

GLMRIS  
GREAT LAKES AND MISSISSIPPI RIVER INTERBASIN STUDY  
PUBLIC HEARING

FEBRUARY 1, 2011

2:00 P.M.

UNIVERSITY OF CINCINNATI  
TANGEMAN UNIVERSITY CENTER  
2766 UC MAIN STREET  
CINCINNATI, OHIO

1 A P P E A R A N C E S

2 PANEL:

3

4 GENERAL JOHN PEABODY

5 MR. DAVE WETHINGTON, III

6 MR. MIKE SAFFRAN

7 MR. JOHN ZIMMERMAN

8

9

10 List of Speakers:

11 Tim Guilfoile 52

12 Michael Toombs 63

13 Josh Lillard 70

14 Raymond Timmerman 71

15 Andy Betts 74

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1 P R O C E E D I N G S

2 MR. ZABOROWSKI: Good afternoon, ladies and  
3 gentlemen. If I could ask everybody to be quiet and  
4 turn down any cell phones and then we'll get started  
5 with this afternoon's meeting.

6 I'd like to welcome everybody to today's  
7 Great Lakes and Mississippi River Interbasin Study, or  
8 GLMRIS, NEPA public scoping meeting. My name is  
9 Kendall Zaborowski. I'm from the U.S. Army Corps of  
10 Engineers, Chicago district and I will be this  
11 evening's moderator.

12 Before beginning the meeting I would like to  
13 let everybody know the bathrooms, if you walk out this  
14 door and take a right and then there's a small hallway  
15 on the left with vending machines, the bathrooms are  
16 there. I'd like to now take a moment to introduce  
17 today's panel to my left and moving down we have Major  
18 General John Peabody. He is the commander of the Great  
19 Lakes Ohio River Division of U.S. Army Corps of  
20 Engineers. Next to him is Dave Wethington, the GLMRIS  
21 project manager. Then there's Mike Saffran who is the  
22 Other Pathways project manager. And then last at the  
23 table is John Zimmerman who is the chief of planning  
24 and policy at the Great Lakes and Ohio River Division.  
25 I would like to make an apology.

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1 I would like to make an apology. Normally at  
2 these meetings we have a representative from the White  
3 House Counsel Environmental Quality who today we were  
4 supposed to have Mr. John Goss, the Asian carp  
5 director, but due to the weather he cannot make the  
6 meeting, but never fear, General Peabody will be  
7 addressing some of his slides in the presentation  
8 today.

9 GENERAL PEABODY: Not nearly as well as he  
10 does.

11 MR. ZABOROWSKI: When you arrived today the  
12 following materials were available at the front desk:  
13 We have the GLMRIS business card which has several of  
14 our web sites, our actual project website, Facebook and  
15 how to follow us on Twitter and just general contact  
16 information. There was this tri-fold brochure which  
17 has general information about GLMRIS, the green meeting  
18 agenda which speaks to our schedule today, this white  
19 written comment form which has instructions on how to  
20 submit written comments or mail them into us.

21 I would like to note that the NEPA scoping  
22 period ends March 31st, so any comments must be  
23 submitted to us by that date. If you mail them in,  
24 they must postmarked no later March 31st. This purple  
25 paper is frequently asked questions about GLMRIS. The

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1 peach paper is frequently asked questions about other  
2 aquatic nuisance species efforts by the Corps of  
3 Engineers and then also we have copies of today's  
4 presentation. And then lastly as far as handouts, we  
5 have these blue informational booklets that is detailed  
6 information about the study that we will present today.

7           If you have pre-registered on the project  
8 website to give an oral comment and have not yet  
9 checked into the register-to-speak table, please do so  
10 now. If you have not registered online and wish to  
11 speak and have not registered yet, please do so now.  
12 We need everybody to have filled out one of these  
13 yellow registration forms. For people that are  
14 registered online, we just need your indication on the  
15 privacy statement.

16           Similarly, if you will be giving a comment  
17 today and you have a prepared statement and would like  
18 to leave that with us, you can just make sure you grab  
19 one of these light blue sheets from the registration  
20 table and fill that out. We would gladly accept it and  
21 make sure it's included in our NEPA scoping documents.

