRO: Okay. |
| 17 | corn and soybeans were there when you bought the | 17 | THE WITNESS: -- in the area on the |
| 18 | property? | 18 | photograph we had. |
| 19 | THE WITNESS: I'm going to say, and this is | 19 | JUDGE BIRO: Okay. Where we saw all the |
| 20 | again, an approximate, 85, 85 to 90. | 20 | very -- lines -- |
| 21 | JUDGE BIRO: And when you first did your | 21 | THE WITNESS: Yes. |
| 22 | first tiling on the property, was that 2009 ? | 22 | JUDGE BIRO: -- squiggly lines all across? |
| 23 | THE WITNESS: The fall of 2008. | 23 | Okay. |
| 24 | JUDGE BIRO: Okay. | 24 | And how many acres did you tile at that |
| 25 | THE WITNESS: But it wasn't on the area that | 25 | time? |
|  | Page 524 |  | Page 526 |
| 1 | we're talking about. | 1 | THE WITNESS: Approximately 35 acres, |
| 2 | JUDGE BIRO: I understand. | 2 | because we did some also from where we're talking to |
| 3 | THE WITNESS: It was on another area. | 3 | the east and to the north, on the east side of Deep |
| 4 | JUDGE BIRO: The first tiling was 2008. | 4 | Creek, but more north, we did some more. |
| 5 | THE WITNESS: Yes. | 5 | JUDGE BIRO: Right. Okay. And did you |
| 6 | JUDGE BIRO: I'm just talking -- | 6 | accomplish tiling in the same way? |
| 7 | THE WITNESS: Yes. | 7 | THE WITNESS: Yes. |
| 8 | JUDGE BIRO: -- about your old farm. | 8 | JUDGE BIRO: Okay. As you did in 2015. |
| 9 | THE WITNESS: Yeah. Yup. | 9 | THE WITNESS: Um-hmm. |
| 10 | JUDGE BIRO: And how big an area did you | 10 | JUDGE BIRO: Okay. And were you already |
| 11 | tile at that point? | 11 | farming that land? |
| 12 | THE WITNESS: Approximately 25 acres. | 12 | THE WITNESS: Yes. |
| 13 | JUDGE BIRO: And if I were looking at your | 13 | JUDGE BIRO: Okay. So, by 2015, before you |
| 14 | property, would that be in the -- well, maybe you | 14 | tiled in the tributary, how many acres were you |
| 15 | should tell me where in -- | 15 | farming? |
| 16 | THE WITNESS: It would be straight -- the | 16 | THE WITNESS: One hundred and forty-two, |
| 17 | unnamed tributary that we're talking about, it would be | 17 | approximately. |
| 18 | east of Deep Creek and then south a little bit. | 18 | JUDGE BIRO: And what were you farming? |
| 19 | JUDGE BIRO: On the other side of Deep | 19 | THE WITNESS: Soybeans and corn. |
| 20 | Creek. | 20 | JUDGE BIRO: Okay. It's always the same |
| 21 | THE WITNESS: Of Deep Creek, yes. | 21 | crops. |
| 22 | JUDGE BIRO: Okay. Did you get any type of | 22 | THE WITNESS: Yeah. |
| 23 | permit for that tiling because you were doing it | 23 | JUDGE BIRO: Okay. And essentially you had |
| 24 | adjacent to Deep Creek? | 24 | tiled just about everywhere except the tributary, is |
| 25 | THE WITNESS: No, I got the okay from the | 25 | that correct? |


|  | Page 527 |  | Page 529 |
| :---: | :---: | :---: | :---: |
| 1 | THE WITNESS: Yes. | 1 | THE WITNESS: Yeah, to Steven Johnson. |
| 2 | JUDGE BIRO: Okay. And in 2015, you had | 2 | JUDGE BIRO: And what triggered your |
| 3 | additional tiling done through the tributary, and I | 3 | decision to make such a request for a wetlands |
| 4 | want to go over this fairly carefully. Before you did | 4 | determination? |
| 5 | that tiling, you said that you had had a discussion | 5 | THE WITNESS: I had requested other small |
| 6 | with someone at the NRCS -- | 6 | ones for certain projects, and at that time, I made a |
| 7 | THE WITNESS: Um-hmm. | 7 | comment, I says instead of doing it for small projects, |
| 8 | JUDGE BIRO: -- about the possibility of | 8 | let's just have a determination done of the whole farm. |
| 9 | tiling that area. | 9 | JUDGE BIRO: So you had gotten some wetlands |
