NEPA Public Scoping Meeting

Please note this document is a compilation of two transcripts, the afternoon session followed by the evening session of the NEPA Public Scoping meeting. Please use the Acrobat “Find” tool to perform key word searches within this document.

GLMRIS

GREAT LAKES AND MISSISSIPPI RIVER

INTERBASIN STUDY

FEBRUARY 8, 2011

2:00 P.M.

NATIONAL GREAT RIVERS MUSEUM

#2 LOCKS AND DAM WAY

ALTON, ILLINOIS

A P P E A R A N C E S

PANEL:

MR. BILL BOLEN
MR. LIEUTENANT COLONEL DAVID BERCZEK
MR. DAVE WETHINGTON, III
MR. MIKE SAFFRAN

LIST OF COMMENTS:

P R O C E E D I N G S

MR. BLUHM: Welcome everybody. My name is Kevin Bluhm, and I'm the moderator for today's meeting. I come from the St. Paul District Corps of Engineers office, and this is our third week in a row of doing meetings here for the GLMRIS, Great Lakes and Mississippi River Interbasin Study, and this is a NEPA public scoping meeting. I'm glad you're all here.

Just want to let you know a few things about the information that we passed out for you. The packet here is really important. If you haven't got the packet, just raise your hand and we will make sure that you get one.

In that packet we have got a short explanation for the different pieces here. The green piece half-sheet here is the agenda. This is what we are going to be working off of today. Following that we have got a quarter-size sheet and a small little booklet that has a lot of details of what the study itself entails.

Also, the most important piece for today's meeting and the main reason why we are

here, is the white half-sheet of paper, our comment form. This comment form is designed so it gives you the ability to write down anything on the inside or the backside, as well as all of our pertinent mailing information. So keep that in mind if you have anything that you would like to add or any comments you would like to provide for us.

The yellow sheet here is what we ask you to fill out if you want to make a oral comment or presentation to us today. We have also got a purple sheet of paper here that has a lot of information that will help with any frequently asked questions. These are questions that we have already answered in case you have some questions, they may fall into that category.

We have also got a salmon-colored sheet here that has information on the other efforts that are going on, and you will hear more about that in the presentation following. And then the blue sheet of paper here is a piece that we use for documenting any submittal materials that you have for us. So if you want to submit anything, if you have got any backup material or

documents you would like to turn in, accompany this with that. That will help us get the proper credit for that as we prepare our documents. And then the last stapled booklet here has all the slides that we will be using, so this is something you can use as a reference to go through as you see the slides.

If you do need any additional copies to take with you when you leave, you can feel free to get any extras as well for anybody that may not have been able to attend.

If you preregistered on the project website to give an oral comment and have not checked in yet, we would ask that you do that at the table in the lobby out here to get your name on the list. And if you want to make an oral comment now but have not already registered, again, you can go up to the comment table there and register yourself.

Our GLMRIS team has organized this public meeting in two different goals. The first is to present information about the study itself, and then the second is to solicit your comments on the significant issues that should be included

in GLMRIS and on the insignificant issues that can be eliminated from further study.

The Corps is hosting 12 public meetings throughout the study area in an effort to provide opportunities for those interested in the study to learn more about the study and provide your oral comments. Please take note the NEPA public scoping period closes on March 31st, 2011.

As indicated on the agenda, this public meeting is organized in two sessions. Identical presentations will be given at the beginning of each of the sessions, followed by the oral comment period. Our first session will end here at 5:00 if we are still going strong until then, and the second one will start at 5:30 promptly. Our study staff will be available between the sessions to answer any questions as needed and then again after the last session as well.

If you have any questions or concerns, our staff will be around and we will stay around here as long as we have to. Just keep in mind any conversations you have offline,

either in the back of the room or out in the hallway, will not be recorded as part of the official documentation. So if what you have to say is important and you want to make sure that it's included as part of the NEPA documentation, we would ask that you make sure that you either come to the microphone during the comment session to give those orally or you write them down and put them on a comment form or you mail them in. Those will be the three ways that you can best have your comments recorded and heard as part of the documentation.

At this time I would like to introduce the members of the panel here.

To my left here, Mr. Bill Bolen from the USEPA, and he is representing the Asian Carp Regional Coordinating Committee. At the table, Lieutenant Colonel David Berczek from the -- deputy commander from Chicago District, US Army Corps of Engineers. Center of the table there, our project manager for the GLMRIS effort, Dave Wethington. And on the far side of the table from me, Mike Saffran, and he's the Other Pathways project manager.

And also want to take note we are not in the Chicago District area. We are down in the St. Louis District, Mississippi Valley Division, and Colonel Tom O'Hara, the commander from the St. Louis District is with us in the back there. So thank you, sir, for allowing us the day and the opportunity to use your facility. This is a wonderful opportunity. Thank you.

With that, I'm going to turn it over to Bill and we will start the Asian carp control update.

MR. BOLEN: I just want to check with everybody, can you hear me in the back fine? I coach basketball, so I assume that my voice will carry.

Good afternoon. Thank you very much for coming. My name is Bill Bolen. I'm the senior adviser with the United States Environmental Protection Agency. I'm also on the Asian Carp Regional Coordinating Committee, and I'm part of the Senior Executive Committee as well.

I'm here today to tell you that the Obama administration has taken a keen interest in

Asian carp. We are taking an aggressive, proactive, and unprecedented approach to keep this invasive species out of the Great Lakes.

Many of you might have heard the Asian carp began their migration south of here in the 1980s, imported to control plankton and algae, primarily in sewage treatment ponds and/or fish farms. They were able to escape. They moved their way up the Mississippi River, moving up into the Illinois River. Much of your Mississippi River -- as I understand from fish biologists, 90 percent of the biomass in the Mississippi River is Asian carp.

What we are concerned with now is the possibility that Asian carp could get into the Great Lakes to affect the multi-billion dollar sport fish industry.

How can that happen? It's pretty basic. The Chicago Sanitary Ship Canal now provides a connection between the Great Lakes Basin and the Mississippi River Basin.

The administration, though, and the Army Corps of Engineers is concerned not just about Asian carp. We have many invasive species

that we are trying to battle right now. And one of the things you are going to hear a lot more about this afternoon is the great work that the Army Corps is doing under the GLMRIS study. So the GLMRIS study is not only looking at just Asian carp, it's looking at all invasive species and how to prevent the passage of invasive species from the Mississippi River Basin up into the Great Lakes and vice versa.

I want to assure you all we are committed -- we, the federal and state agencies, are committed to battle this problem. We are putting all available resources toward it. And to date I would like to say that we are effective so far in this battle.

Now, I got out in the public quite a bit. I'm not a fish biologist, I'm a geologist, by the way, but my background is in emergency response so I do know how to collaborate and cooperate.

What I found interesting about Asian carp is -- and, again, when I go to the public, they say, "Do they eat the other fish?" No, they don't eat the other fish. They outcompete the

other fish. They procreate more rapidly than native species. They eat plankton and algae more rapidly than native species. So they basically starve the native species.

One of the interesting things that I have learned about Asian carp recently: They may be able to survive on leaf litter, detritus, until they get to the next plankton or algae source.

The Asian Carp Framework. In February of 2010, the Obama administration released the first Asian Carp Framework. It's a collection of short- and long-term actions that the federal government and the State of Illinois committed to, and it also established the Asian Carp Regional Coordinating Committee, which I will talk about in just a minute.

The primary agencies you see on that cover that were responsible for putting this together, these agencies have the jurisdictional authorities or the financial wherewithal to do most of the actions that we have implemented so far. You see USEPA up there, Army Corps of Engineers, Fish and Wildlife Service, the Coast

Guard, and that's -- I can't see the other one over there -- Illinois DNR.

In September of 2010, the Obama administration announced that they have selected a Asian carp director. That individual is Mr. John Goss, who extends his regrets for not being here today, that's why I'm here today, but he has attended most of these GLMRIS meetings.

This is how we are structured: At the top we have a federal executive committee that's cochaired by Director John Goss; Mr. Cameron Davis of USEPA, who is Lisa Jackson's senior advisor. He's also in my Chicago office.

Underneath that you will see my name to the left; Admiral Michael Parks of the Coast Guard; Mr. Charles Wooley, senior executive for the Fish and Wildlife Service.

The other side of the column, Major General John Peabody of the Army Corps out of the Cincinnati office; Colonel Vincent Quarles of the Chicago District; Senior Executive Leon Carl of the Geological Survey; and Deputy Director Jim Bredin, recently from the state of Michigan but now working also for the Council on Environment

Quality along with Mr. John Goss.

Underneath that, the most important part of this whole structure, this whole diagram, is the Regional Coordinating Committee. What I want to point out there is you see not only federal representation but you see state representation and, most importantly, state representation from every one of the Great Lakes states that surround the basin. We are also lucky to have the City of Chicago as part of that organizing group and the Metropolitan Water Reclamation District.

I'm going to briefly touch on the bubble off to the left. I think Mike Saffran is going to talk more about that, the interconnecting waterways work that Mike has been leading on. We also, because of the robust nature and interest in Asian carp, we have established a communications and outreach work group.

We also have a stand-alone entity. Many of our industry partners, our researchers, our residents -- for example, the American Waterways Operators, they wanted an opportunity

to be involved in the process, so we have created this nonfederal technical and policy work group, it's chaired by a Sea Grant person named Phil Moy -- we are trying to get a cochair right now -- but this is a chance for those of you not part of the federal executive team or a state agency or regulatory agency to get involved in this effort, even beyond what you can do today with our Army Corps representatives here.

Pretty simple to understand what happened and why things have changed so dramatically. Years ago, we used to take our sewage and dump it into Lake Michigan. I'm sure you are all aware of the health concerns and health issues that created. So back in the early 1900s, I want to say 1902, '05, something along those lines, there was a artificial waterway that was connected called the Chicago Sanitary Ship Canal. The Chicago River, the flow was reversed. Our sewage was then taken, put into the waterways, including the Cal Sag Channel down there to the south, the main channel of the Chicago River and the Des Plaines River, all that wastewater from the Metropolitan Water

Reclamation District is now funneled down into the Illinois River and into the Mississippi River. That created the passageway by which Asian carp could migrate from the Mississippi River Basin up into Lake Michigan.

The most important defense we have right now is the Chicago Army Corps of Engineer's electric barriers. They currently have three barriers.

But I want to make this point to you today: You cannot fight biology with a single engineering solution. That's what the Framework really does. It takes this and brings in many other technologies and resources to keep the battle going and keep the carp out.

We did some very significant things this past year thanks to the Great Lakes Restoration Initiative monies. One of the very significant things that we did, beyond those electric barriers, there's a possibility that flooding from the Des Plaines River above these electric barriers -- flooding, again, from the Des Plaines -- could overflow into the Chicago Sanitary Ship Canal and could bring Asian carp

roe, fish, eggs -- primarily adults is what we are concerned about -- into the CSSC above the electric barriers.

Army Corps did an exemplary job of building about 13 miles of barriers between the Des Plaines River and the CSSC. There's also some connections -- you can't see it on the map right now -- but the Illinois and Michigan Canal had some connecting passageways. Army Corps got it all done in one -- less than 1 year, about 1 year, they brought it in under budget, and they returned a lot of those monies back to the Asian Carp Regional Coordinating Committee to do further work, so we are very, very appreciative -- the administration is very appreciative of that.

Mike is going to -- I think -- you want to talk about this briefly, Mike, about the Wabash-Maumee or should I delay this for some later period of time?

MR. SAFFRAN: We will go into it in more detail later.

MR. BOLEN: I will just make this point that the money that the Chicago District

saved putting those barriers up enabled you to cut off this other temporary pathway between the state of Indiana and Ohio.

Mike is going to be talking more -- want me to delay this too, Mike? Want me to skip past this, the interconnecting waterways? You might as well take the mic if you want.

MR. SAFFRAN: I will just -- we will do it the way we have done all the other ones. Just hit the highlights if you want.

MR. BOLEN: I will hit the highlights.

One of the things that we are concerned about is even beyond the -- I apologize, this is my first GLMRIS meeting, so I'm learning this as I'm going.

One of the things we learned though, we don't need to be concerned about the CSSC and that connecting pathway. There's many interacting pathways that may pose a potential risk in Great Lakes Basin. So the Army Corps -- primarily Mike and his state DNR counterparts -- went out, surveyed the entire basin, located these other potential pathways of concern. The

highest risk one I just mentioned was the Wabash-Maumee connection between Indiana and Ohio. That connection, if Asian carp got past that point, would have a free swim up into Lake Erie. The fish biologists tell me that the Lake Erie regime, by the way, is probably the best lake for Asian carp to survive and propagate in. It's got the most plankton and algae of all the Great Lakes.

We have spent more time on the waterway making sure that the Asian carp are not getting above the barriers. Fish and Wildlife, State of Illinois, spent $3,200 in the past year in electrofishing, seining, and netting to make sure that we did not have carp above the electric barriers. We found one, by the way, one in Lake Calumet, and we don't know if that was an introduced species or if it got beyond the electric barriers.

Again, the Framework, this is the document that drives the whole thing. It's the way that we collaborate and cooperate. It's a very interactive process. I mentioned the 2010 Framework we came out with. This is the

brand-new 2011 Framework that was announced by the administration in December. It's an interactive process. We're coming out. We're listening to you, the public, the industry. We are incorporating your ideas into what will make this a better document.

Currently there's 42 short- -- and I shouldn't say short- and long-term -- there's 42 action items now in the Framework. I'm going to briefly cover a few of the most exciting ones, and I'm looking forward to, in the coming year, to hopefully be further developed.

One of things we are going primarily through the Army Corps of Engineers, we are using environmental DNA as an indicator of where Asian carp might be. Now, the tool isn't refined yet. When we find Asian carp DNA in the water, we don't know if that means that's a live fish, a dead fish, if it's something from a sewage outfall. We are going to recalibrate that tool in 2011. But that's a really good tool that we're using to try to track the leading edge of Asian carp.

We are also looking at innovative

commercial fishing and netting. We believe that our existing electrofishing, netting, and seining are effective, but maybe there's some more innovative ways that we can come up with to not only control Asian carp below the barrier but above the barrier as well.

There's, again, many ongoing things that we're looking at. We need to determine risk assessment: How at-risk is the basin and the Great Lakes from having Asian carp get established? We are trying to collaborate even more. We are trying to bring in not only -- we brought in our federal and state and regional partners. We are getting Native American tribes involved. We are getting NGOs, both environmental and industry involved. So we are really trying to push forward on everything that we can possibly do to keep Asian carp out.

One of the really exciting things I think that the State of Illinois is doing, along with commercial fishermen, you can imagine Asian carp being a bug infestation. The more there are, the more they proliferate, the more pressure it puts on electric barriers. The State of

Illinois through the Great Lakes Restoration Initiative funding is getting into commercial harvesting of Asian carp below the electric barriers. In essence, removing the population, taking them away from the electric barriers. That Lockport Lock and Dam and it's progressing to the lower pools. They are overfishing those pools. They are taking the Asian carp out.

The State of Illinois, Governor Patrick Quinn, signed an agreement last year with a Chinese entity. They are beginning to start the process of importing up to 50 million pounds of filets per year of Asian carp into China. It's considered a delicacy there. The Chinese waters are more polluted than ours. They are willing to pay a premium for Asian carp.

Again, we have the ongoing work of the Coast Guard. We are very fortunate that the Coast Guard is our partner. Every time that we have to shut down the Chicago lock and dam system for one of our rogue known actions, for electric fishing, seining, netting, health and safety is the first concern, so the Coast Guard is our constant partner. They do secure the waterways

for us and make sure we have, if possible, safe passage of traffic through the waterways.