22           Our GLMRIS team has organized this public  
23 meeting to accomplish two goals, first to present  
24 information about GLMRIS and to inform everybody about  
25 the study and its goals. Second is to solicit public

1 input on what they feel are the significant issues that  
2 should be included in the study and also what issues  
3 are not significant that that can be eliminated from  
4 further study.

5           The Corps of Engineers is hosting 12 public  
6 meetings throughout the study area in an effort to  
7 provide opportunities for those within the study area  
8 to provide comments and to learn about the study. As I  
9 mentioned earlier, the NEPA scoping period ends on  
10 March 31st of this year.

11           As indicated on the green agenda, this public  
12 meeting is organized in two sessions. An identical  
13 presentation will be given at the beginning of both  
14 sessions and then following the presentation will be an  
15 oral comment period. The first public comment period  
16 after this session is scheduled to end at 5 p.m. and  
17 the second session is scheduled to begin at 5:30.  
18 There will be a 30-minute break between the two  
19 sessions. During that break the study staff will be  
20 available for informal questions and comments.

21           I would like to note that any questions asked  
22 of the panel during this time will not be included in  
23 the NEPA scoping process. For comments to be formally  
24 included, they need to be either given during one of  
25 our oral comment periods at one of our meetings,

1 submitted as a written comment or submitted as a web  
2 comment through our project website.

3           If you have any questions or concerns during  
4 the presentation or the meeting itself, please find  
5 somebody with a red lanyard and we'll try to help you  
6 out the best we can.

7           Now I would like to turn it over to General  
8 Peabody to begin the presentation portion of this  
9 meeting.

10           GENERAL PEABODY: Thanks, Kendall. Well good  
11 afternoon, everybody, and thanks for braving the  
12 weather that's bearing down on us to come out here  
13 today. We really do appreciate it. We only have a  
14 handful of folks here today so what I would suggest is  
15 after we finish the presentation we'll dispense with  
16 the normal rules that we have about limiting time for  
17 oral comments and we can have as long and as informal  
18 discussion as you all might wish. And we really do  
19 look forward to your comments, concerns and  
20 recommendations.

21           So first let me hit some of the highlights  
22 from the Asian carp control strategy, which is actually  
23 coordinated by the Council on Environmental Quality in  
24 the White House, and as of September, an Asian carp  
25 director was appointed by the Council on Environmental

1 Quality, Mr. John Goss, who is a former Director of  
2 Natural Resources in our state of Indiana and has a  
3 large resume which I'm not intimately familiar with,  
4 but in natural resource issues, both working in  
5 government as well as in private non-governmental  
6 sectors.

7           Okay. So beginning about a year and a half  
8 ago, the fall of 2009, after we had found environmental  
9 DNA that indicated that Asian carp may be closer to the  
10 fish areas than we previously detected a live specimen,  
11 the federal family began coordinating on an ad hoc but  
12 routine basis to address the concerns related to that  
13 issue.

14           The primary but not all the agencies included  
15 the Army Corps of Engineers, the Environmental  
16 Protection Agency, U.S. Fish and Wildlife Service, the  
17 U.S. Coast Guard, the Illinois Department of Natural  
18 Resources, and Chicago Area Metropolitan Reclamation  
19 District. And again, those are the primary, the most  
20 active players, but there was a whole host of both  
21 governmental agencies and non-governmental agencies  
22 that contacted us and provided their concerns and  
23 recommendations which we have consistently considered  
24 and implemented where we could.

25           In the fall, late fall of 2009, right before



1 Thanksgiving, we found for the first time environmental  
2 DNA of Asian carp above the fish barrier, and since  
3 that time we found a smattering of environmental DNA of  
4 hundreds of processed. The positive hit rate has been  
5 on the order, depending upon the time and location,  
6 between two and five percent. So a relatively low  
7 order of magnitude and yet clearly an issue of great  
8 concern.

9           In February of 2010 the White House CEQ  
10 published really at that point an effort that was led  
11 primarily by the EPA who coordinated all the issues,  
12 published the first draft Asian carp control strategy  
13 framework. That was updated in May of last year and  
14 updated again in December of last year. So we've had  
15 three iterations of this, but they all have the same  
16 basic approaches in common, which is to find and  
17 continue to apply the best available technologies and  
18 capabilities and research, promising research aspects,  
19 to deal with this very important issue for the Great  
20 Lakes states.