| 10 | THE WITNESS: Yes. | 10 | determinations for other areas -- |
| 11 | JUDGE BIRO: And when exactly was that | 11 | THE WITNESS: Yes. |
| 12 | conversation? | 12 | JUDGE BIRO: -- on your farm? |
| 13 | THE WITNESS: When? | 13 | THE WITNESS: Yes. |
| 14 | JUDGE BIRO: When. | 14 | JUDGE BIRO: So what areas had you |
| 15 | THE WITNESS: The first time was in fall of | 15 | previously gotten a wetlands determination? |
| 16 | 2009. I had had that conversation once or twice after | 16 | THE WITNESS: I already had them for |
| 17 | that, and I don't know exactly, and the reason I know | 17 | everything east of Deep Creek. |
| 18 | of 2009 because I had that conversation at the same | 18 | JUDGE BIRO: Okay. |
| 19 | time that I did the tiling that we've seen in the | 19 | THE WITNESS: I had them for the area |
| 20 | diagram. But as far as the other ones, I can't give | 20 | directly south, that hillside in an area south of the |
| 21 | you an exact date. | 21 | tributary. I had them for everything -- I felt the |
| 22 | JUDGE BIRO: Okay. And the NRCS person that | 22 | tributary -- because everything to the north of the |
| 23 | you spoke to about this, what was her name? | 23 | tributary I had already had them on. The only place I |
| 24 | THE WITNESS: Regina Leer. | 24 | really needed them on was for an area clear to the |
| 25 | JUDGE BIRO: Leer, okay. Was she the same | 25 | south of the tributary on the west side of Deep Creek |
|  | Page 528 |  | Page 530 |
| 1 | person you spoke to in subsequent years? | 1 | and north of the English River. |
| 2 | THE WITNESS: Yes. | 2 | JUDGE BIRO: Okay. So, this tributary flows |
| 3 | JUDGE BIRO: Okay. So, you believe you had | 3 | into Deep Creek, Deep Creek flows into the English |
| 4 | about two or three conversations with her? | 4 | River. |
| 5 | THE WITNESS: Yes. | 5 | THE WITNESS: That's correct. |
| 6 | JUDGE BIRO: About tiling the tributary | 6 | JUDGE BIRO: What does the English River |
| 7 | area? | 7 | flow into? |
| 8 | THE WITNESS: Yes. | 8 | THE WITNESS: I can't -- I'm not positive. |
| 9 | JUDGE BIRO: And in none of those | 9 | JUDGE BIRO: Okay. |
| 10 | conversations, do you believe she ever told you to get | 10 | THE WITNESS: If it would be the Mississippi |
| 11 | a permit? | 11 | down the southern part of Iowa, I'm not sure. |
| 12 | THE WITNESS: No. | 12 | JUDGE BIRO: Okay. Yes, the Iowa River, I |
| 13 | JUDGE BIRO: You said you requested a | 13 | believe. |
| 14 | wetlands delineation, is that correct? | 14 | THE WITNESS: Okay, the Iowa and then the |
| 15 | THE WITNESS: Pardon? | 15 | Mississippi. Okay. |
| 16 | JUDGE BIRO: You requested a wetlands | 16 | JUDGE BIRO: Okay. And does anybody use the |
| 17 | delineation? | 17 | English River for boating, fishing? |
| 18 | THE WITNESS: Determination. | 18 | THE WITNESS: Not that I'm aware of. |
| 19 | JUDGE BIRO: Determination. I'm sorry. | 19 | JUDGE BIRO: Okay. But the English River |
| 20 | THE WITNESS: Yes. | 20 | flows perennially, right? It's always got water in it. |
| 21 | JUDGE BIRO: Okay. And who did you make | 21 | THE WITNESS: Yes. |
| 22 | that request to? | 22 | JUDGE BIRO: Okay. |
| 23 | THE WITNESS: To the NRCS office in | 23 | THE WITNESS: For the most part. There is |
| 24 | Williamsburg, which is where the Iowa County office is. | 24 | some years -- yes, there is always water in it, but |
| 25 | JUDGE BIRO: In Williamsburg you said? | 25 | very low some years. You couldn't boat in it. |


|  | Page 531 |  | Page 533 |
| :---: | :---: | :---: | :---: |
| 1 | JUDGE BIRO: The English River? | 1 | JUDGE BIRO: $\$ 4,500$ for tiles, and eight to |
| 2 | THE WITNESS: Yeah. | 2 | ten thousand dollars for the -- |