I talked a little bit about the eDNA surveillance. What this picture shows you is all the different stretches of where we are conducting eDNA surveillance now, again, above the electric barriers. We want to know every potential location where Asian carp might be, and if we are getting that eDNA evidence there, we are getting out with more intensive electrofishing, seining, and netting using our normal techniques to try to find Asian carp.

I would like to close with this: I appreciate your time in listening to me today. I encourage you to go to asiancarp.org, that's the website where we put all of our information up. I appreciate your attendance today. And with that, I'm going turn it back to Kevin I think.

MR. BLUHM: I'm going to turn -- at this point here I'm going to see if the -- Colonel, you want to use the microphone or are you going to try to go without it?

LT. COLONEL BERCZEK: I will try it.

Good afternoon, everyone. Welcome

and thank you for your attendance here today. Just heard quite a bit about the Asian carp, so makes you think a little bit, well, this Great Lakes and Mississippi River Interbasin Study, what is it? Is this another study about Asian carp? No, this is not. This is Asian carp and beyond. This is --

One of the things too that I think comes out of studies like this and meetings such as being held today is the opportunity to have discussion and have dialogue, both of which will serve to inform and educate. And know that every time we come away from this with the questions and the comments made, I learn a lot and I go out and read some more. So I just wanted to share with you a little bit, as an introduction, some of the things here that I have been reading and why this study is significant.

I read a 2004 publication entitled "100 of the World's Worst Invasive Alien Species," and in that it talks about -- it poses the question, "What happens when a species is introduced into an ecosystem where it doesn't occur naturally?" And it further says, "History

is rich with tales of the disastrous outcomes of some intentional introductions, such as that of the Nile perch, which resulted in the extension of more than 200 other fish species."

And I read also from the National Invasive Species Council here, the National Invasive Species Management Plan dated 2008 to 2011, and the opening statement in both their executive summary and the main body of the text says this: "Invasive species inhabit all regions of the United States and every nation. The problem is complex and accelerating. The species of benefit in one area or application may not be an invasive in another. Only a small percentage may become invasive, but even a single invasive species can cause great harm."

Knowing that and coming into looking at efforts that have been done in the past and looking at other areas and things such as the fight, depending on where you are in the United States or the world, with these types of species, I think Congress saw that we needed to have a more comprehensive look at this. You look up here with the study language and the

authorization in the Water Resources and Development Act of 2007 where the Corps was directed to conduct a feasibility study to look at -- and you can see the words highlighted in blue there -- "looking at options and technologies to prevent the spread of aquatic nuisance species between the Great Lakes and the Mississippi River Basins." Says specifically there as well "through the Chicago Sanitary and Ship Canal and other aquatic pathways."

I point that out to you because we will see a little bit, when we started looking at this and trying to understand how to go ahead and execute this study, how we went in and organized to go ahead and build the teams and organize for success.

Kevin mentioned at the start that I'm here from the Chicago District, which falls under one of our divisions, the Great Lakes and Ohio River Division, and we are here in St. Louis, which falls under the Mississippi Valley Division, that is one of the first areas of complexity. The Corps of Engineers sets up its divisions under major watershed areas and now we

have a study that one district is trying to do that spans two of them, two very large studies, and I will show you that on this next map.

And it's not one species. We are to look at aquatic nuisance species. So if there's something that is a nuisance or invasive species in the Great Lakes, we are tasked to study how to keep it there. If there's something as well, in this case here looking at the Asian carp that's moved up the Mississippi River into the Illinois and portions of the Ohio Rivers, that -- looking at ways to keep that here.

The study is 100 percent federally funded, and it is -- as well it's a feasibility study. So these of you that are familiar with how the Corps of Engineers does studies, that's not the first step. We are down at Step 2.

The 100 percent federal funding is another significant piece written into the way the legislation was written, the way Congress wanted us to act. A lot of times in a feasibility study, which this is, we will look for a feasibility cost-sharing partner and look for a local sponsor to help share cost. In this

case here, the study is fully federally funded.

I mention that because when we talk to the timeline in a little bit, you are going to see that this is a lengthy process. There are steps already at the outset of this process that have been taken to try to accelerate and move it along a little bit further.

The GLMRIS study area -- take a look here and highlight -- primarily when we start looking at these states here, the areas of the detailed study area, the brown, the Great Lakes states, and then the darker green upper Mississippi River. When you look at the rest of the region too, the other tributaries that feed with the Missouri and the Arkansas River, there are roughly 33 states that somehow feed and contribute to these watersheds, so that's a massive effort.

And there's a dash line that runs across the top where we start talking a little bit and you see a little bit more when we talk about the detailed study areas. This is the kind of the watershed divide that exists between -- water that lands north of that will flow into the

Great Lakes Basin, water to the south of that feeds the Mississippi River. That portion there, when we start talking about these alternate pathways, remember back to the study language talking about through the Chicago Sanitary Ship Canal and other pathways, that's 1,500 miles of other pathways to be considered and investigated.

What does the study include? We are looking at aquatic connections, looking at -- you see there on the -- including swimmers, floaters, hitchhikers. I have a picture later that shows some pictures, I like to say from fish to fleas. So we are looking at -- that does not include looking at terrestrial or airborne pathways or transfer, does not look at human release.

One of the things where Bill mentioned earlier about the Asian Carp Regional Coordinating Committee, one of the great things about that type of the collaboration and that effort is there are other agencies and other folks involved with that that are looking at those things. They are looking at bait bucket, looking at transfer on boats and trailers and things like that, and those areas as well,

looking at biological controls.

Talking again to the left side of the slide in the green, you can see the locations there I highlighted on the map. This says portions of 31 states. Maybe I was a little lax maybe in counting. I counted one time sitting in one of these meetings that there were 17 states that did not have some color on them, so I just subtracted 17 and came up with 33, but there may actually be 31 states that are really involved.

What are we looking at? Looking at options and technologies to prevent the interbasin transfer of aquatic nuisance. Part of that you will see a little bit later when we talk about what's been done so far is cataloging and identifying those aquatic nuisance species. If you were to look at the National Oceanographic and Atmospheric Association, NOAA, their database for the Great Lakes, you will see over 180 species that are categorized as nonnative or nuisance in the Great Lakes alone.

So which of these are we looking at, which of those have the potential to transfer from one to the other, and how do we control that

passage? Looking to some of the elements as well. Hydrologic separation is something that would be considered as well. This is a feasibility study. It will result in not only a feasibility report with some recommendations that will then go to Congress for legislation to implement, but it also will result in issuing an environmental impact statement.

On the right side there, does not include, you can see some of the areas there compared with the elements. The one thing I do want to point out is the Atlantic Slope and the St. Lawrence Seaway are not part of the consideration of this study, nor looking into pathways through Canada.

The Great Lakes Commission has a study with some other Canadian agencies that are looking at some of these components, and Canada is very much involved through the IJC, International Joint Commission, looking at Canadian pathways and things like that. So that is under consideration, but that's not necessarily part of the scope of our study.

Branching off, looking at the efforts

and how it would make sense to proceed, again, drawing from the authorization, it made kind of an easy break. Through the Chicago Sanitary and Ship Canal, which you see somewhat identified here under that CAWS, C-A-W-S, Chicago Area Waterways, being a primary effort, then the other pathways and those are the other areas and I will have the project managers that are here talk about each of those to help explain what it is they are looking at.

Why is that the primary effort through Chicago? Bill mentioned and you heard it talked about, the artificial connection, the man-made connection of the Chicago Sanitary and Ship Canal, it's the only pathway identified to date that is constantly open and is constantly a pathway, a waterborne pathway.

We mentioned about organizing for success that was part of the strategy, we had to figure out how to do this, how to bring in the right talent, how to set up the leadership and keep everyone involved and gather in those areas of expertise.

And you can just see there a little

bit, the Corps of Engineers, the Executive Steering Committee, a number of those federal agencies, nonfederal agencies, senior leadership as well to make sure we continue talking and understanding what each other is doing and some of the efforts that are coming out of that.

And also then talking to stakeholders. Here it mentions groups and other things, but also the public. We are all stakeholders in this. We all have a stake as to what the outcome of this study provides.

It is a lengthy study, so some of the things that are here, we talk about our strategy to cycle out these interim progress reports. As information becomes available -- there's a lot of data that's out there. There's a lot of information that, as the summaries mature and the analysis matures, would be suitable for release to the public so that we can keep people informed of what the study is revealing and where we are.

There's a lot going on. Bill mentioned with the Asian carp Regional Coordinating Committee and the latest Framework that was issued December that highlights -- I

think's 45 or 46 actions that are funded for effort in this year coming up. So that's a lot of effort going on out there, a lot of other agencies, a lot of focus in talking to invasive species. So we want to make sure that we're adaptable and be open to anything that spins out of those studies, incorporate those into either a control or a new piece of information or an impact or an influence of the study.

And, of course, as all things that we do, we will abide by all legal regulatory guidance in the course of the study.

Again, here is just the study purpose -- again, kind of a repeat a little bit of what we had said up front talking to the authorization -- we are going to look at the aquatic pathways, Chicago Area Waterways is the focus area and then the other pathways is another focus areas.

Here are the pictures a little bit to give you an indication of, like I was talking about, it's everything from fish to fleas and things in between, plants and such.

And what are we going to do? Again,

it talks there analyzing possible aquatic nuisance species control available to prevent that transfer. And to drive home the point, we are including a look at hydrologic separation of the basin.

This slide has a little bit -- it shows the map of when we talk about Focus Area I, Chicago Area Waterway System. I'm going to let Dave Wethington, the project manager, talk to you a little bit and explain this map and I will point some things out as he's talking to them.

MR. WETHINGTON: Thank you, sir. Good afternoon, everyone. Again, my name is Dave Wethington. I'm the project manager for what we call Focus Area I or as you can see above me, the Chicago Area Waterway System.

As Colonel Berczek pointed out earlier, the reason why we are focusing on this area -- and Mr. Saffran will talk a little more about the other pathways -- is because the Chicago Area Waterway System is the only open continuous and therefore the highest risk potential pathway for aquatic nuisance species transferring between the Great Lakes to the

Mississippi River Basin or vice versa, from the Mississippi River Basin to the Great Lakes Basin.

I want to spend just a couple minutes kind of outlining some of the issues and concerns and problems that we have with the Chicago Area Waterway System. The map above me, you can see -- along the shore of Lake Michigan, you can see the Numbers 1 through 5. And those points, 1, 2, 3, 4, and 5, are the points at which the Great Lakes Basin and Mississippi River Basin have the opportunity to mix, to interact.

What's unique about this system is that, like the prongs of a forks where there are five prongs representing each one of those five locations, they all flow down into a single waterway system, which is the Chicago Ship and Sanitary Canal, that is the handle of the fork. You can see on the map above me, Number 7 is where we located the electric barrier disbursal systems.

So that's why we have chosen -- the Corps of Engineers has chosen that place to locate current aquatic nuisance species controls for the Asian carp specifically is because we can

control all five points at that single point downstream.

Another thing I like to point out about the Chicago Area Waterway System is a lot of times we hear advice from stakeholders that we need to immediately close the locks and that would basically stop the Asian carp problem. I just want to point out that Numbers 1, 2, and 3 above -- I'm sorry -- 1, 2, and 3 are locations that are basically structural controls that are in the waterways. Number 1 is the Wilmette pumping station, Number 2 is the Chicago Lock, and Number 3 is actually controlled by that red dot, Number 6, which is the TJ O'Brien Lock and Dam, so those are three controlled waterways. Now, remember they all flow into the same handle. There's two located within the State of Indiana, the Little Cal and Grand Cal, which have no type of structural controls on these waterways so they remain open under all conditions, all scenarios.

On the left-hand side, is basically an outline of the Corps of Engineers planning process. And we're basically looking at Steps Number 1 and 2 right now, specifying pumps,

opportunities. We put together a team of experts, not just from the Corps of Engineers, but from other federal agencies, state agencies, nongovernmental organizations, to help us identify what are the problems here. And part of the reason why we are here today speaking with you and, more importantly, listening to what you have to say to us is that your thoughts, your ideas, your concerns are important to how we scope and how we shape the path forward for this study.

We will also be collecting a large amount of data over the next about 12 to 18 months, and the purpose of that is to identify what are the waterway uses in the Chicagoland area or throughout the entire Great Lakes and Mississippi River Basin. And something you might have heard a lot about is commercial navigation, I'm sure there's commercial navigation, but the Chicago Area Waterway System specifically has a number of other uses, they include, but aren't limited to, recreation, industrial water supply, water discharge -- about 70 to 80 percent of the total volumetric flow of the Chicago River is

made up of the municipal discharge, the wastewater discharge, from the Chicagoland area.

The Chicago River and Chicago Sanitary and Ship Canal also play a significant flood risk management role for the City of Chicago and surrounding suburbs. The Chicago Ship and Sanitary Canal acts as a passageway for storm waters. And when we have significant rainfall -- it doesn't happen very often, maybe every 2 to 5 years, there's a storm of significant magnitude that we must open that lock at Number 2 on the map above to you allow water to backflow back into Lake Michigan to alleviate the potential flood risk, both overbase flood risk in downtown Chicago, as well as sewer backup throughout the entire Chicagoland area which could have the potential to affect millions of residents and businesses and industries throughout Chicagoland area.

So what we are going to do is we are going to identify what all those waterway uses are and look at, when we implement aquatic nuisance species controls, such as the barrier system, such as looking at the potential for

hydrologic or physical separation, what kind of impacts will there be to the existing waterway uses. Part of our direction within our Congressional authorization and our guidance from our headquarters is to look at mitigation. So if we have adverse impact to those waterway uses, like flood risk management, what can we do to mitigate those adverse impacts.

As was mentioned before, we are working in full collaboration with all other federal agencies, including US Fish and Wildlife Service, USEPA, NOAA, I could go on, other Native American tribes, and other nongovernmental-type organizations.

With that, I will turn it over to Mr. Saffran is going to tell you a little bit more about our Focus Area II. Thank you for your time and attention.

MR. SAFFRAN: Thank you, Dave.

When we went into the GLMRIS, there was a lot known about the Chicago Sanitary Ship Canal. The first fish barrier was built in 2002. The second barrier had been authorized and was in construction. There has been significant

investments in preventing aquatic nuisance species transfer through that location. There was a lot known about that.

But the other three words in that authorization, "other aquatic pathways," there was very little known about it. And last year in the beginning of the summertime, General Peabody, who is the commander of the Great Lakes and Ohio River Division challenged the division team to, in a period of about 60 days, do a preliminary study that would identify all of the other potential aquatic pathways that either exist or may form across the basin divide between the Great Lakes and Mississippi River Basins.

As Colonel Berczek has already said, that's about a 1,500-mile-long divide, and anybody that's familiar along with that divide is, it's very, very flat topography. There's -- it's not a very distinct divide. It's not like the normal continental divide that you would normally see through a mountain range. Anyway, that was a very tall order.

The first thing we did was we went to the Asian Carp Regional Coordinating Committee

and folks like the USGS and Fish and Wildlife Service stepped up and identified key biologists that could help us right away to get started on what is the universe of species that we had to consider. They helped put us in contact with their state water science centers with the USGS and all the state DNRs where we also got their very best water science folks who really knew the conditions in the local area.