| 3 | JUDGE BIRO: Okay. And how about the Deep | 3 | THE WITNESS: Well, that's just for the six- |
| 4 | Creek? | 4 | inch tile. |
| 5 | THE WITNESS: Most of the time. I have seen | 5 | JUDGE BIRO: Oh, for the six-inch tile. |
| 6 | it, in my time I have seen it actually dry twice. | 6 | THE WITNESS: Yeah. In evidence. there is |
| 7 | JUDGE BIRO: And when was that? | 7 | invoice for the 18-inch. |
| 8 | THE WITNESS: 1988, and it's been within the | 8 | JUDGE BIRO: Okay. And then another eight |
| 9 | last 10-12 years here, whenever we had that drought | 9 | to ten thousand to have it installed. |
| 10 | year. | 10 | THE WITNESS: Um-hmm. |
| 11 | JUDGE BIRO: Just at times of severe | 11 | JUDGE BIRO: And then after that, the only |
| 12 | drought? | 12 | work left to do was work you did yourself. |
| 13 | THE WITNESS: Yup. | 13 | THE WITNESS: I hired him to come back in |
| 14 | JUDGE BIRO: Were those also the times when | 14 | for a day -- and not just there, I had some other work |
| 15 | maybe you saw the tributary dry, the same kind of -- | 15 | around there, but shape everything up so I could work |
| 16 | THE WITNESS: Oh, it was dry at the same | 16 | it down and seed the waterway and farm it. |
| 17 | time plus some other times. It was dry. I mean, those | 17 | JUDGE BIRO: Okay. And what's a day of |
| 18 | are the only two times I have ever seen Deep Creek dry, | 18 | labor for that? |
| 19 | but I'd seen the tributary dry quite often. | 19 | THE WITNESS: Probably about 2,000. |
| 20 | JUDGE BIRO: Okay. In terms of the tiling | 20 | JUDGE BIRO: Okay. |
| 21 | you said you hired a company to do the tiling. | 21 | THE WITNESS: And like I say, these are just |
| 22 | THE WITNESS: Um-hmm. | 22 | approximates. I don't know the exact amounts. |
| 23 | JUDGE BIRO: How much did you pay the | 23 | JUDGE BIRO: Once you tiled essentially all |
| 24 | company? | 24 | of your farmland, how much do you think it increased in |
| 25 | THE WITNESS: Right offhand, I don't know. | 25 | value? |
|  | Page 532 |  | Page 534 |
| 1 | I'm not sure. I'm going to say probably eight to ten | 1 | THE WITNESS: That's hard to say because |
| 2 | thousand dollars. | 2 | farm -- farm ground has fluctuated so much in the past |
| 3 | JUDGE BIRO: And did that -- | 3 | three to five years. |
| 4 | THE WITNESS: It might have been -- it might | 4 | JUDGE BIRO: Well, I'm basing that on the |
| 5 | have been more. | 5 | fact you said that when you tile -- |
| 6 | JUDGE BIRO: Did that cover the -- buying | 6 | THE WITNESS: Tile. I'm going to say |
| 7 | the tiles themselves? | 7 | probably increased it -- the tile itself, probably 20 |
| 8 | THE WITNESS: No. I still had to pay for | 8 | percent. Maybe 30 percent. |
| 9 | the tile. | 9 | JUDGE BIRO: So, maybe it went from the |
| 10 | JUDGE BIRO: You had to pay for the tile. | 10 | whole property being worth 400,000 to 550 or? |
| 11 | How much did that cost? | 11 | THE WITNESS: Oh, yeah. I would say yeah, |
| 12 | THE WITNESS: It's in an invoice in the -- | 12 | at least. |
| 13 | JUDGE BIRO: In evidence? | 13 | JUDGE BIRO: Six hundred -- |
| 14 | THE WITNESS: Yes. | 14 | THE WITNESS: Especially with inflation, I |
| 15 | JUDGE BIRO: Okay, so that's for the | 15 | mean, in time. But just as the tile, to property |
| 16 | purchase of the tile itself. | 16 | that's tiled to property that's not, you're probably in |
| 17 | THE WITNESS: Of the one line of pipe, and | 17 | that ballpark. |
| 18 | then I had the other pipe, it showed in that diagram. | 18 | JUDGE BIRO: Okay. Well, that seems like a |
| 19 | There is two six-inches tile. I had them on hand | 19 | worthwhile investment about -- from what I can tell, |
| 20 | already. | 20 | maybe $\$ 30$ - to $\$ 50,000$ to increase it 30 percent. |
| 21 | JUDGE BIRO: Okay, so you didn't have to buy | 21 | THE WITNESS: Yeah, because -- because the |
| 22 | them. | 22 | crops respond to tile, and like I say, it helps the |
| 23 | THE WITNESS: So them would have cost | 23 | ground work like a sponge. It absorbs the water and |
| 24 | probably another -- \$1,500 a roll, so there is two and | 24 | then releases it, and so the water -- the ground isn't |
| 25 | half. That would have been probably another \$4,500. | 25 | staying wet, to erode as easy, either. |


|  | Page 535 |  | Page 537 |
| :---: | :---: | :---: | :---: |
| 1 | JUDGE BIRO: So it just makes it much more | 1 | JUDGE BIRO: Okay. I'm a little confused as |
| 2 | valuable farmland. | 2 | to why it would cost so much to take out the tile when |
| 3 | THE WITNESS: Yes, environmentally and | 3 | it only costs about 15,000 to put it in. |
| 4 | economically. | 4 | THE WITNESS: Now, when you say "cost so |
| 5 | JUDGE BIRO: Tell me about the application | 5 | much to take it out". |
| 6 | of manure on farmland. I take it that these soybeans | 6 | JUDGE BIRO: Right. |
| 7 | and corn are not for human consumption? | 7 | THE WITNESS: To mitigate? |
| 8 | THE WITNESS: Yeah. It can be, yes. | 8 | JUDGE BIRO: Yes, to mitigate. You said it |
| 9 | JUDGE BIRO: Even when you apply this manure | 9 | was going to cost forty to fifty thousand. |
| 10 | to it? | 10 | THE WITNESS: The mitigation that I checked |
| 11 | THE WITNESS: Oh, yeah. Yes. Manure is an | 11 | into was through the NRCS office, and where they |
| 12 | organic fertilizer. As a matter of fact, organic | 12 | directed me, that's -- that's where I got the price. |
| 13 | farmers, that's one of the only things they can use, | 13 | JUDGE BIRO: Oh, so you weren't intending to |
| 14 | it's one of the products they can use. Because it's | 14 | take out the tile. You were going to buy wetlands |
| 15 | organic, it breaks down into it, but it's pumped out | 15 | credit somewhere else. |
| 16 | and put on a farm with a toolbar and tractor with a | 16 | THE WITNESS: Right. |
| 17 | pipe hooked to it that's pumping it to this and | 17 | JUDGE BIRO: Okay. |
| 18 | injecting it into the ground. | 18 | THE WITNESS: Yes. That's one of the things |
| 19 | JUDGE BIRO: Okay. So, are you now an | 19 | that I'm working with them now is trying to find a |
| 20 | organic farmer? | 20 | solution to it. |
| 21 | THE WITNESS: No, because you've got to be | 21 | JUDGE BIRO: So, is it my understanding you |
| 22 | certified. | 22 | can't take out the tiles because if you did, then they |
| 23 | JUDGE BIRO: Certified. | 23 | couldn't operate their hog farm on your property, on |
| 24 | THE WITNESS: If you're organic, you cannot | 24 | what used to be your property? |
| 25 | spray with herbicides and insecticides. | 25 | THE WITNESS: Right. |
|  | Page 536 |  | Page 538 |
| 1 | JUDGE BIRO: Oh. | 1 | JUDGE BIRO: Right. So, you're, in essence, |
| 2 | THE WITNESS: I mean, it's got to be all | 2 | between a rock and a hard place, right? |
| 3 | organic. | 3 | THE WITNESS: Um-hmm. |
| 4 | JUDGE BIRO: So, do you use herbicides and | 4 | JUDGE BIRO: Is that what the situation is? |
| 5 | insecticides on your property? | 5 | You can't take out the tile. What was your agreement |
| 6 | THE WITNESS: We're forced to. | 6 | with MCM Pork in terms of being able to operate a hog |
| 7 | JUDGE BIRO: Okay. What kind of products do | 7 | farm in -- |
| 8 | you use? | 8 | THE WITNESS: I sold -- I just -- they |
| 9 | THE WITNESS: You've probably heard of | 9 | purchased this piece of ground from me. |