Long story short, we reached out to the best experts that we could find within the federal community as well as within the state government agency and then also down to the local agencies where we had time to do that. And by doing that we were able to form a team that could quickly assess and identify locations. We identified a total of 36 locations for this study where it appeared there was a reasonable probability that the pathway either exists or could form from a significant storm event.

When we went through the risk characterization process to determine if there were any other locations out there that pose a significant risk for transfer of aquatic nuisance

species, and specifically focusing on Asian carp because, again, General Peabody's primary concern is we have got these huge investments in the Chicago Sanitary and Ship Canal, what happens if we are getting outflanked and the carp finds its way into the lakes through another pathway.

So the big focus on the other pathways was to identify and inventory the location and to do a preliminary risk characterization to determine if there was any really significant risk.

Well, we found 18 locations where we determined that there was a significant risk, but one of those really jumped out, and it's already been discussed just a little bit here today, which is the Eagle Marsh, which is in Fort Wayne, Indiana. That's fairly special condition that occurs there. But you have two rivers, the St. Mary's and the St. Joseph's, that come in from the south and from the north into the town of Fort Wayne and then they formed the Maumee River, which flows to the northeast into Lake Erie.

Well, when those two -- when you have

a significant rainfall event, anything bigger than the normal event you would expect in any given year, so at least once a year or about once a year, you generally have flow where the waters in the Maumee River Basin from the St. Joseph's and St. Mary's get so high that they backflow across into the Wabash River Basin and cause a flow across the divide.

There was a 2009 flood insurance study that we had available at that particular location and it identified that the depth of the water column across the divide from a 10-year storm event, the largest storm you would expect to occur in any given 10-year event, it was 4.5 feet deep of water. The USGS concluded -- well, that circumstance, with the combination of collections and observations of established populations of Asian carp, silver and bighead, in the Wabash River about 25 miles downstream, led to a very quick meeting on-site where USEPA, USGS, the Indiana DNR, National Resources Conservation Service, a nongovernmental organization called the Little River Wetlands Project, local county surveyor, we had all the

right people in the right room who had the right authorities and right knowledge and right information and we basically discussed the issues and what were our options, what could we do. And everybody agreed that we needed a long-term solution, a permanent solution, for this location, but that it would take some time to work that out.

We jumped to the type of barrier that was used in the Chicago Area Waterways to separate the Des Plaines River from the Chicago Sanitary and Ship Canal, and said, yeah, that is something -- the Indiana DNR stepped up and said yeah, that's probably something we could build and get in place very quickly.

Long story short, some federal money became available. Less than 60 days from the time we had that meeting there was a physical barrier in place there, and it does show the kind of speed and things that can happen, I think, under the GLMRIS and under this collaboration that we have among all the partner agencies in here right now for the right agencies to step forward and do the right thing at the right time.

And so we have a temporary fix at Fort Wayne right now that's a chain link fence on steroids that's protecting from adult Asian carp being able to make the migration, that 25 miles, and go across the basin divide the next time we have a really significant storm event. We also are in the process right now of preparing a draft feasibility study for a permanent solution for that location and that report is expected to be done this year.

Last but not least on the other pathways is that we are evaluating the other 17 locations right now. We have got a draft study plan out that, within the federal and state agencies that are contributing to the effort, doing their review. We will start in earnest later this spring in completing the risk characterization at those other locations, and, again, before the end of this year we anticipate having a final report on that.

LT. COLONEL BERCZEK: Henry Ford said "nothing is particularly difficult if you break it down into small jobs." So you just heard Dave and Mike both talk a little bit about their small

jobs.

So what's been done so far? You have heard Bill talk a little bit about some of the efforts with the Asian Carp Regional Coordinating Committee and we have talked a little bit about where we are with the study from the authorization and this talks a little bit about the timeline, receipt of funds going through till we got to the point where we established the work plan. Again, anything like this we got to identify how we are going to do the work before we can get out and start doing it. You can see down on the left-hand side where the timeline has been leading us to where we are here today.

What's been going on? You can see on the right-hand side, the simultaneous execution. We haven't just been sitting still waiting to develop plans and get to this point. There's been a lot of work being done to look at the data out there, identifying the nuisance species. You have heard Mike's story there with Eagle Marsh and going ahead and adjusting and making sure that we continue to move wherever we could and implement whatever possible.

So what's next? This is the project schedule. And if you see an asterisk up there, that is the best-case scenario. Kind of look at best-case scenario, making sure that the funding is available as needed to go ahead and identify the data that we get and if there are other projects that we are looking at other agencies and other folks to provide that they arrive in a timely manner and that nothing really shows up to go ahead and knock us off track.

That being said, you can kind of see looking to where the big black star is there is a recommended plan -- a draft recommended plan sometime in the fall or winter of 2014.

You can see the other pathways focus, the bar across the bottom. Mike just talked about what his schedules are, and you can see the block on the right-hand side when he's talking about having his report out to start looking at what could be done along those lines and get something for implementation. But that's a long time to wait.

So what's going on? How do we know where we are going and what's happening since?

And you see we have those little arrows with projects spinning out.

The other thing I want to mention too, back to this Asian Carp Regional Coordinating Committee and Strategic Framework. We are not just waiting for the study to go ahead and move on this. Bill mentioned about all the other agencies and what's still going on. We are still operating and maintaining the electric barriers. We are still going ahead and looking at other measures that could go ahead and enhance the effectiveness of those barriers and we have other agencies looking and other types of controls. So we are not just sitting around waiting for a bigger study to look at -- look broader than that single issue. But all those other things are going on. They are not waiting for this study to inform those actions.

What are we talking about when we talk about interim projects and updates? Dave talked about identifying the waterway's usage. Well, once we go ahead and identify that and the value of some of those uses, either navigation, commercial, or recreation, looking at emergency

response efforts, looking at the fisheries. As those reports and that data is available and is mature enough to go ahead and release for review, we will do that. That's the kind of thing that will keep people informed, identifying what we have been looking at and what we have found out.

One of the keys, of course, as I mentioned that at the very beginning about being adaptive and flexible a little bit. We do need to continue to get input. That's what we are here today to hear.

I'm looking at my watch here. I think I talked a little longer than I like because this is really your time to tell us what you think, help us to focus the study. But you see here a little bit too we are relying on a lot of other folks for these types of input, areas of expertise, that don't necessarily fall in our realm, and that's what's going to keep the study moving along is those other organizations and agencies that have focus areas or subject matter experts feeding us that information so that we can go ahead and process it through.

This here just shows the list, and

you have this information in some of the data that we have provided. And you can see where we are heading next, heading down river a little bit more in the next few weeks, and then for some reason we are turning back around to go north. We had a big snowstorm last week that kind of knocked out a good portion.

Moving to Chicago a year and a half ago, I was told our snow plan for the Chicago District what happens is people say if it snows, you go to work. It snowed, we didn't go to work. I think that's the first time the Chicago District has not gone to work in a snowstorm. It was a rather significant event. That being said, we couldn't go anywhere either, so that was the day we were supposed to go to Ann Arbor the day after.

Plenty of efforts to go ahead and get inputs and continue this dialogue and discussion. Like I said, we have some of this information, so I'm not going to belabor the point, but you will see this, a little bit of brand recognition almost, this GLMRIS thing, this business card, this little button. If you go to the Chicago

District website, you go to those other websites mentioned, you will see a button that looks like this card. All you have to do is look at this card and you will know how to do that and how to get in touch with and keep up with what's going on. If you are technically inclined or social media inclined, you see a couple of other options there to keep up to date with what's going on through either Facebook or Twitter.

I thank you for your time and look forward to your input and comments.

MR. BLUHM: Okay. Excellent. Thank you, sir.

Well, for about an hour now you have heard a little bit about what we are working on, what we plan to be working on, and where we go from here. At this point, though, I would like to make sure we turn the meeting over to you, the audience, and hear what you have to say for us given what you have now heard and what you have done for the study.

Before beginning, I want to make sure that you understand our website is a very good source of information for additional study and

the Corps will use the GLMRIS study e-mail list to give you any project updates and any other future information. So if you would like, you can go into the website and sign up to be part of that electronic distribution in the future. Any additional documents that we have will be added, such as any other additional public involvement opportunities and any other important news or events for GLMRIS. The website itself can be found on any of the -- or several of the handouts that you received as well as the little card that the Colonel was just mentioning. And then again, the social media aspect is definitely another way to stay informed.

Now, moving into the oral comment period for the meeting, for any individuals that have indicated on their registration form that they would like to make a brief formal statement will have the opportunity to do so. If you are going to ask a question in addition to making a comment, we would ask that you manage your time so that the comment, question, and response can be allowed in that time frame. And the Corps staff here will answer any questions that are

answerable.

Typically at this point if we had a larger crowd and more people signed up, I would go through a series of ways that we can manage our time and I have got some visual slides that we can use, but looking at what I have got in my hand here, I have got seven people that have registered to speak.

And if at all possible, if it's agreeable with the group, I would like to propose a slight change to our agenda. Our agenda calls for a strict three minutes per person and following that, and as long as nobody has an objection to it, I would like to run a little bit looser and allow people a reasonable amount of time to make your comment to us. If anybody has a problem with that, though, because that is what we have recommended and advertised, I would like to see a hand if you object to that proposed change. So if you object to that, if I could see your hand now, we can definitely follow that, but if not, I really think, in value of everybody's time and knowing that we only have seven people signed up, I would like to just be a little bit

more flexible and allow a reasonable amount of time for that.

I didn't see any hands, so we will give that a try, and I will let you know if it seems like it's not working, but it has worked for us in a lot of our other meetings that were a similar attendance.

Also want to let you know that all forms of comment received during the scoping period will be given equal consideration, so you do not have to get up in front of the crowd to have your comments heard. Anything that's been written down, e-mailed in to us or mailed in to us, will be all considered equally.

Now, I would also like to mention that we have a stenographer with us, she's located on the other side here, and she will be directly recording all comments that we have. For that, we want to make sure that you all use a microphone so that it can be easily heard for herself as well as everybody here on the panel and the audience. The second microphone is located on that side, and what I would ask is when I call your name, if you can go to that side

of the room, grab the microphone, and then help us, make sure we understand -- if you can say your name over again and if you can give us also any organization or affiliation that you represent and then for statistical purposes your ZIP code, if you could give that to us, that would be greatly appreciated. We would ask that you speak into the microphone. I notice there's not a stand over there either, so you will probably have to do a little bit of an impromptu hold, kind of like what we are doing here as well.

Also just keep in mind you can talk slowly, we don't have the timer going on you, and speak slowly into the microphone so we can all hear you. Okay?

I'm going to start with the list of people that have a blue card that have preregistered and asked to speak.

Our first person that checked in today was -- and I do apologize if I mispronounce her name, I'm very, very poor at this, but that's part of the reason why we ask you to restate your name. So the first person, number one, I have

got Glynnis Collins. Second up will be Christine Favilla. So, Ms. Collins, if you want to go to the microphone and start us.

GLYNNIS COLLINS: Glynnis Collins. My ZIP code is 61820.

Good afternoon. My name is Glynnis Collins, I'm executive director of Prairie Rivers Network. We are Illinois only statewide river conservation organization headquartered in Champaign, Illinois.

Is the sound okay?

MR. BLUHM: It's pretty weak. I think I'm going to give you my microphone, and I will see if we can get somebody from the building here to help us out.

GLYNNIS COLLINS: I'm glad we have the lenient time policy so I can thank you all for all your efforts to date that you've shared with us today. We all really appreciate that.

And thank you very much for this opportunity to provide input on the Great Lakes and Mississippi River Interbasin Study or GLMRIS. I appreciate the extensive public comment period that you have elected to provide.

Much of the press conference on GLMRIS -- press coverage on GLMRIS so far has been on the Asian carp threat to the Great Lakes and understandably so. The monstrous bighead carp and the flying silver carp make great fare for headline photos and YouTube video clips. But at this meeting we are here in the Mississippi River Basin, and it's important to look beyond carp and I was delighted to hear you use that phrase today.

As you know, implementing the end result of GLMRIS isn't going to help the carp problem here. Our basin is already infested with Asian carp, and it has been for years. In Illinois all of our rivers that can be infested are, with the notable possible exception of the upper reaches of the Illinois River and the connected Chicago Area Waterways.

So here especially it is important to highlight that successful completion of GLMRIS isn't just about Asian carp. It's also about the zebra mussel that has infested our basin after migrating here from the Great Lakes via Chicago. It's also about the quagga mussel, the zebra

mussel's more evil cousin that many scientists believe is poised to follow the same path. It's about many others. We need our great river to be protected from an endless procession of aquatic invaders that an ongoing connection with the Great Lakes Basin means.

With that primary goal in mind, I submit the following comments regarding the scope and timing of the GLMRIS study:

Number 1, the study should focus solely on options and technologies available to prevent the spread of invasive species through the waterways as mandated by Congress.

Number 2, physically separating the basins, often referred to as hydroseparation, is the only 100 percent effective way to achieve this goal. Lesser measures, such as chemical or acoustic barriers, will only delay the inevitable and should not be considered in this study.

Number 3, the portion of the study focused on Chicago should be on the fast track aiming for completion within 18 months. Although Asian carp are not the only concern, they are the most immediate threat, and every month of delay

subjects the Great Lakes to the real possibility that we will have acted too late.

Number 4, to speed up the Chicago portion of the study, efforts should focus on comparing costs for permanently separating the basins at several well-chosen locations, identifying the least costly option. A full benefit/cost analysis is not required because the benefit, preventing the spread of aquatic invasives, is identical for every option.

Finally, we urge the Corps to engage with the Great Lakes Commission Chicago Waterways Study. With similar goals, the processes and products of both efforts will only be improved through open, constructive collaboration.

Thank you very much for your consideration.

MR. BLUHM: Thank you, Ms. Collins.

Second up I have got Ms. Favilla, and third will be Brad Walker.

CHRISTINE FAVILLA: Christine Favilla. ZIP Code is 62002.

I want to thank all of you for the opportunity to speak because we know that you

have taken on this incredible task and it's not an easy one and we know you are taking our comments to heart and we appreciate that.

Time is of the essence in the effort to save our Great Lakes from the Asian carp. I mostly going to be speaking about the Asian carp in my comments.

We need a permanent solution that ends the need for chemically killing fish in the Chicago River system and protect our Great Lakes forever, and we have months, not years, to plan for that solution.

So while Congress directed the Army Corps of Engineers to study ways to prevent invasive species transfer, we were surprised in one of the November Corps planning documents that instead describes the study's objectives as the prevention or reduction of the risk of invasive species transfer. Particularly relating to Pathway I, researching risk reductions we believe will likely divert resources from quickly determining how to achieve prevention. And so physically separating the Great Lakes from the Mississippi would achieve that, and there's very

likely no other alternative to achieve complete prevention in Pathway I.

Severing the artificial Mississippi River-Great Lakes connection would require modifications to the series of canals and quite a bit of modification for the canals, locks, and the channels or the cause. The CAWS has allowed for the movement of goods through the city and the region, and we are aware of that. We are also aware that it has diverted massive amounts of water away from the Great Lakes, it's allowed the city to postpone a sustainable solution to deal with its sewage problems, in addition to serving as a virtual expressway for invasive species in both directions.

If done right, however, we believe that building a physical barrier between the two waters could involve investments in new infrastructure in the Chicago are, not only closing an invasive species pathway, but also enhancing Chicago's transportation, sewage treatment, and flood control, creating jobs and improving water quality, tourism, and recreation, which are other uses of the water system.

An Asian carp on Lake Michigan's doorstep is not going to wait 5 years for this study to be completed. The Chicago portion we understand is not predicted to be completed until mid-2015. That's nearly 5 years away. The Corps must acknowledge the urgency of finding a permanent solution, condensing the time frame, and producing final results for the Chicago portion of GLMRIS within 18 months rather than mid-2015.

To reduce the time frame, we appreciate that you have been doing a complete literature review and we hope that you continue on that path. We hope that you do not waste time or money by repeating work that has already been done or is currently in the process.

I wanted to highlight two studies that are currently in process in hopes that you will be able to look at them. The risk assessment. At least two comprehensive reports describing the likely impacts of Asian carp on the Great Lakes have already been written. One was from US Fish and Wildlife Service and one was from Fisheries and Oceans Canada. And I have the

URLs for those as well, as I'm sure you probably already do.

Another study that could hopefully avoid some time delays is the wastewater and transportation study that's being undertaken by the Great Lakes Commission and the Great Lakes St. Lawrence Cities Initiative. This study they are conducting is on water management and transportation alternatives available after a physical separation of the Great Lakes and the Mississippi River would occur.

We also believe that -- I say "we." I don't think I said who I was with. I'm sorry. I'm the Three Rivers Project Coordinator for the Illinois chapter of the Sierra Club. We work in Madison, Jersey, and Calhoun County, so I do incorporate three of our greatest rivers in the United States and definitely the confluence of one that has a severe Asian carp interest.

So we really hope that you can create opportunity for regular discussion forums during which the public can interact with your technical advisers and staff, beyond this NEPA process, although we are very appreciative of the many

different meetings that you have already heard.

Thank you so much for your time.

MR. BLUHM: Great. Thank you.

Next Mr. Walker. Following Mr. Walker will be Lorin Crandall.

BRAD WALKER: Name is Brad Walker. I'm a staff member with Izaak Walton League. My ZIP code is 52804.

The Izaak Walton League is a nonprofit organization of hunters and fishermen established in Chicago in 1922 with the mission to protect the soil, water, woods, and wildlife of North America.

At our 2010 convention that was held this past summer, the members passed a formal resolution in favor of the hydrological separation of the Great Lakes from the Mississippi River system, the object, of course, being to close the primary avenue for migration of Asian carp into the Great Lakes and also that avenue for the transfer of other aquatic invasive species between the two great water systems.

The clock is ticking, and we know that time waits for no one, not the government,

not the Corps of Engineers. It is likely that the problems will be resolved by the hydrological separation of the Great Lakes from the Mississippi River, therefore this separation must be addressed quickly and efficiently.

We believe that enough studies and data collection have occurred to understand the problems associated with flooding concerns, barge traffic concerns, and tourist boat excursion business issues to proceed. We acknowledge that there will be financial hardships, and these must be correctly understood, with fair compensation to those affected until the individual concerns are resolved.

To summarize our concerns, the value of the assets that are at risk are far greater than the cost of physical separation, significant as that may be, given the present and long-term value of our Great Lakes. Any efforts to do physical separation must include mitigation to those with long- or short-term economic losses that can be verified.

We believe that taking the position that we cannot move to separate until Asian carp

in viable populations are verified is unacceptable and by then it would be just simply too late. We are where we are because of three-plus decades of failed leadership. Continuing as we have with legislative gridlock, lawsuits, and debates is not acceptable. We do need to urgently come together as a national and regional community to move beyond conflict, move beyond win-loss boxes based on political connections and the influence of dollars and move into the light of prevention that embraces the reality of our opportunity and threats in a comprehensive way.

I want to thank you for allowing me to offer this perspective on behalf of the Izaak Walton League and our Great Lakes community. Thank you.

MR. BLUHM: Thank you.

Next, Mr. Crandall, and then following will be Tim Robinson.

LORIN CRANDALL: I am Lorin Crandall. ZIP Code 63130. I'm here on my own behalf and also representing the Missouri Coalition for the Environment.

This is a relatively new issue to me, at least the GLMRIS report itself. Obviously I have been aware of Asian carp for a little bit, but I wasn't really informed on what this study is all about.

And so I guess I could recite some comments based on, you know, do we need to do all these studies or, you know, isn't it pretty obvious that separation would be the most effective way to fix this problem, or, you know, I could say something about living in St. Louis and having an issue with Chicago dumping -- what did you say, it was 70 percent of the flow in that river is Chicago's -- that's combined stormwater and sewage I assume. Do you know what percentage sewage it is or what percentage stormwater?

MR. WETHINGTON: I do not.

LORIN CRANDALL: Well, I have a problem with that, so this might be a great moment to not only fix this invasive issue but also maybe fix the issue with dumping all that raw sewage directly into the river, which seems like it could be a clear-cut violation of the

Clean Water Act to me.

But I do have some questions, since I'm not super-informed on this issue. And one of my questions is: If breeding populations are found in Lake Erie or Lake Michigan, will this study continue? During the course of this study being done will it continue if you fail because of your not getting it done in time? Does anyone have an answer on that one?

LT. COLONEL BERCZEK: Yes, the study will continue. The study is -- we are charged to look at all aquatic invasive species, not just the Asian carp. We have already, through the Asian Carp Regional Coordinating Committee, responded to finding a carp or the environmental DNA where the application of rotenone fish, it inhibits their ability to process oxygen, so it's nonselective, but it has -- in the area where we had an indication that there might be Asian carp, there has been a rapid response action undertaken to go after that carp, that individual, or that species, whatever might be there.

LORIN CRANDALL: Well, I mean, but I -- obviously I'm referring to breeding

populations. I mean, when it's gotten to the point where it is where it is in the Mississippi right now, or in -- I guess Glynnis pretty much said all the rivers in Illinois more or less. So is that -- I mean, if it reaches that point, the study still continues despite the fact that you could reach a 50, 60, 70 percent bio mass carp and you would basically be doing a pointless study because it would already have failed but it would still continue. I mean, it seems like there's a real administrative gum-up right there that's not responsive to what might really happen on the ground.

MR. WETHINGTON: As Colonel Berczek mentioned, the purpose of interbasin study is to look at more than just Asian carp. There's already a number of ongoing activities addressing the control, the prevention, the spread of Asian carp into the Great Lakes Basin. That's a separate focus.

The focus of this study is to look at all aquatic nuisance species. As other commenters have mentioned, that includes quagga mussel, zebra mussel, or looking, you know, 5,

10 years ahead of what is going to be the next Asian carp or the next quagga mussel.

That's why, to answer your question, no, we would not stop. Just because there was a potential breach in the barrier, you know, we would still be looking for other potential aquatic nuisance species which we could prevent the spread of between the two basins.

I just also want to make a clarifying statement to what you mentioned earlier. The City of Chicago -- I'm not a representative of the City of Chicago, but the wastewater is treated wastewater. It's not raw sewage.

LORIN CRANDALL: So it's not from a CSO, a combined sewer overflow?

MR. WETHINGTON: Could be.

LORIN CRANDALL: So that would be raw sewage during rain events. Because in St. Louis we have CSOs, and we dump, like, 30 billion gallons of combined sewage and stormwater into the river, so that's essentially raw sewage that's been treated.

MR. WETHINGTON: The number that I stated, 70 to 80 percent of the total flow, is

treated wastewater.

MR. SAFFRAN: I would just like to take one other part of it on.

The Asian carp Regional Coordinating Committee has 42 ongoing actions right now that are designed to prevent the Asian carp from getting into the Great Lakes, so there's a very significant effort that's going on in parallel with the GLMRIS study that's focused specifically on keeping the Asian carp out. And the electrical barrier system is the big component of that, as well as eDNA and other types of monitoring techniques that are being used. But it's not like --

LORIN CRANDALL: I'm sorry. I didn't mean to cut you of off there.

From my perspective, I see things being over-engineered to the point where you are engineering the next solution, which presents the next problem, and you're engineering the solution to that and that's the next problem, and then you engineer the solution to that. And so I think a lot of people who stand where I'm standing and look the direction I'm looking say, you need to

unengineer that hydrologic connection. That is the answer.

We could have these -- are they electrical fences? I don't know if you had a picture up of them or not. But that sounds like something that's not really very sustainable. I mean, how much power do those use? How does that work? Is that something that will have to be maintained forever? Will that just be one more project that perpetually has to be maintained and operated for as long as Asian carp are a problem?

MR. SAFFRAN: There are significant operation and maintenance expense, and there's no doubt about that. And it is more of an interim solution than it is potentially a permanent solution. But we have to finish the study. We have to look at all the options and technologies and do the economics.

LORIN CRANDALL: But we do know that the -- disconnecting the hydrology will make it impossible for the carp to migrate into Lake Michigan.

MR. SAFFRAN: To swim on their own. There are a lot of other vectors that could allow

them to bypass any type of hydrologic separation. There's bait bucket transfers. There's lot of other vectors for the spread of nuisance species that are possible.

So the answer is, you know, hydrologic separation should keep them from being able to swim across the basin divide. But is that the only way they can get across the basin divide? The answer to that a clear no.

LORIN CRANDALL: But it's the most likely.

MR. WETHINGTON: I don't know if I could say that or not.

LORIN CRANDALL: Okay. All right. And then do these electrical barriers -- again, I didn't know if you guys put a picture of them up or not. I don't know what they look like or how they work. How do they work when we get record floods?

LT. COLONEL BERCZEK: The electrical barriers, there's a series of electrodes we take and pulse DC current into the water. The electrodes go along the length -- the width of the canal, and they are spaced -- there are a

couple different arrays. One array has lower voltage and then the next array upstream is a higher voltage. And they are set right now -- it's a combination of voltage and frequency and duration of the pulse. And they are set to go ahead -- and the fish that come into the higher voltage array will be stunned and they will float back downstream. So it's a --

How do they work in floods? The same as they work in normal. They provide 2 inches -- 2 volts per inch at the top of the water column. Further down will be a little bit stronger than up at the surface to maintain that 2 volts per inch at the higher level.

LORIN CRANDALL: What would be like the yearly operational cost on this array setup, including power conception and all that? I mean, how long have you been doing it?

LT. COLONEL BERCZEK: We would have to look at the records on that because I couldn't go back and tell you right now. We have had -- we have been constantly managing and changing the system a little bit and modifying and looking at how to make improvements with it, so I don't know

that I have that. I could look through a certain month or a certain time period and say, "Here's an average," certainly we would have that information, but I don't have that readily available today.

LORIN CRANDALL: So we couldn't be able to compare the cost of those to other alternatives, like perpetuating those for the next 20 years versus something else?

LT. COLONEL BERCZEK: Sure, we could. That would be part of the study to look at the cost. We would have to look at -- part of what we have to look at -- it's obvious we can do this separation if we only consider that. You can say that, I can say that maybe individually, but when I'm tasked to go ahead and do a study, I can't do that and say, "Here is the solution, Congress. Here's what it costs to do," without looking at the options and technology. The electric barrier -- part of that authorization was to look to existing structures, but that told us to put a control structure, look at some sort of a structure to put in the water, either on its own or tied into existing structures, like maybe a

lock or another facility. That's how we got where we are. In this case here we have been told to look at the feasibility study looking at the range of options that could be done, hydrologic separation obviously being one of them.

But part of our study is we also have to look at and analyze the current and future uses of the waterways, the current and future aquatic nuisance species that could become under consideration. And so what are those technologies today? What are those technologies that could eventually be devised?

So it is a little bit more in-depth than me just saying, "I want to do this, and here what's it takes to do that." We will have to look at that. We are being urged to consider hydrologic separation. That is also one of the things that we have to consider as part of that. So that will include those costs. It will also include what will be the impacts of that type of an operation and then what would be mitigation measures to take care of that. So it's not just "how do I turn the water from going this way back

to that way."

I would have to look -- I do remember that it took a number of years to build that canal. I don't know how long it would take to reengineer and reverse that water to go back in that direction. So there's just --

That's why we do things like this. You are bringing up your comments and asking your questions. When we talked in Chicago about modifying perhaps the way that we -- the manner in which we operate the locks, it might be, from our standpoint, saying, "Well, here's the through put, here's the tonnage, oh, here's the impact," but then a guy in Indiana says, "The only place that I ever get my one material that is singular to my business is these three times a year and it comes to Burns Harbor, so you guys don't even track what I get and what's significant to me." We didn't know that. So that's why we do this. Those things have got to come up so that we can consider and fully evaluate all the impacts.

LORIN CRANDALL: What type of thing -- what type of considerations would come up that would make it worthwhile to sacrifice the Great

Lakes?

MR. WETHINGTON: The study is going to look at all economic, social, and environment potential impacts for implementing aquatic nuisance species control based on values of fisheries, based on values of commercial navigation, based on values of flood risk management. When you talk flood risk management, you are speaking of human life and human safety. So we will weigh all those options as part of this feasibility study and not predetermine a solution because we, as the federal government, we're stewards of your dollar and everyone's taxpayer dollars and so we must remain unbiased in how we implement this study, how we move forward.

And so we will take on all this information and, you know, go through the principles and guidelines that are documents that outline how a federal study is implemented, how we coordinate with other federal agencies, with nongovernmental organizations, with stakeholders such as yourself, and how we come to that recommendation, which will go to Congress and

Congress will have the ability to look at it -- it will go through the Secretary of the Army to the Congress and have the ability to authorize and appropriation for that recommendation.

LORIN CRANDALL: Who is accountable if you fail? Who is accountable if we fail? Who loses their job? Who in Congress has to pay for Lake Michigan? Who has to pay for Lake Erie? I mean, is there an impetus for this to get done before the carp get there? Is there any provision that says that we must expedite this? You know, when we reach this threshold and the problem has become too immense, we have to do a disconnection, we have to do something immediately. I mean, is that pressure there or is this just sort of a paper stacking, research, you know, we are going to build up a bunch of --

MR. WETHINGTON: At the very beginning of Colonel Berczek's presentation, he put up the Congressional authority. What we do, as a Corps of Engineers, we require authority and appropriations, two things we need for us to do anything. What you read up there is what our authority is, to look at the prevention of

transfer of aquatic nuisance species between the two basins through Chicago Ship and Sanitary Canal and other pathways. That is what we are doing.

LORIN CRANDALL: I just like Lake Michigan.

LT. COLONEL BERCZEK: Well, no. I think the objective is clear with the study too. The purpose is not to sacrifice the Great Lakes. But I think -- I know the big fish is still in the room, and that's what we keep focusing on. The fact that we are coming and asking the questions all about this study and are we going to let the fish get through -- the Asian carp get through with this study, this study is beyond that. This study is looking at the flea. This study is looking at the duck weed. This study is looking at the viruses.

The Asian carp, we are actively engaged still with that with all those issues that Bill mentioned in the Asian Carp Regional Coordinating Committee. We are very much involved with improving the barrier system and looking at that. We are testing now today with

that next version -- not the next version but the other component of the barrier on how to safely pass through. That is, you know, 5,000 volts DC in the water. How do you get through that safely? Okay?

So there's a lot of things that are still going on. We have looked at and have some recommendations going on how to make sure that barrier is more effective. Bill mentioned about looking at -- we found that there could be a potential overland connection with flooding from the Des Plaines River and the I&M Canal through the Chicago Sanitary and Ship Canal. They don't exist now because we put up barriers to block that.

So we are not sitting here waiting for this study to inform our actions on Asian carp. Those are still ongoing and we are still working on that on a daily basis.

So your question about, well, what if this study fails --

LORIN CRANDALL: It's just a study. It doesn't have any accountability.