| 10 | Roundup, Dicamba, which is the new product. We use 2- | 10 | JUDGE BIRO: How many acres did they |
| 11 | 4D, and I'm not an expert on a lot of them. There are | 11 | purchase, or what was the size of the purchase? |
| 12 | different categories, but we use different -- some | 12 | THE WITNESS: Approximately three acres. |
| 13 | Atrazine. We're being forced to use more and more | 13 | JUDGE BIRO: Okay. |
| 14 | because we aren't allowed to till. So, to control the | 14 | THE WITNESS: And then I get the manure. I |
| 15 | weeds, the only other way you got to do it is to spray | 15 | mean, that's where they build hog buildings normally is |
| 16 | herbicides and insecticides on the surface. | 16 | where there is agricultural land available to apply the |
| 17 | JUDGE BIRO: Tell me why you say you're not | 17 | manure to. |
| 18 | allowed to till. | 18 | JUDGE BIRO: Okay. And do you know how many |
| 19 | THE WITNESS: It's just kind of policy now. | 19 | hogs there are in their containment? |
| 20 | JUDGE BIRO: Okay. So, you tiled about 1.3 | 20 | THE WITNESS: I can't tell you that. |
| 21 | acres, they say. Is that about correct, you believe? | 21 | JUDGE BIRO: Okay. |
| 22 | THE WITNESS: That's what they say. | 22 | THE WITNESS: I don't want to -- I'm not |
| 23 | JUDGE BIRO: Do you believe that's correct | 23 | active with the hog building and I don't -- I've been |
| 24 | or is it more or less? | 24 | in that years ago and I don't care to do that. |
| 25 | THE WITNESS: It's real close. | 25 | JUDGE BIRO: You didn't build the building? |


|  | Page 539 |  | Page 541 |
| :---: | :---: | :---: | :---: |
| 1 | THE WITNESS: I had nothing to do with any | 1 | did you make with MCM Pork regarding applying the |
| 2 | of the building. All I did is sold them the land. | 2 | manure? Would they continue to provide it to you for |
| 3 | JUDGE BIRO: Okay. And did you make any | 3 | free indefinitely as long as they operated the hog farm |
| 4 | representations about being able to use it for hog | 4 | there? |
| 5 | containment? | 5 | THE WITNESS: We have a -- I believe it's a |
| 6 | THE WITNESS: Pardon? | 6 | 10-year contract. |
| 7 | JUDGE BIRO: As part of your sale -- | 7 | JUDGE BIRO: Is that separate from your sale |
| 8 | THE WITNESS: Yeah. | 8 | with them? |
| 9 | JUDGE BIRO: -- did you make any | 9 | THE WITNESS: Yes. |
| 10 | representations that they could use the property for a | 10 | JUDGE BIRO: Okay. So, you have a 10-year |
| 11 | hog containment area? | 11 | contract. |
| 12 | THE WITNESS: I didn't make that as a | 12 | THE WITNESS: Yeah. I don't know what they |
| 13 | representation, no. That was their purpose of buying | 13 | call it, a continuous 10-year contract where it's 10 |
| 14 | it, though. | 14 | years. One year goes off this end and then another |
| 15 | JUDGE BIRO: Okay. So, if it turns out that | 15 | year is added to the other end. |
| 16 | you take out the tiles and they are no longer more than | 16 | JUDGE BIRO: Okay. |
| 17 | 500 feet from a waterway, is there any compensation | 17 | THE WITNESS: So it's a -- it's a continuous |
| 18 | you're going to owe MCM Pork? | 18 | 10-year contract. |
| 19 | THE WITNESS: I don't know. I can't -- I | 19 | JUDGE BIRO: And they agree under that |
| 20 | can't answer that. You're talking about taking the | 20 | contract to give you the manure for free. |
| 21 | tile. I thought you meant taking out the tile | 21 | THE WITNESS: Yeah, they -- |
| 22 | someplace for a wetland, but you're talking about | 22 | JUDGE BIRO: And what do you promise them on |
| 23 | taking the tile out of the -- | 23 | the other end of the contract? |