LT. COLONEL BERCZEK: -- of this

study to prevent Asian carp. I have got 45 other things I'm helping other agencies work with to prevent Asian carp. This study is looking at more than that.

So I can appreciate your concern; we all share that concern. But this is looking at, okay, what's out there that's not swimming around that we can see jumping and makes a good YouTube video, what's something that's been out there a number of years that we need to go ahead and make that doesn't transfer and beyond that.

So I do thank you for your comments. They are good questions.

LORIN CRANDALL: Thanks for giving me a chance to talk. Keep up the good work.

MR. BLUHM: Thank you.

Next we will hear from Mr. Robinson. Following will be Michael Luhr.

TIM ROBINSON: I really did set mine up for three minutes, so this will go fairly quickly.

My name is Tim Robinson. I'm port captain for American Commercial Lines. We're a towing company. We range all throughout the

waterways. My ZIP code here in St. Louis is 63111.

My company is pleased that the Army Corps of Engineers is following the Congressional mandate to study the range of options and technologies available to prevent the spread of aquatic nuisance species between the Great Lakes and the Mississippi River Basin, including the many pathways. As you spoke of earlier, there's a number of pathways involved with this.

We feel the Army Corps of Engineers must engage industry on a regular basis, at least before each decision point, to ensure the study is taking all navigational issues into account.

My company also endorses the comments from AWO, which will be submitted at a later date.

I understand we talked about here recently about how broad of a scope this really impacts. I understand we have set a meeting up in New Orleans also, and I really appreciate it extending all way down to there. There's quite a few people down there with issues.

That's all I have. Thank you very

much for your time.

MR. BLUHM: Thank you.

Our sixth speaker, Mr. Luhr, and then our seventh one, Mr. Jim Bensman.

MICHAEL LUHR: My name is Mike Luhr with Luhr Brothers, Incorporated, out of Columbia, Illinois. We are a family-owned business for over 60 years.

I want to speak for the AWO as Tim did. I'm going to piggy-back a little bit what he said.

The AWO, which is American Waterways Operators, is an association made of tow boat, tug boat, and barge operators. It's very important they are part of any and all of these studies. Because you talk about fixed barriers and shutting the locks, you are talking about putting a lot of companies out of business and a lot -- thousands and thousands of people out of work, so please include the AWO.

Thank you.

MR. BLUHM: Thank you.

Next we will hear from Mr. Bensman.

JIM BENSMAN: Jim Bensman, 62002.

First, I got a question. In one of your slides you had the authority, and that language seemed quite clear to me where it says "prevent." And when you're dealing with the law, if the language is clear, you don't need to go any further than that. It seems clear to me.

But I'm wondering if you can tell me where the Army Corps came up with prevent also includes reduction of the chance. Do you have some legislative history, some committee reports, or something? What are you basing this leap on?

LT. COLONEL BERCZEK: Thank you, sir.

As we are looking at the study, of course the objective of -- the overall objective is to prevent and achieve 100 percent prevention or blockage of transfer. And in the language to the study team and the project management plan, we have got to look at options and technologies. We have got to do a risk assessment of each one of those and look at does it have the ability, does that --

JIM BENSMAN: That's not my question. My question is: Where is your legal authority to make this jump?

LT. COLONEL BERCZEK: There will be a number of components, sir, with that idea being to that 100 percent effectiveness. 100 percent effectiveness may not be technologically or feasibility --

JIM BENSMAN: So are you saying there is no legal authority, there's nothing in any of the legislative history of this language that indicates it means something else? Is that what you are saying?

LT. COLONEL BERCZEK: Actually, you brought up a good word, "meaning." I'm not going to argue with you and debate. Throughout that legislation, the Water Resources Development Act it does talk about preventing, the reducing of risk. In that particular passage, you are right, it does just say prevent. As far as what the committee implied or intended, we have got to go with the word prevent. Look it up in the dictionary, prevent also does talk to reduction of risk. So you mentioned the word "meaning," so I will use "meaning."

But in the study we are not limiting ourselves to only those things that show

100 percent effectiveness because I don't know what those are. But if we have something that's a promising technology or something that we can put into place that has an 80 percent chance right now that we can get involved, do we need to continue to study that and not do anything until it gets to 100 percent? I think our idea is to go ahead and bring those things in that can sequentially buy down that risk with, again, that focus being that 100 percent effectiveness and going ahead and getting to that point.

JIM BENSMAN: Well, I would offer a comment that some of the basic NEPA requirements are alternatives have to meet the purpose and need and the purpose is to prevent, so if the alternative can't prevent it, it's not a reasonable alternative that should be studied.

The other thing I had the question about was what was the natural -- was there any natural -- after the glaciers receded, was there any natural connection between the Illinois River and the Great Lakes?

LT. COLONEL BERCZEK: I think General Peabody spoke to that one time in the first

meeting in Chicago and it's interesting you should mention after the glaciers receded because I think when he was looking back there was indicators geologically that after that last period was when there were connections, natural connections, but that have since eroded or changed and everything so that now the connection between is a man-made connection.

MR. WETHINGTON: The area in which the Chicago Ship and Sanitary Canal was dug was historically, before settlement, a marshy area that did occasionally flow between each basin. So was there a natural connection? Yes. Under certain climatological and metrological conditions, yes, there was naturally.

JIM BENSMAN: Well, I would say it seems like to me, you know, the Corps always says they are interested in doing restoration, and, you know, I always have -- I'm always questioning that and here would be a good chance to prove you are by doing restoration by removing the connection that the Corps built. You know, when you just look at all of these impacts invasive species can have, you know -- I have been out on

the river multiple times and it's just amazing what those carp can do and you just, you know -- like here we have the bush honeysuckle, it's like invading and destroying everything. It's just, you know -- it's just seems insanity to, you know -- particularly when you consider how highly subsidized the barge industry is to have that connection, that artificial connection, between Lake Michigan and the Illinois River, you know. It seems to me it's obvious that should be removed.

Let's see. What else was I going to say? Just one more point I thought.

It also seems reasonable to break this down a bit. You know, it seems like you know there's a big problem and, you know, the study specifically mentioned the canal and it seems like that should -- you shouldn't delay dealing with that serious problem by dealing with the rest. You ought to get the problem with the canal done first and then do a second phase to deal with the rest of the stuff and break it down because, you know, the time frames you are talking about is not a reasonable time frame, you

know, it might be too late.

That's all I have.

MR. BLUHM: Thank you.

That's all the people that we had signed up that had asked at the registration table to make a comment.

At this time I would like to ask if there's anybody that has not had an opportunity to speak so far that has now decided that you would like to, raise your hand or make your way to the microphone.

Not seeing anybody moving yet.

Then I will ask again, anybody that has not or has made a comment that would like to make an additional comment, now would be the time to raise your hand or make your way to the microphone.

Not seeing too much movement.

We have heard about 40 minutes of testimony from folks, heard a lot of questions, the panel has been engaged, and we have had very good dialogue. I want to thank you all for taking the time, working with us, and providing those comments and thoughts.

As we move forward, I want to remind you all that we are going to do the exact identical presentation and comment period this evening starting at 5:30. If you would like to come back and hear the presentation again or sit in for that dialogue, you are very welcome to do that.

Also, if there's any materials that you have been given that you're finished with and do not need, you can either leave them at the chairs here or at the table and we would gladly like to recycle them as we are in our eighth meeting out of twelve and we can definitely use anything over again.

Lastly, if you have any presented materials that you would like to leave with us today, things that you are using as back-up material or the actual statements that you have, I want to make sure we collect anything you would like to provide to us. You can either leave them with myself or at the table on the way out so we can be sure we can include them in our documenting of the NEPA process.

Keep in mind our website is a very

good source of information through the comment period, as well as the study itself. And the comment period, again, closes on March the 31st, 2011, so we have got a little bit of time yet. If you think of anything, use the comment form or the website to help convey any of the comments, questions, or thoughts that you have for us.

So with that, I will conclude my closing remarks. It's 3:41 in the afternoon. Thank you all for your attention. That dismisses everybody from the meeting. Meeting is adjourned. Thank you.

STATE OF ILLINOIS)
) SS
COUNTY OF FRANKLIN)

I, Andrea M. Murphy, a Notary Public in and for the County of Franklin, State of Illinois, do hereby certify:

That the said proceeding was taken before me as a Notary Public at the said time and place and was taken down in shorthand writing by me;

That I am a Certified Shorthand Reporter of the State of Illinois, that the said proceeding was thereafter under my direction transcribed into computer-assisted transcription, and that the foregoing transcript constitutes a full, true, and correct report of the proceedings which then and there took place;

IN WITNESS WHEREOF, I have hereunto subscribed my hand and affixed my official seal this 22nd day of February, 2011.

_____
Andrea M. Murphy, RPR, CSR, CCR
IL CSR #084-004558
Notary Public in and for the
County of Franklin,
State of Illinois

M

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GLMRIS

GREAT LAKES AND MISSISSIPPI RIVER

INTERBASIN STUDY

FEBRUARY 8, 2011

5:30 P.M.

NATIONAL GREAT RIVERS MUSEUM

#2 LOCKS AND DAM WAY

ALTON, ILLINOIS

A P P E A R A N C E S

PANEL:

MR. BILL BOLEN
MR. LIEUTENANT COLONEL DAVID BERCZEK
MR. DAVE WETHINGTON, III
MR. MIKE SAFFRAN

LIST OF COMMENTS:

P R O C E E D I N G S

MR. BLUHM: Thank you for taking your time to come out. I apologize for starting late. We just wanted to really make sure that we caught anybody that might be coming in just a few minutes late.

My name is Kevin Bluhm, I'm going to be the moderator for this evening's session. I work out of the St. Paul District Corps of Engineers office. I'm very pleased that you took the time to come and meet with us.

I will introduce the staff before we begin here that are sitting with us. Sitting right here beside me is Bill Bolen, and Bill is from the USEPA representing the Asian Carp Regional Coordinating Committee. Next to him is Lieutenant Colonel David Berczek, and Colonel is the deputy commander for the Chicago District Army Corps of Engineers. Center of the table, Dave Wethington, and Dave is the GLMRIS project manager. You will hear from him in a little bit. And then on the far side of the table, Mike Saffran, and Mike is the Other Pathways project

manager. You will hear more about that also in the presentation.

You'll notice that I said Chicago District is sitting up at the front table, and we are obviously not in Chicago anymore, so I would like to turn your attention to the back, our hosting district office, Lieutenant Colonel Bittner is the deputy commander from St. Louis. Thank you, sir, for providing us the facilities here and the opportunity to be in your district area.

Before we begin, I just want to go through the packet of materials here that you got when you came in. The green half-sheet here is our meeting agenda. This is the basic guidelines that we are going to follow. We have also got two pieces of information here that will serve as study background here, the quarter sheet. And the blue booklet is detailed information for the actual study itself and some background overview information. So that's an important piece to take with you.

The most important piece, from my perspective as the moderator, while we are in

this comment period, is the white half-sheet here. This half-sheet gives you information on how you can have comments recorded and entered as part of our scoping process. The center has room, as well as the back page has space for you to put any comments that you have for us. Keep in mind, any comments that you want to have for us need to be postmarked or turned in by March the 31st, that's the end of our comment period for the scoping session.

And then on the full-size sheets of paper, the yellow one is designed to help us if you want to make an oral presentation. The purple or lavender-colored one here has frequently asked questions on both the front and back to answer some of the things we have heard the most. The salmon-colored sheet here has information about the other efforts, and that's what Mike will be talking about a little later in the presentation. And then the blue sheet here is a piece that we are using, and we are asking if you have documentation that you want to submit or hand in, that this would accompany that so we get proper credit for any of the materials that

you are potentially giving.

Did you have all those sheets of paper?

LAWRENCE DOUGLAS SMITH SMITH: Perhaps the blue sheet.

MR. BLUHM: Here it is.

Then the slides just basically mimic the slides that we will be going through once we can figure out how to get our computer to work.

Let's see here. Let me go over some logistics here. I will ask anybody that's in the room, if you have got a cell phone on, if I could ask you to turn it off or turn it to silent, and it will keep us a little bit more quiet, that would be great.

And then if you are not familiar fully with the facilities here, if you need to use the restroom, you can excuse yourself at any time through the doorway and off to the right, the restrooms are located near the entrance.

Our presentation will last somewhat less than an hour, and then after that we will go on to our second portion of the meeting.

I will just start with some

introductory statements about the GLMRIS study itself. The GLMRIS team has organized this public meeting to accomplish two goals: Our first is to present the information about the study, that's what we will try to do as soon as the computer works. And then our second is to look close at your comments on the significant issues that should be included in the GLMRIS work, as well as any insignificant issues that can be eliminated from further study.

The Corps is hosting 12 public meetings -- this is the eighth one -- throughout the study area in an effort to provide opportunities for those interested in the study to learn more about it and to provide any oral comments. Please, again, note that the NEPA public scoping period closes on March the 31st.

We had an identical session to this that started at 2:00 today, and we had about 40 minutes of discussion from the people that were here, heard from seven people, and had a very interesting dialogue with the panel and were able to get some good information from the local folks. So it was very helpful for us.

And we will take as much time as it takes after our presentation to answer any questions you may have, and then after the meeting has been adjourned, again, you will have the opportunity to talk to anybody you like -- keeping in mind, if you want your information recorded as part of the scoping document, you will want to make sure that you ask any questions while we are still in the meeting before we adjourn. Okay?

So this is a graphic that shows different materials that we have. If you do need more, if you want to take any back with you to give to any friends that couldn't be here today, we can get you as many pieces as you like.

And with that, I'm going to turn the floor over to Bill here, and he will give you a little bit more information about the Asian Carp control update.

MR. BOLEN: Thank you. My name is Bill Bolen. I'm actually senior adviser with USEPA. I'm part -- you will see this in a minute -- I'm part of the senior executive team that's kind of guiding the Asian carp control response

effort. Normally the Asian carp director, John Goss, would normally be here, but he is not able to be here today, so I'm appearing in his stead.

It's been, you know, quite an interesting year for us with these Asian carp. This pictorial here, these are the silvers that jump. I'm sure you're aware of that. It's been a challenge for the entire government.

They were introduced down in Arkansas. They moved their way up the Mississippi River. They are in the Illinois River proximate to Lake Michigan at this point in time. As I'm sure you guys are aware, there's a connecting waterway now between Lake Michigan and the Mississippi River basin called the Chicago Sanitary and Ship Canal. That's the artificial waterway that could allow the Asian carp to migrate.

Beyond even that artificial waterway though, Mike Saffran is going to talk to you about 18 other naturally occurring connections that the Corps is looking at as well to try to protect the Great Lakes.

You are going to hear a lot about

GLMRIS. And a lot of people focus on Asian carp, but what GLMRIS is doing is looking at all aquatic invasive species, not just Asian carp. That's a key difference between maybe -- when I start talking about the Asian Carp Framework, which really is focused on Asian carp, versus the bigger study which Colonel Berczek is going to talk about.

Are you guys familiar with -- do you know the propensities of Asian carp? Are you at all familiar?

LAWRENCE DOUGLAS SMITH: Read about it.

MR. BOLEN: They are prolific breeders. A lot of times when I go to the public, people think they eat other fish. They don't do that. They outcompete for the plankton and algae. So that's how they basically starve out the other species.

I'm going to talk about this for a minute. This is the Framework. This is the original -- actually, the White House introduced this document in February of 2010. It was finalized in May of 2010. This is what we use --

the collaborative we -- federal and state agencies, primarily the Illinois DNR -- we combined our efforts back in 2010 to put all of our resources toward Asian carp.

On a personal note, I'm the primary author of that, so I'm pretty proud of this document.

This is the Regional Coordinating Committee, and I think I had mentioned to you that I have been Superfund, so I did emergency response work. So I can tell you from a personal note that this is collaboration that I have experienced at Katrina, Rita, Columbia shuttle, anthrax on Capitol Hill. This is really spectacular for an invasive species. I have experienced this before in the past, so I can stand here before you right now and say that these people are all working for a common goal and a common effort here.

So if you look at the top, we do have a federal executive committee, Asian Carp Director John Goss, appointed by the administration in September of last year; Cameron Davis, who I work with in Chicago, he is a senior

advisor to Administrator Lisa Jackson at the EPA, those are the two co-chairs.

You got me off to the left; Admiral Michael Parks of the Coast Guard; you've got Senior Executive Charles Wooley of the Fish and Wildlife Service.

The other side you've got General John Peabody of the Army Corps; this guy's boss, Colonel Vincent Quarles; and then Senior Executive Leon Carl of the Geological Survey; and Jim Bredin is John Goss' deputy. He came from the state of Michigan and is now also Council of Environmental Quality Control. John Goss and Jim Bredin are the two administration, if you will.

The important thing to note, in this inner circle right there, we started out with the federal agencies and the State of Illinois leading the efforts. It's now grown to all of the Great Lake states, so we are all in this together.

This bubble over here, interconnecting waterways, Mike is going to talk more about that. So, again, we are concerned with more than just the Chicago Sanitary and Ship

Canal. We are concerned with many other interconnecting bodies.

One of the things we have trouble with as a federal agency, we have to follow certain rules where we can engage the public. For example, this is a formal public meeting, but we need to provide an opportunity for industry, for residents, for scientists, for other folks to engage in our process. So we have established this nonfederal technical policy group to really allow, for example, a professor at the University of Missouri and his significant other the opportunity to engage in the process and so you are engaging today. Thanks for being here.

Back in the day there was no connection between Lake Michigan and the rest of the basin. We dumped our sewage, treated sewage -- untreated back in the 1900s -- right into Lake Michigan. The decision was made to reverse the flow of the Chicago River, locks and dams were put into place. All of our effluent now flows down into the Illinois River and into the Mississippi River, and if you live around here, probably flows right by your house.

Colonel Berczek is going to get into this a little bit more. Our main defense that we use are the electric barriers. The Army Corps funded and built these, and this is our main line of defense. But we have acknowledged that you can't use a single engineering control to beat biology, that just doesn't work. So that's what the Framework is all about. The Framework is about putting all of our resources, the geological survey, the pheromone and tracking, looking at different encapsulated fish poisons that are specific to Asian carp that could be ingested by the Asian carp. So we are looking at all the different mechanisms by which we can defend the Great Lakes from this invasion.

I want to give kudos to the Army Corps right now. There are many times we hear they take too long, they spend too much. This is a great example -- we used the Great Lakes restoration money last year, we were aware that there would be a possible bypass situation. If you look at the Des Plaines River up there, it flows right next to the CSSC, approximately -- well, right above the electric barriers. And in

flood conditions, significant flood conditions, adult Asian carp could go from the Des Plaines into the CSSC and then swim free to Lake Michigan. Army Corps identified that. Again, we committed GLR monies. In one short year, the Army Corps constructed 13.2 miles -- does that sound about right? -- of a barrier to basically defend from that occurring. They did it in one year, they did it under budget, and so we were able to take those monies and plan for other Asian carp activities. So the Army Corps gets credit for that.

I'm going to just -- I will let Mike talk a little bit more about this. We took those monies, we found another natural occurring waterway between the states of Indiana and Ohio that could allow a free swim in flood conditions of Asian carp into Lake Erie, so that's a temporary barrier. Mike is going to talk more about that later on.

Mike is also going to talk about these other 17 possible higher risk areas that the Army Corps is going to be evaluating.

You know, many times we are

criticized for a variety of things, but right here this is some electrofishing, seining, and netting. Between the agencies we spent $3,200 last year on the waterways, either trying to find Asian carp above the barrier or removing them from below the barrier. All of our resources are going to this.

This is the new Framework from 2011, so we have gone up to 45 activities now. If recollection serves me, I think we had 32. Does that sound about right?

LT. COLONEL BERCZEK: Yes.

MR. BOLEN: So we are learning things from you all and from industry and so we are expanding the Framework. This is really the document that binds us all together. It's the way we collaborate and cooperate. We use our jurisdictional authorities, our funding resources, state programs, Great Lakes Restoration money, and this is really what kind of guides our action here.

We are looking at DNA, really cutting-edge technology, environmental DNA. We are trying to figure out where the leading front

of Asian carp are.

We're looking at, as I mentioned, pheromone and tracking repellants and new seining and netting activities.

This is GLMRIS. I'm going to skip right past this. This Corps is going to cover this pretty quickly.

One of the exciting things that we are also doing is we are doing commercial harvesting, if you imagine Asian carp being bugs, and so if you take the bugs out, there's less pressure on these electric barriers. So the State of Illinois is hiring commercial fishermen to pull the Asian carp out. The governor of Illinois last year signed an agreement with a Chinese entity to begin importing up to 50 million pounds of fillets a year because they are a delicacy in China.

We partnered with the Coast Guard in all these activities to protect public safety and health.

We are doing -- this map shows where we are doing the eDNA analysis, both below as well as above the electric barriers. So we are

really trying to find out where the leading edge is, if there is any Asian carp. I would like to point out in all those activities we found one single Asian carp last year in Lake Calumet, about 6 to 8 miles from Lake Michigan. We don't know if it got past the electric barrier. If you ask me my opinion, I think it was an induced species because in the City of Chicago it was legal to sell live Asian carp in the market. And it is sometimes a cultural practice to buy two, consume one and release the other, but I don't know.

This is our main website. This is where we post all of the Asian carp stuff, so this is a good website for you all to go to.

And with that, I'm done with my remarks. Thank you for your patience.

Colonel Berczek, I think I will turn it over to you.

LT. COLONEL BERCZEK: Thanks for coming today. Personalized briefing for you -- I was telling Dave I felt like I could sit across the table from you, but then I also have spent time on stage and I keep three-quarters front so

I don't want to turn. There are a couple things I want to make sure I point out to you on these slides.

One of the things -- Bill spent a little bit of time talking about the Asian Carp Regional Coordinating Committee, we talked about the strategic framework, and those are efforts of a lot of federal and state agencies and other local partners to go ahead and fight one identified invasive species.

We talk about Asian carp. If you think about other words -- and I will say a few other words, start thinking a little bit broader and look at what the GLMRIS study is. It's beyond Asian carp. It's zebra mussel, sea lamprey, snakehead fish, nutria. Depending on where you are, those words will go ahead and invoke some sort of feeling or idea in your mind.

One of the things that I was looking at, there's been a -- the National Invasive Species Council released a report a number of years ago under executive order -- they were established in 1999, had to report every 5 years on the efforts of invasive species control.

Their 2005 report, recently they just updated the National Invasive Species Management Plan for 2008 to 2012. It's kind of significant.

The opening statement in both their executive summary and the main body of the report says, "Invasive species inhabit all regions of the United States and every nation. The problem is complex and accelerating."

And one of the challenges that they point out in identifying an invasive species and hence the means to control it is that species that benefit in one area or one application may be invasive in another.

I brought a report with me that I was looking at and it's kind of an example that highlights that. I grew up in upstate New York, and one of the things every year is we used to like to skip school on April 1st to go trout fishing down in Naples Creek. One of the species that we went after were the brown trout.

I had a report I looked at that talks about the 100 most invasive species. Brown trout and brook trout are two invasive species that they consider the most invasive. Where I grew

up, they were naturally occurring, but I guess in other environments they are invasive species.

So looking at that and understanding that we do have a challenge and a problem to address that goes beyond a single species, Congress in 2007 directed the Corps of Engineers, under the Water Resources and Development Act, to go ahead and conduct this, the Great Lakes and Mississippi River Interbasin Study.

What is it? It's a feasibility study. The language -- the key language, of course, here looking at options and technologies available to prevent the spread of aquatic nuisance species between those two watershed areas, between the Great Lakes Basin and the Mississippi River.

Where specifically? We need to focus through the Chicago Sanitary and Ship Canal, Bill mentioned that, that artificial waterway connected there to go ahead and bring water from Lake Michigan into the Mississippi River, and other aquatic pathways.

Some of the special considerations in this study -- you can see right there -- it talks

about the alternative recommendations. We will look at the impacts and do an analysis of those, to include hydrologic separation as one of the options under the study.

The study is 100 percent federally funded. If you are familiar with Corps of Engineers studies where we typically will go and look first to establish federal interest in the reconnaissance phase, this is the next step beyond that, so we are already beyond the point in the whole study process. So, in effect, they have taken that little bit of timeline out.

The other significant part with the feasibility study is feasibility studies have a cost-share sponsor, a local sponsor contributing part of the funds, which sometimes could be a lengthy process in identifying the sponsors and interested parties and also being able to come up with the funding source. In this case here, to go ahead and get this study moving and keep it going, Congress said this is 100 percent federally funded for this study, a rather significant effort.

The middle bullet we have talked

about a little bit here -- I will spend a little bit of time on this because in the last session this did come up. Typically any time we engage in a study we come up with a project management plan. The key to carrying out the study is instructions to the team, "Here's what we need to look at. Here's how we need to go about doing this."

In this case here we included in there prevent and talking about including the reduction of risk to the maximum extent possible. It's primarily a guidance. If we are looking at a technology or looking at an option and it comes out in testing or other applications 70 percent effective, should we not consider it because it's not 100 percent effective or should we consider that as an implementable technology and then deal with what else can be done to go ahead and get to that 100 percent goal? And so it could be -- there may be individual technologies or options that, in and of themselves, are not 100 percent effective but the end result, the end objective, is to be 100 percent effective in keeping those two basins separated.

The study area is large. You can see through all the different colorings there, these are all the states from the Rocky Mountains down the Appalachians that feed both these two watershed areas. The direct -- the detailed study area for the GLMRIS study primarily focuses up in these areas. The states that constitute this brown shade there, the states where the water contributes to the Great Lakes Basin, and then below this dashed line here, which is somewhat of a flow divide, water to the south of that then feeds into the upper portion of the Mississippi River. That dashed line there represents roughly 1,500 miles.

What is it we are looking at? Under this study we are looking at aquatic connections -- we heard there with the authorization language -- focusing on the Chicago Sanitary Ship Canal, Chicago Area Waterway System, and then also through other aquatic connections.

Talks about aquatic nuisance species, swimmers, floaters, hitchhikers, things like that. That's one of the challenges with the study, you know, looking at some other items that

-- trying to come up with a control for items that we may not be able to see except through microscope. So it is a rather challenging project to do.

Does not include looking at those types of either connections or transfer or human release. We are looking at the interface between the Great Lakes Basin and the Mississippi River. Portions of 31 states overall with that larger area, but primarily right now I think it's 17 roughly in the main detailed project area where those two with the green and the brown shades. The study scope does not include the Atlantic Slope or the St. Lawrence Seaway or up into Canada.

You can see there too listing under the elements what it is we are going to be looking at doing. A range of options and technologies, what is it that's out there, or what can be out there that we can apply to prevent the interbasin transfer of aquatic nuisance species.

I won't go through all those things on the right- and left-hand side, but typically

this outlines a little bit too part of what our process is. We have got to look at regional economic modeling. We have got to look at ecological decision-making processes. We will evaluate hydrologic separation. This is a feasibility study, so it will result in two things: A feasibility report, which will have options and recommendations to Congress for implementation, but then also we will release an Environmental Impact Statement as part of this study.

How do we do this? First of all, I mentioned the word "prevent" because it came from our project management plan. Part of the other thing we had to figure out is how we are going to do this. The authorization told us to look at kind of two different areas, the Chicago Sanitary and Ship Canal and the other pathways. So we broke that down with the primary effort being in the Chicago Area Waterway System. Dave Wethington will talk to you a little bit about that. He's the project manager for that section but also for the study overall. Mike Saffran is the project manager of the other pathways, and he

will talk to you a little bit about the details when there's a slide that comes up on that, what's been done so far, what we have identified.

We had to organize for success. You saw the area of the country involved with a study like this. The Corps of Engineers were designed -- our districts are set up primarily along watershed areas. This study -- we are down here in St. Louis. We are part of -- we are not part of the Mississippi Valley Division. Chicago District belongs to the Great Lakes and Ohio River Division. So there you have got two general officers that have different regions of responsibilities.

How are we going to work together? How do you work that whole system and everything else? So it's -- you might look at something like this and say it's just obvious you got to succeed. It's not quite as obvious how you set up to do that. Bill mentioned about the Asian Carp Regional Coordinating Committee and the collaboration in there. Okay. This is broader than that, so it -- it has all those problems and then some. So we set up like this to try to go

ahead and address that through the command and control, through the executive steering committee, keeping the leaders and agencies involved in understanding what's going on and how we are proceeding with the study.

Also, stakeholders. There it talks about the heads of agencies and organizations but stakeholders, the public, how do we keep you informed and how do we keep you involved.

One of the ways to do that is that next bullet that talks about cycling out interim products and reports. There's a lot of information, a lot of details, a lot of data that's being put together and refined and analyzed as a part of this process. As some of that information has matured and ready to go ahead and be delivered so people can see what we are looking at and what's coming out of the efforts so far, we will go ahead and submit out reports of some of the data and everything so people can keep up to date with what's going on.

Two key things with this is because it's such a difficult challenge to go ahead and identify those nuisance species -- what is there

today? What could be there tomorrow? -- and planning for that. And also the controls -- what are the controls today? What are the controls for tomorrow? Or waterway uses -- how do we use the water today? How might we use it tomorrow? Or other types of transportation means. Looking at that and all the efforts of the other agencies involved with this, something may come out. Bill talked about the biologic controls. That may come out as a technology that might get us a 60 percent solution. We need to be able to adapt our study to incorporate that into and have that part of the whole process.

Of course, as in everything we do, the Corps of Engineers will abide by all legal and regulatory guidance.

The study purpose is to identify those aquatic pathways, identify those species that are in there. Again, I talked about this, how we are going to deal with these two focus areas. One of the first steps is an inventory of current and future potential aquatic nuisance species. We talked a little about the Asian carp and we talked about what's going on right now

with the electric barrier and the Asian Carp Regional Coordinating Committee. I like to say this study is from fish to fleas, looking at all these areas, looking at all those things, to include plant life where -- if it's where it shouldn't be or where we don't want it to be, we just got to make sure it stays there. It might be a nuisance species in one basin. Well, we are not looking at how to eradicate it in that basin. We are looking to control it, keep it where it is, keep it where it is separate and go from there. Again, we will evaluate hydrologic separation as one of the options and controls.

This slide shows you a little bit Chicago Area Waterway System, Focus Area I. Dave will talk a little bit about this. The reason why it is kind of the priority effort is because it represents the only known continuous waterway to the basin.

Go ahead, Dave.

MR. WETHINGTON: Thank you, sir.

Good evening, everyone. My name is Dave Wethington. I'm project manager at the Chicago District for what we are calling the

Focus Area I, which is on the Chicago Area Waterway System.

I want to spend a couple minutes talking to you about the complexities that we have inherent to the Chicago Area Waterway System, as well as waterway uses.

On the map above me, you will notice on the right-hand side there are five points numbered 1 to 5 starting at the top and working the way down the coast line of Lake Michigan that represent areas where the Great Lakes Basin and Mississippi River Basin have to potential to interact.