| 24 | JUDGE BIRO: Out of the tributary. | 24 | THE WITNESS: I've got to take the manure. |
| 25 | THE WITNESS: Yeah. | 25 | JUDGE BIRO: Oh, you have to take it. |
|  | Page 540 |  | Page 542 |
| 1 | JUDGE BIRO: Yes, if you take them out, and | 1 | THE WITNESS: Well, for the most part. They |
| 2 | let's say it makes it so that the hogs -- the hog | 2 | need that manure out of that building every year. |
| 3 | containment area can no longer operate there because | 3 | JUDGE BIRO: Okay. |
| 4 | they're not 500 feet, have you breached your contract | 4 | THE WITNESS: To run under -- to run under |
| 5 | with them? | 5 | the regulations. |
| 6 | THE WITNESS: I can't -- I can't say. I | 6 | JUDGE BIRO: So, do you apply that manure to |
| 7 | don't know. | 7 | any other farms or sell it? |
| 8 | JUDGE BIRO: Okay. So when, you know, I | 8 | THE WITNESS: No. My parents' farm we apply |
| 9 | suggested you're between a rock and hard place, it's | 9 | it to also. |
| 10 | because you would no longer be entitled to get the | 10 | JUDGE BIRO: Okay. Is there any other farms |
| 11 | manure for free? | 11 | you apply it to? |
| 12 | THE WITNESS: Yeah. | 12 | THE WITNESS: Not at this time, no. |
| 13 | JUDGE BIRO: Is that your economic loss -- | 13 | JUDGE BIRO: Okay. So, they are also saving |
| 14 | THE WITNESS: Yeah. | 14 | about \$10-\$12,000 a year? |
| 15 | JUDGE BIRO:-- if you take out the tile? | 15 | THE WITNESS: No, that's -- that's total. |
| 16 | THE WITNESS: Yeah. | 16 | JUDGE BIRO: Oh, between -- |
| 17 | JUDGE BIRO: Okay. And how much does that | 17 | THE WITNESS: Between, yeah, whoever gets it |
| 18 | save you, getting the manure? | 18 | that year. We may split it. We have split it before |
| 19 | THE WITNESS: That varies. It's not as | 19 | but that's -- that's a total. |
| 20 | cost-saving today as it was two years ago or three | 20 | JUDGE BIRO: For both you and your parents' |
| 21 | years ago because of where we're at in farm commodities | 21 | farm? |
| 22 | right now, but I'm going to say probably -- probably | 22 | THE WITNESS: Yeah. Yup. |
| 23 | this year \$10-\$12,000 because I -- because I do have | 23 | JUDGE BIRO: Because otherwise, did you buy |
| 24 | to pay for the application of it. | 24 | fertilizer together? |
| 25 | JUDGE BIRO: Right. So, what arrangement | 25 | THE WITNESS: Well, if you don't put that |


|  | Page 543 |  | Page 545 |
| :---: | :---: | :---: | :---: |
| 1 | on, you have to buy commercial fertilizer. | 1 | acres, you said you could get in another 20 rows? |
| 2 | JUDGE BIRO: Okay. And did you used to | 2 | THE WITNESS: No, that's when we cleaned the |
| 3 | split that also with your parents? | 3 | trees along the fencerow. |
| 4 | THE WITNESS: No. | 4 | JUDGE BIRO: Oh. So, what do you get out of |
| 5 | JUDGE BIRO: Oh, so how much did that cost | 5 | tiling over 1.3 acres in terms of additional farmland? |
| 6 | you? | 6 | THE WITNESS: Not so much more farmland, but |
| 7 | THE WITNESS: Last year. | 7 | farmability, protecting the land I have by -- by |
| 8 | JUDGE BIRO: When you used regular | 8 | catching the residue, the corn stalks and the bean |
| 9 | fertilizer instead of manure. | 9 | stalks on big rains. If there's any washing of top- |
| 10 | THE WITNESS: If I put hog manure on, I | 10 | soils, silt, I catch that, and can take that back. |
| 11 | don't need commercial fertilizer. | 11 | JUDGE BIRO: And re-deposit it on your land. |
| 12 | JUDGE BIRO: Right. | 12 | THE WITNESS: On top of the hill or |
| 13 | THE WITNESS: If I don't put it on, then I | 13 | wherever. |
| 14 | need it. | 14 | JUDGE BIRO: Okay. |
| 15 | JUDGE BIRO: And how much does that cost? | 15 | THE WITNESS: Once it -- once it washes into |
| 16 | THE WITNESS: It would be that additional -- | 16 | the creek and goes on down, I mean, it's gone. |
| 17 | for one or the other, it's going to be an additional | 17 | JUDGE BIRO: Okay. So, really it's not |
| 18 | \$10-\$12,000 dollars. | 18 | having the opportunity to farm on that particular |
| 19 | JUDGE BIRO: Just for your farm. | 19 | sliver of property. |
| 20 | THE WITNESS: Yeah. | 20 | THE WITNESS: No. |
| 21 | JUDGE BIRO: Okay. So, if you remove the | 21 | JUDGE BIRO: Okay, just give me a moment. |
| 22 | tiles, let's say from the tributary, basically undid | 22 | (Pause.) |
| 23 | what the government says you should not have done, you | 23 | What county is your property located in? |
| 24 | would have the cost of removing it. | 24 | THE WITNESS: Iowa County. And when you |
| 25 | THE WITNESS: Um-hmm. | 25 | asked yesterday, it's Lincoln Township. |
|  | Page 544 |  | Page 546 |
| 1 | JUDGE BIRO: Do you know what that cost | 1 | JUDGE BIRO: Lincoln Township, Iowa County. |
| 2 | would be? | 2 | THE WITNESS: County, yes. |
| 3 | THE WITNESS: No, I don't. | 3 | JUDGE BIRO: Okay. |
| 4 | JUDGE BIRO: Okay. Is that something you | 4 | THE WITNESS: Lincoln Township is in Iowa |
| 5 | could just do yourself? | 5 | County. |
| 6 | THE WITNESS: No, I don't have the equipment | 6 | (Pause.) |
| 7 | to do that. | 7 | JUDGE BIRO: Okay, I don't think I have any |
| 8 | JUDGE BIRO: Okay. And you would also lose | 8 | more questions. Mr. McAfee, did my questions raise any |
| 9 | the \$10-\$12,000 of free manure and, you know, | 9 | questions for you that you would like to ask? |
| 10 | fertilizer. | 10 | MR. McAFEE: No, Your Honor. Thank you. |
| 11 | THE WITNESS: Um-hmm. | 11 | JUDGE BIRO: Okay. Mr. Muehlberger? |
| 12 | JUDGE BIRO: Okay. So, you said you've | 12 | MR. MUEHLBERGER: I've got about three quick |
| 13 | talked to NRCS about mitigating. Other than buying | 13 | questions, Your Honor. |
| 14 | let's say credits, is there any other mitigation you | 14 | JUDGE BIRO: Go. |
| 15 | can offer them? Do you have other property that you | 15 | RECROSS-EXAMINATION |
| 16 | could offer to use in mitigation? | 16 | BY MR. MUEHLBERGER: |
| 17 | THE WITNESS: For that 1.3 acres? | 17 | Q Mr. Morrow, so you just told the Judge that |
| 18 | JUDGE BIRO: Yes. | 18 | if you took out the tiles that you would lose the |
| 19 | THE WITNESS: That is one thing I'm working | 19 | benefit of getting the manure from MCM Pork, is that |
| 20 | on, is I have a piece of ground that -- clear to the | 20 | correct? |
| 21 | southwest corner of my farm that we're going to -- | 21 | A I would assume that. I can't -- I don't |
| 22 | we're looking into to see if that piece could qualify. | 22 | know what would happen, but yes. |
| 23 | JUDGE BIRO: Okay. All right. | 23 | Q So, you have a deal with MCM Pork concerning |
| 24 | THE WITNESS: That doesn't have tile in it. | 24 | the distance of the confinement barn to the -- what was |
| 25 | JUDGE BIRO: So, when you tiled over 1.3 | 25 | the tributary, correct? |


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| :---: | :---: | :---: | :---: |
| 1 | A No. | 1 | are listed as Morrow One site. |
| 2 | Q Well, so I guess I don't understand. If you | 2 | A No, I did not. |
| 3 | would lose the benefit from MCM Pork by taking out the | 3 | MR. MUEHLBERGER: Okay, no further |
| 4 | tile, then there must have been some kind of agreement | 4 | questions. |
| 5 | between you and MCM Pork. | 5 | JUDGE BIRO: Okay, thank you very much, Mr. |
| 6 | A I don't know what would happen to the | 6 | Morrow. |
| 7 | building if the tile came out. Your Honor asked me if | 7 | (Witness excused.) |