You will also notice that Points 1 and 2 are denoted with red circles. Those red circles, as well as Point Number 6, indicate water control structures.

Before I get into that, there are five points, and what's unique about the Chicago Area Waterway System is that all five of these points will come together, converge, as in like five prongs of a fork converging into the handle of it, they all flow into a single waterway, which is the Chicago Ship and Sanitary Canal,

which is where we have established the fish barrier system, the electronic disbursal barrier system, that is used to control Asian carp. That's at Point Number 7.

So I was getting into Points Number 1, 2, and 3 are all controlled streams basically. That means there's some type of water control structure on there. Starting at the top, Number 1 is Wilmette Pumping Straight, Number 2 is Chicago Lock, and Number 3 is actually controlled by a structure at Point Number 6, which is the O'Brien Lock.

You will also notice that Points 4 and 5 are completely uncontrolled, which basically means that there's no physical structure controlling the flow of water. This is kind of the reason why perhaps the idea of closing the locks at Chicago may not be an effective solution for stopping the spread of Asian carp.

Moving on, on the left-hand side is basically kind of the plan of study that the Corps of Engineers uses on a feasibility study, specifying problems, opportunities. What we have

done is we have put together a team, you know, disparate expertise, scientists, engineers, to look at this issue of aquatic nuisance species and how to prevent the transfer between the basins. We have gone through the Corps of Engineers, incorporate other federal and state agencies, and we are also here speaking with everyone in the room to kind of get your idea on what you think is significant or maybe perhaps not significant as we scope out the path forward for the study.

We are also in the process of what we are calling inventory and forecasting conditions. I spoke a little bit earlier to the idea of waterway uses. And something you might have heard a lot about is commercial navigation, the Ship and Sanitary Canal is used for commercial navigation, and that's true, but there are also several other waterway uses, including, not limited to, recreation, water supply, water discharge. The City of Chicago Metropolitan Water Reclamation District discharges treated wastewater into the Chicago Ship and Sanitary Canal. About 70 to 80 percent of the total flow

of the Chicago River is made up of this treated municipal discharge.

Additional, the Chicago Ship and Sanitary Canal is used for flood risk management. Doesn't happen very often, maybe a couple years, every 5 years, we get a significant storm event that will basically require us to open up the locks at Point Number 2 to allow water to backflow, so flow the opposite direction from which it normally flows, which is down toward 7, 8, and 9 down there, and allow release for stormwater in the Chicagoland area. Basically, if we were not able to open the locks at Chicago, O'Brien, Wilmette Pumping Stations, it would cause significant overbank flooding in the downtown area, as well as basement flooding throughout the entire Chicagoland area, as well as suburbs, causing impacts to likely millions residents, businesses, industries, et cetera.

Once you identify what all these waterway uses are, what we basically need to do is evaluate the impact of any proposed aquatic nuisance species control. So evaluate the impact to waterway uses of the electric barrier, future

other technologies, or hydrologic separation. So if we were going to do, say, a physical barrier in the system, how would we account for adverse impacts to existing waterway uses as well as mitigate for those? So those are all the things that the Corps of Engineers needs to do in assessing this feasibility study. We cannot come up with a single prescribed solution as we are the steward of taxpayer dollars and basically must remain unbiased and look at the whole suite of potential aquatic nuisance species controls, the waterway uses, and then the potential impacts to waterway uses and how to mitigate for those.

As was mentioned by both Mr. Bolen and Colonel Berczek, we are collaborating with state, federal, local governmental partners. We are also collaborating with Native American tribes and other nongovernmental organizations and private industry.

Thank you for your attention. I will turn it over to Mike to talk a little about the other pathways efforts.

MR. SAFFRAN: Thank you, Dave.

Again, I appreciate you coming out

tonight. This is not a very easy location to get to. I very much appreciate you folks coming out.

The other pathways. The last three words in that authorization, "other aquatic pathways." In 2007, and we later got appropriations in 2009, we were able to -- we knew a lot about the Chicago Sanitary and Ship Canal. We knew very little about the other aquatic pathways and what the role scope of that was within the GLMRIS.

Last summer General Peabody, who was our commanding general, basically challenged the division staff to come up with a plan to develop an inventory of all the potential aquatic pathways outside of the cause along that 1,500-mile-long divide and to do a preliminary risk characterization to see if we were at risk for having some sort of a back door that the Asian carp could outflank us in the Chicago Sanitary and Ship Canal and get to the Great Lakes. We were also tasked to look at other species, but the species of most significant concern at the time was the Asian carp.

Given that task -- it was pretty

daunting to be frank -- what we did was we reached out to the experts that we could find within the other agencies as well as within the Corps. And we reached out initially to the Fish and Wildlife Service and USGS because they have the best database, if you will, on invasive species. USGS has a wonderful database. US Fish and Wildlife Service has had some very eloquent writings on invasive species.

The Fish and Wildlife Service developed us a list of all the species in the Great Lakes, non-indigenous species in the Great Lakes, not known to be in the Mississippi River Basin, there was about 120 of those, and then a list of the species in the Mississippi River Basis, non-indigenous species, that weren't present in the Great Lakes yet. There was only about 21 of those.

We started out with those lists. We got the best biologists we could get within the Corps, within the state DNRs, and within USGS, Fish and Wildlife Service, and NOAA to help us evaluate those species as to which ones would be the biggest risk to either basin to help us focus

the study.

And then the other side of the equation is we had the best hydrologists we could get from the state DNRs, each of the Corps districts -- again, as has been said, we have got a Corps district on either boundaries -- so we got our best hydrologists from the eight different corps districts and then USGS has a water science center in each state who are very familiar with the conditions. So we really relied on the locals to help us identify where are the pathways potentially there.

And so, long story short, we identified 36 pathways from New York all the way over to Minnesota that appeared to be viable for either forming the existing aquatic pathway being there for forming. And those 36 locations, a Number of them are just like natural wetlands that exist along the basin divide. Some of them were urban areas where it looks like intricate sewers systems and things that might cross the basin divide. There were locations where there were just ditches, agricultural ditches, that crossed the basin divide and connected to the

other stream. So there was a number of different types of locations.

But only one of them really jumped out as a really significant risk, and that was the Eagle Marsh in Fort Wayne, Indiana. And the combination of circumstances there, we have a natural overflow point that occurs there. The St. Joseph's River comes from southeastern Michigan and drains into Fort Wayne, which is a little bit to the west of where its headwaters are, and then St. Mary's River comes from the southeast into Fort Wayne, and those two rivers form the Maumee right there in downtown Fort Wayne which then flows to the northeast to Lake Erie. When you have the largest storm event you would expect to occur in any given year, 1-year-type storm, water backflows from the St. Mary's River through and across the Eagle Marsh into the Wabash River Basin.

Very fortunate at that location, we had a 2009 flood insurance study which indicated that the 10 percent annual return frequency storm, the biggest storm you would normally expect in any 10-year period, the depth of the

water column across the divide under that condition is four and a half feet. You couple that with the fact that about 25 miles downstream there's three different locations where Asian carp have been collected and been -- two of those they have been determined to be established, so we had the combination of Asian carp within 25 miles and a condition where generally at least once a year or so we have a connection that occurs and a little less frequently a very significant connection occurs.

So we got all of the parties together on-site, USEPA, National Resource and Conversation Service, Little River Wetlands Project, which is a nongovernmental organization that basically operates the Eagle Marsh, Indiana DNR, the county surveyors, we got all the right people in the room and start talking through the issues and what we could do about it.

Everybody agreed that we needed a long-term solution but that we might not have time to get a long-term solution in the ground, so we came up with two alternatives, one path toward a long-term solution and another toward a

very quick interim solution.

The interim solution, you saw a couple pictures in Bill's discussion there of a chain link fence basically running across the marsh. What that chain link fence is designed to do is prevent adult Asian carp from being able to make the passage the next time the water comes up. There's no evidence right now that there's fry or any reproducing populations within that 25 miles. The biologists looked at it pretty good and felt like that the chain link fence would be substantial enough to keep any adults out, and that if it needed to be modified, you could add netting or something like that to make it a little finer. There's also a concern with flooding.

Bottom line is within 60 days we had that fence up across the marsh, and it was, I think, a very good testament to the way government can work when you have got the right people sitting at the table at the right time. And Indiana DNR deserves a lot of credit for stepping up and taking responsibility doing the design and getting it in the ground so quickly.

The Corps of Engineers is currently working on a feasibility study for permanent solution at that location. We expect to have that report out by the end of this year. We got a couple issues though, we don't have any actual implementation authority, we don't have a local sponsor, so we have got some issues we have got to work through. But we should, by the end of this year, have a good thorough document that provides a well-based recommendation for a permanent fix at that location.

For the other 17 locations, there was a fair amount of uncertainty because of the repetity that we had to do the study in and just a very flat topography that exists over much of the area. So what we are also doing this year -- there's a draft study plan out among the agencies right now that's being reviewed -- but we are going to do a much more detailed risk characterization that will establish basically the baseline condition at each of those locations and determine whether there's any significant risk for species migration through those locations and that report is expected to be

completed by the end of this year as well.

That's the other pathways.

LT. COLONEL BERCZEK: Pretty simple, right? But part of the organizing for success was breaking things down so that we could have some more manageable functions and pieces. When Henry Ford talked about that, he said, "Nothing is particularly hard if you divide it into small jobs," so here's the two small jobs with this study.

You see here on this slide talking a little bit about some of the accomplishments, just in the initiating stages of the study what could have possibly have been done.

Down on the left-hand side there's a lot of activity and a lot of things that have to be done to then go ahead and know we're meeting the intent and following the legislative and regulatory guidance in initiating a study.

See down on the right-hand side, Mike talked a little bit, you heard some of the other efforts involved, but there is still work being done to get to this point. Mike talked about some of the efforts done to identify nuisance

species and part of this is understanding, of course, the species of concern right now, the Asian carp. What's out there, what's been written about them, what do we know, what is speculation, where do we go. Drafting that and identifying what it is that we need to be concerned with.

And I think in the last session here I had a discussion with somebody afterwards and she asked the question, "Are there things that we do want to pass between the two?" I don't know. I think that's part of what it is we are looking at. Over 100 years or so of a canal being there, has something now started going back and forth that maybe is desirable. I don't know that that's -- I don't know that this is something that has happened. But she asked the question, and I said, "I honestly don't know the answer to that. That's a good question."

Talked about some of the preliminary risk characterization as well, and then as we start going through, identifying what are some of the controls. Not everything is going to work on all types of species and all types of organisms.

You know, you don't shoot skeet with a pistol, so we have got to get the right weapon for the right target.

What's coming next? This here shows a little bit on the project schedule for the overall conduct of the GLMRIS study, and I'm going to highlight a couple little stars on here, this tiny little star and then this big star.

This tiny little star talks about -- down here at the bottom -- the best case scenario. I mentioned earlier that this is a feasibility study that's 100 percent federally funded. Of course, federal funds will follow with federal budget cycles and everything else, so we want to make sure we keep on track and we express the needs that the study has to have to continue on track and that everything arrives as we need it to maintain progress.

If that progress is maintained, we look at this big star out here now, we are talking sometime in the fall or winter of 2014 having a draft recommendation and plan to go ahead and come out for public review once again with looking at some recommendations out of this

study.

Meanwhile, Mike mentioned about some of these reports in this report coming out with the other pathways, again, with the idea there would be options and recommendations there that would then have to go forward for consideration or for implementation or legislation to occur.

What's going to happen? What should we expect to hear during this little black hole, so to speak, of this study? It's not a black hole. We see these little arrows we have talked about cycling out interim products. We don't want to keep people in the dark. We continue to engage in dialogue, these public sessions, to let you know what's going on and also getting input from you. There's a lot of data we talked about, a lot of things we have to look at, and a lot of analysis that has to be done. As that data is processed, we can go ahead and cycle out reports that are mature enough to release, and we plan on doing that and sharing with you.

We talked about some of these control technologies, talked about some of these waterway uses and the value of those uses. To share with

everybody what it is we are looking at so there are no surprises as we start heading down and coming up with recommendations and what that draft report looks like.

The key to this is, like we are doing today, getting your input, getting input of others, and also that collaborative effort. There are a lot of other efforts out there that aren't necessarily within our expertise at the Corps of Engineers. You will see some of the other agencies that we are looking to there. Mike talked about using USGS and Fish and Wildlife and the state agencies because they are the local experts, they do this day in and day out, they have authority to do what they do. So they could bring that expertise to the table and help us go ahead and evaluate what's out there and what needs to be done.

These meetings and gathering input and sharing, educating, and informing and then also collecting your inputs and learning from you.

You can see the list of where we are today, St. Louis, we have got a few more meetings

left to go, that would be this part of the study phase, and then the public comment period will close out at the end of March and we will move on from there.

Other ways to stay in touch and provide input. We talked a little bit -- Bill had mentioned with the Asian carp efforts, the Asian carp -- when you go to the Chicago District website or other websites, you will see a button that looks like this. It's because we want you to know if you are looking at that button -- and Dave's got a business card he's holding up, I think it's in the materials you have. The website is on there. This website is very important because this is the website where the public comments can be submitted if you choose to submit a comment online. And then also acknowledging the fact that there's a reason that these little buttons here, these little pictures, look like application buttons. They trying to get into the technology age using social media like Facebook and Twitter if you choose to follow along with the study that way. I know Dave is pretty good on updating those things, and I'm

glad he's not tweeting today while I'm talking. If he were, I would know it if your cell phone wasn't silenced because I would hear that he was tweeting you.

With that, I think I have talked enough. I hope you got a better understanding now of what it is we are looking at with this study and the process and the timeline, and now it's your turn to talk to us. Thank you.

MR. BLUHM: Thank you, sir. You have just heard about an hour of discussion from our side. Our four panelists have informed you, told you some of the things that we have been working on, and given you the road map of where we plan to go in the future.

With that, I want to add that the website that the Colonel was talking about is a great source for information now and into the future. If you would like to be part of our mailings, we have got a button and a location on there where you can subscribe to an e-mail list, and that will give you details on any type of public information or upcoming meetings, any study or interim results that come out. That

would be a great opportunity just to inform and give you additional public involvement opportunities. That information is on the packet in several locations as well as the business card that Dave just showed you.

Now, going through this, we have taken an hour of your time and now it's our time to hear from you. As we go into the comment period, I want to let you know that we are a slightly small crowd here tonight, so we will go through this relatively informally.

We do have a court reporter stenographer with us, and she is going to be recording all of our information. We want to make sure anything you have to tell us gets properly recorded. I have got a microphone. I would ask that you use the microphone for us, mostly so we can amplify it for the folks in the back of the room and also make sure that our stenographer gets the information correctly.

I do have an adjustment I would like to ask, if it's okay to follow. Our information and our website shows that we are allowing three minutes for your comments that you may have for

us. Given that I'm not too worried about running out of time and that my list of preregistered speakers shows one, I'm going to ask if it's okay that we keep it a little informal and, as long as you don't object, we will say that we would like to hear what you have to say in a reasonable amount of time if that's all right.

LAWRENCE DOUGLAS SMITH: Lovely.

MR. BLUHM: Very good. Just want to make sure we don't have an objection to that.

When you start I would ask that you start with your name, any affiliation or organization that you may represent, and, if we could, your ZIP code for statistical reasons, just want to try to get a tracking as we get through our meetings to know who stopped in and who talked to us.

Also, just want to let you know that any and all types of communication are considered equal for this, so anything you want to say orally is going to have the same weight as anything that you may write in or submit online to us, any documentation you give as well, so you do not have to say everything tonight. If

something comes to your mind during the comment period and you send that in, that will have equal consideration as well.

With that, I guess we will start with our list of preregistered speakers. So Mr. Smith has indicated that he would like to make a comment.

LAWRENCE DOUGLAS SMITH: Thank you very much. We really were impressed with your presentation, and we're extremely grateful for doing that for just the two of us this evening. You have done a wonderful job, and we appreciate how particular you are about it and the thoroughness of the scope of the study. We will say that right off.

I did prepare a few remarks expecting to be constrained by the three-minute deadline, I will share them, and then I have a series of questions that just emerged from your presentation that I could perhaps use to motivate a little bit of discussion and hope not to keep you all really long considering we have a limited audience.

MR. BLUHM: Could I stop you? Could

I get your ZIP code?

LAWRENCE DOUGLAS SMITH: 63121. And I did register at the desk.

My name is Lawrence Douglas Smith. I'm a resident of St. Louis County, Missouri 63121. I serve as professor of management science. I'm the director of the Center for Business and Industrial Studies at the University of Missouri in St. Louis. In that capacity actually I have studied the upper Mississippi River transportation system with a view toward maximizing the efficiency of traffic movement through the most congested section of the river up here between Locks 20 and 25. That work, incidentally, was funded by a succession of grants from the US Army Corps of Engineers, so we are grateful. They were made through the Center of Transportation Studies at UMSL. I'm also a summer resident of Georgian Bay of Lake Huron with dual US and Canadian citizenship.

In my lifetime I have seen the devastating effects of the lamprey eel, overfishing by commercial fishermen in our area, four-foot drops of water recently in Lakes

Michigan and Huron, and the current spread, of course, of the zebra mussel population and the quagga mussel. So I do have a great personal interest in the protection of the world's greatest freshwater resource and also an understanding of the advantages, economically and environmentally, of inland water transportation.

So I should first express my appreciation for the scope and organization of your planned study, the GLMRIS study, and the clarification that you did offer about reduction versus elimination of risk, that you have seen some comment about the distinction between those two, and we are fully comfortable with the way you are approaching that and your interpretation of that. And we also appreciate the assurances that your own document has of the seriousness of the threat to the waterway provided by the Asian carp invasion.

Notwithstanding this express recognition of the risk, I do feel compelled to express our concerns, however, that the immediate commercial and economic interest might prevail over long-term sustainability of the Great Lakes

ecosystem, not from deliberate choice, but rather from the delayed action as authorities await the findings from your study and as they debate their implications.

I was really pleased to hear this evening about interim measures that you have been taking. As you learn, you act. And I gather that is your intention.

One of the concerns we had was your acknowledgment of the limited resources in that regard and wondering if there's some way that the public can help make sure that when you learn something that it can be put into action before the entire study is completed.

So I guess our concern for the evening was that immediate aggressive action may be needed to prevent migration of the silver carp or Asian carp into the Great Lakes where their impact could be catastrophic and that irreversible damage might be done before a 5-year study could be completed and its implications can be debated. We do hope that forceful and immediate measures can be taken to provide greater protection from this invasive species

pending the results of the further studies and research, and I really believe that your presentation tonight has helped give us some assurance in that regard and for that we are grateful.

Now, shall I open up to a series of questions or would you wish to comment on my own remarks? I'm sure you have heard this from others. It's pretty standard.

MR. BOLEN: Frankly not quite as eloquently.

LT. COLONEL BERCZEK: The one thing that I did want to address with that is I did want to reassure you that specifically with actions related to Asian carp that we are continuing along with the efforts that are already in place there with the electrical disbursal barrier also as part of the efforts that Bill mentioned to you earlier, with the collaborative effort with the Asian Carp Regional Coordinating Committee.

We did have the authorization to go ahead and conduct an efficacy study to look at the barrier, and that's where the fence line was

put in between the Des Plaines River and the Chicago Sanitary and Ship Canal because we identified a means that existed that could reduce the efficiency of the barrier. That was under that authority that Congress gave us. We also had the authority to immediately implement -- we, as the agent for the assistant secretary of the Army for Civil Works, was given the authority to go ahead and implement those actions that were deemed necessary go ahead and eliminate that type of bypass or anything that would make the barrier less effective. That was, I think, Section 126 we refer to that authority as part of the National Defense Authorization Act. That is some of the effort that we have done in looking at additional measures that could be in place to go ahead and make that barrier more effective.

We are involved with the monitoring efforts with telemetry and other things to identify where the fish are and working with the Illinois Department of Natural Resources primarily in the waterways, coming up with plans for rapid response measures should fish be identified if we have to go ahead and apply the

toxin or working with the Rock Island District as far as using Lockport Lock and Brandy Road as control points to go ahead and do that effort in the waterways if it's necessary like we have done twice already. So those efforts are ongoing.

We have submitted reports through the Secretary to Congress on some additional barrier measures that could be put in. Dave mentioned about the uncontrolled pathways, the Little Calumet River and the Grand Calumet River. We have some recommendations and options to look at technology there and other areas and downstream.

Part of the challenge with some of these technologies, sonics or other things, they have to be tuned to the fish, so we have got to put them where the fish are. We are looking at some areas down by the Brandon Road pool area potentially, areas that could be used to herd fish and maybe then do eradication efforts in those areas. So we are looking at continuing efforts along those lines to prevent Asian carp from getting into the Great Lakes.

I say that just from the standpoint because I don't want you to think that while we

are waiting to get to the ultimate solution with this study we are sitting and waiting for this to inform us as to the action we need to take today to prevent the Asian carp from getting any further. That is still ongoing and we're still totally engaged with that, while at the same time trying to execute this study and identify, beyond Asian carp, what else has to be considered, what else has to be done, oh, by the way, what are the impacts, what are the mitigation measures, so that we can then submit that to Congress as they directed us to do in this authorization.

MR. BLUHM: Okay. Great. Good. Excellent. Thank you, Colonel.

Just as a point of order, I want to make sure I acknowledge the rest of the audience. We have heard now from all of the people that have indicated that they would like to make a statement and would like to now ask if there's anybody else in the audience that would also like to make a statement that did not indicate so.

If you would like to make a statement and have not had a chance, raise your hand.

That's what I expected. Just wanted

to check.

Now, if anybody has already made a statement would like to continue or make additional statements, comments, or ask questions, now would be the time to do so.

LAWRENCE DOUGLAS SMITH: I do have a series of questions. I guess I would offer these in the spirit as I would of any member of a research team and dialogue on these sorts of things.

You did mention the serious financial constraints and so on, I think you are also saying you're managing successfully to get resources when you learn things that can be done, and I guess you expect that to continue to occur, at least I hope so.

LT. COLONEL BERCZEK: Right now, sir, we don't see any reason why it wouldn't. I think we have got the funding we need for this year. Mike mentioned with some of these other pathways, taking advantage of the resources of the states as well. Indiana came on board to go ahead and implement that solution in their area, an area that they had the authority to do, and then we

look to our friends at the EPA funding a lot of these efforts to so far, yes.

LAWRENCE DOUGLAS SMITH: I was prepared to come and offer a suggestion facetiously but you have managed to trump me on it. We were going to subject commercial culling and taking advantage of the new hub that we are trying to create at Lambert Airport to ship the fish back to Asia, and indeed that's what you are doing. I think that's wonderful. Really, I think there's potential for that to just reduce the intensity of the population in the river here before it hits the Great Lakes.

MR. BOLEN: Let me just clarify that we have actually been in discussions with the aviation management team of that airport facility, so that might be on the horizon, by the way. That might be the shipping point for a lot of these fillets to go back overseas.

LAWRENCE DOUGLAS SMITH: Interesting. That's a nice surprise from the evening.

You mentioned the problems of the diversion. You shut down the -- even if you were to close the locks and shut down the Sanitary and

Ship Canal that there are other diversions. I hope that people would really properly assess the relative risks and not use that as a sufficient reason to prevent you from implementing a measure that may still have much more dramatic effect on lowering the risk. And, of course, I'm sure you will objectively assess that.

One thing that occurred to me as a Canadian citizen as well as a US citizen is that there haven't been Canadians at the table.

The question I would ask in this regard is when you do an economic impact statement, does the economic impact stop at the US border when you are looking at costs and benefits? And I rather fear from your comments they may not. Is there some way that the scope could be expanded to consider the effects in the entire Great Lakes region?

MR. BOLEN: Actually, I will start, Mr. Smith, with the financial part. There's recently be a convening of risk assessment professionals from DFO, several federal agencies, and other entities, so there is now an ongoing binational risk assessment to look at the impact

of -- focused on Asian carp right now but they are also doing other invasive species.

I can't speak to the point of what they are going to assess for economic impact, but at least I wanted to share with you that, you know, for you, on the other side of the border, you know, we are now joining together, at least on the science level, to begin that evaluation.

I will turn it over to Colonel Berczek for the clarification.

LT. COLONEL BERCZEK: As far as the economics go, I can't speak authoritatively to that. I do know that Canada has looked at -- has done some studies relative to Asian carp. We do interact with Canada on a regular basis through the International Joint Commission, so we are in discussion with them. They are very much aware of what's going on with this study. And I imagine that we would have some collaborative efforts there to look again between our two nations on how we incorporate that and share that information and go ahead and have that available for assessment.

LAWRENCE DOUGLAS SMITH: So you will

be going beyond the typical core impact as defined as the net economic effect for the United States then possibly.

LT. COLONEL BERCZEK: I don't know, sir. I don't know where we would have the authority to go beyond that.

LAWRENCE DOUGLAS SMITH: That's my fear, yeah, yeah, so we understand each other.

MR. WETHINGTON: Right. Right. I think it's important to recognize, you know, that through our authorization with the study and being that it is a Corps of Engineers-authorized study, we do follow the principles and guidelines document for federal planning studies, and so any kind of impact -- I'm sorry -- any kind of environmental or economic evaluation would be fully kind of described within those principles and guideline documents.

LAWRENCE DOUGLAS SMITH: So it may well be then that there will be other very significant effects that the study will not encompass.

MR. WETHINGTON: There may be.

LAWRENCE DOUGLAS SMITH: And the last

question, I guess, pertains to your schedule and, I was -- it seems that there's quite a bit of time in years 2, 3, and 4 that could be compressed. And I'm wondering if you really need the amount of time for the amount of study that you prescribed in years 2, 3, and 4, just looking at the study as a whole.

MR. WETHINGTON: I appreciate your comment. I think that what we tried to do, especially in the Chicago Area Waterway System, is to appropriately outline the amount of information that's necessary to establish baseline conditions. We need to know what's out there. What is the value of the fishery in the Great Lakes? What is value of fishery in the Mississippi River system? You know, just as importantly, what are the navigation, recreational value, the impacts there, as well as trying to establish some kind of an environmental habitat -- I don't want to call it evaluation, but that's essentially what it is to both ecosystems.

The amount of information that needs to be processed, collected, et cetera, I believe

requires that timeline that we are looking at, as well as going through the appropriate reviews. You know, this is -- as I try to say, you know, we are a steward of the taxpayers' dollars. We must remain unbiased. We try to balance all of our potential stakeholders. And so I believe we are trying to be as aggressive as we can with our schedule. We will continue to look for ways to maximize efficiencies where possible.

LAWRENCE DOUGLAS SMITH: Thank you.

RUTH SMITH: Well, one question I thought of, just my ignorance, I don't know how much commercial traffic actually goes through from Lake Michigan into the Mississippi area.

And related to that was I noticed you mentioned something about ballast water. I'm aware that a lot of the invasive species coming to the Great Lakes have come through the St. Lawrence Seaway, and although there are regulations about dumping ballast water, they have not really been enforced. So I just wondered, is that something that pertains here or is that an issue?

MR. WETHINGTON: With regard to

ballast water, we are working with partner agencies, such as the US Coast Guard who is really kind of taking up the lead on the whole ballast water issue, so working with the US Coast Guard, having their work inform the interbasin study and form the work we are doing will basically help guide the path forward to recommendations for the study, as well as, you know, the study potentially helping guide recommendations for other agencies where their authorities are appropriate such as US Coast Guard or other federal, state, local agencies.

So the ideas -- we are in collaboration. Maybe the Corps of Engineers part of the study won't specifically address ballast water, but we are working with the Coast Guard, the Coast Guard is part of the study, and so by sharing exchanges information by working collaboratively, we can address the vector of ballast water bringing aquatic nuisance species into the Great Lakes or vice versa.

MR. SAFFRAN: I'm just going to repeat that. That's one of the things that really complicates this study is that seaway

staying open, and there's introduction of new species all the time and ballast water appears to be one of the primary ways that species have gotten into the Great Lakes from abroad. That's a very difficult problem and US Coast Guard I know is feeling some pressure I think to help close that window, if you will.

MR. BLUHM: The first question on traffic?

LT. COLONEL BERCZEK: The information there -- I'm not exactly sure. I think we have our navigation center expertise that might have --

MICHAEL COX: I can give you some numbers if you like.

RUTH SMITH: Just in general.

MICHAEL COX: In general, up by Chicago, the Port of Chicago covers about 25 million tons a year. About 9 million of that goes through O'Brien Lock, a little bit less in the last couple of years because of the economy, but it's a very vital pathway. There's well over 30 million tons of cargo that goes from the Mississippi along the Illinois up toward Chicago.

LAWRENCE DOUGLAS SMITH: Does it go as far as Milwaukee?

MICHAEL COX: There's a very small amount that does, but, yes, it does.

And there's also the recreational traffic. More than 20,000 rec boats go through O'Brien Lock every year and more than that through the Chicago Lock.

MR. BLUHM: Excellent. Very good.

Any other questions or thoughts that have come to your mind?

LAWRENCE DOUGLAS SMITH: That covers it. Thank you so much.

MR. BLUHM: All right. Very good.

Well, we have had about 25 minutes of discussion and very good questions, so I do appreciate that. That augments things we have been hearing in our process and really is the reason we are here. We really want to make sure that folks that do come can get stimulated with some of our information but then also can come back to us with good questions. And so I have taken some very good notes and so have the panelists here and we will take those back and

add them as well, so thank you very much.

As we near the end of the meeting, I would like to mention if you have materials that you have received that you no longer need, you can turn them back in and we will recycle them gladly. If there's more materials that you would like for other colleagues, we can give you extra packets as well. So feel free to use the materials however you see fit.

If there's no further questions, I will ask one last time, anything else come to mind?

Very good.

With that said, I would like to thank you for your attention. It's 6:57. Meeting now is adjourned. Feel free to stay as long as you like to ask any other questions offline with our staff members at the front or throughout the room. Thank you and have a great night.

STATE OF ILLINOIS)
) SS
COUNTY OF FRANKLIN)

I, Andrea M. Murphy, a Notary Public in and for the County of Franklin, State of Illinois, do hereby certify:

That the said proceeding was taken before me as a Notary Public at the said time and place and was taken down in shorthand writing by me;

That I am a Certified Shorthand Reporter of the State of Illinois, that the said proceeding was thereafter under my direction transcribed into computer-assisted transcription, and that the foregoing transcript constitutes a full, true, and correct report of the proceedings which then and there took place;

IN WITNESS WHEREOF, I have hereunto subscribed my hand and affixed my official seal this 22nd day of February, 2011.

_____
Andrea M. Murphy, RPR, CSR, CCR
IL CSR #084-004558
Notary Public in and for the
County of Franklin,
State of Illinois