| 8 | the building closed, I would lose the manure. And, | 8 | Okay, we're not going to end today. |
| 9 | yes, I would. | 9 | (Laughter.) |
| 10 | Q Okay. But if you took out the tiles, then | 10 | MR. BIERI: I was too ambitious. I'm sorry. |
| 11 | you feel that MCM Pork would stop providing you the | 11 | JUDGE BIRO: I'm good until Friday. Come |
| 12 | free manure? | 12 | Friday, we're done. |
| 13 | A No. | 13 | (Laughter.) |
| 14 | Q Okay. | 14 | I have to go home. So what time would you |
| 15 | A Not if the building is up and running, no. | 15 | like to start tomorrow? |
| 16 | Q Okay. So, there's no relationship between | 16 | MR. BIERI: Can I speak with my cohort here. |
| 17 | the distant -- between the tributary and MCM Pork -- | 17 | JUDGE BIRO: Your cohort? Your colleague? |
| 18 | A No. | 18 | MR. BIERI: Colleague. |
| 19 | Q -- is what you're saying. | 19 | JUDGE BIRO: Yes. |
| 20 | A No. | 20 | MR. BIERI: How long do you think you will |
| 21 | Q Okay. You talked a lot about how you've had | 21 | go on direct? I'm not going to hold you to it. I just |
| 22 | a lot of history with NRCS concerning wetland | 22 | kind of wondered. |
| 23 | determinations, correct? | 23 | MR. MUEHLBERGER: I can't see going more |
| 24 | A Um-hmm. | 24 | than an hour and a half on direct. |
| 25 | Q So, you knew that FSA wasn't the agency that | 25 | MR. BIERI: Okay. |
|  | Page 548 |  | Page 550 |
| 1 | makes wetland determinations, right? | 1 | MR. MUEHLBERGER: Let me rephrase that. I |
| 2 | A Not -- they were -- until this day, I | 2 | estimate I won't go more than an hour and a half. |
| 3 | consider them working hand in hand. | 3 | MR. BIERI: Sure, sure, sure. I think if we |
| 4 | Q Okay. But you know that you've gotten | 4 | start at nine, we can -- I think that would give us |
| 5 | wetland determinations from NRCS in the past, correct? | 5 | time and I'm going to -- |
| 6 | A I have got a couple, yes, by just a letter | 6 | MR. MUEHLBERGER: Do you want me to |
| 7 | or even a verbal. | 7 | estimate? You're not very good at it. I would think |
| 8 | Q Okay. And just one last question. The | 8 | we could be done by noon or less. |
| 9 | confinement barn, the plans that were submitted as | 9 | MR. BIERI: Yes. |
| 10 | Morrow One site to DNR where the confinement barn was | 10 | JUDGE BIRO: Okay. You don't anticipate |
| 11 | going to be sited, the actual confinement barn is not | 11 | calling any rebuttal witnesses? |
| 12 | in that location, correct? | 12 | MR. BIERI: Perhaps. It depends on what |
| 13 | A I don't know. | 13 | this gentleman says, but it would be short, I would |
| 14 | Q Okay, but it was labeled as -- did you hire | 14 | imagine. |
| 15 | Pinnacle in order to make the -- in order to do that | 15 | JUDGE BIRO: Okay. So, let's start again at |
| 16 | initial consultation to inform DNR where the | 16 | 9:00, and I won't book any tickets home yet. |
| 17 | confinement barn was going to be located? | 17 | Okay, we'll stand in recess until then. |
| 18 | A No, I did not. | 18 | Thank you. |
| 19 | Q Even though it was listed as the Morrow One | 19 | ALL: Thank you, Your Honor. |
| 20 | site. | 20 | (Whereupon, at 5:30 p.m., the hearing in the |
| 21 | A No, I did not. | 21 | above-entitled matter adjourned, to reconvene at 9:00 |
| 22 | Q Okay. But is the confinement barn where the | 22 | a.m. the following day, Thursday, October 4, 2018.) |
| 23 | original plans were supposed to be? | 23 | // |
| 24 | A I never seen no plans of any sort. | 24 | // |
| 25 | Q You never saw the plans from Pinnacle that | 25 | // |



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