21           I do want to remind everybody that the  
22 purpose of this meeting is to discuss the Great Lakes  
23 and Mississippi River Interbasin Study which has to do  
24 not just with Asian carp but with all invasive species  
25 on both sides of the basin. Now what is -- what the

1 federal family did and what has been formalized,  
2 increasingly formalized, over the course of the last  
3 year plus is put together what we call an Asian carp  
4 regional coordinating committee which formalized all  
5 the agencies that are involved in actively doing  
6 things, taking steps, applying engineering, applying  
7 management control technologies and techniques to deal  
8 with this issue.

9           And you can see the executive committee  
10 consists of the people listed who represent the  
11 agencies indicated were the most active with the  
12 exception of the non-federal agencies. And I'm sorry,  
13 I did not mention the U.S. Geological Survey has also  
14 been very actively involved, mostly in the research  
15 side of the equation, and that's Dr. Leon Carl on the  
16 slide. Bill Bolen works for EPA Region 5 in Chicago.  
17 Cameron Davis is the Great Lakes special advisor to the  
18 EPA administrator. Mike Parks is a Rear Admiral in the  
19 Coast Guard stationed out the Cleveland. Charlie  
20 Wooley is the Deputy Regional Fish and Wild Life  
21 Service Director out of Milwaukee. I'm the regional  
22 Corps of Engineers commander here stationed out of  
23 Cincinnati and my deputy for the Great Lakes and  
24 Chicago area commander, Vince Quarles has been actively  
25 involved in this, and then Leon Carl as mentioned. And

1 then Jim Bredin was hired on to assist Jim Goss. He's  
2 a former Michigan Department of Natural Resources  
3 professional.

4           And then you can see all the other active  
5 players which includes all the Great Lakes states  
6 listed in the coordinating committee. We have  
7 telephone conferences that generally last an hour,  
8 sometimes more, on a minimally biweekly basis,  
9 sometimes weekly. And you can see that we have two  
10 subgroups, Interconnecting Waterways Workgroup and  
11 Communications and Outreach Workgroup that support all  
12 this.

13           So we do have a semi-formalized mechanism to  
14 exchange information and to coordinate activities and  
15 to try to make sure that we have the most synchronized  
16 approach to this issue which is pretty complex, and  
17 because we have different authorities in all of our  
18 different federal agencies, the synchronization piece  
19 is really important to try to achieve.

20           Now, recently I think in the last two months,  
21 I don't have a specific date and John would know but  
22 he's not here due to the weather, we set up this non-  
23 federal technical and policy group. We didn't stand it  
24 up. We were approached by several stakeholders, Dr.  
25 Phil Moy who works for Sea Grant in Wisconsin, is that

1 right, Ernie? Thanks. And he has advised us. He's a  
2 former Corps of Engineers employee many years ago, but  
3 he's advised us on fish barrier for some number of  
4 years. He approached us and recommended that he would  
5 like to stand up this policy group of a wide variety of  
6 scientists and industry, NGO's, recreational interests  
7 and so forth, all indicated there, to get periodic  
8 briefings and to advise and make recommendations to us  
9 in an informal fashion.

10 So Mr. Goss agreed to do that and this group  
11 now exists. I'm actually not personally familiar with  
12 how they interact with Mr. Goss, but he does coordinate  
13 their activities with us at their request periodically.

14 Okay, 2010. Let me just give you kind of the  
15 year in review, if you will. So what did we do in  
16 2010? Well, we basically went from a standing start  
17 where virtually the only thing that we had to stop  
18 Asian carp from migrating into the Great Lakes or from  
19 allowing other species to migrate from the Great Lakes  
20 down to the Mississippi River through the Illinois  
21 River and the Chicago Area Waterway was the fish  
22 barrier.

23 In 2009, in April of 2009, we activated for  
24 the first time Barrier IIA. Barrier IIA was the first  
25 barrier that we had available that could take the

1 operating parameters, which is voltage, basically the  
2 electrical parameters, voltage, frequency, hertz and so  
3 forth, to the levels that our laboratory research  
4 indicated needed to be taken to be optimally effective  
5 against Asian carp. We had executed a demonstration  
6 barrier prior to that which has been shown to be  
7 effective in the field but subsequent laboratory tests  
8 indicated could not be optimally effective.

9           When we found the eDNA evidence of Asian carp  
10 in August of 2009, or actually July 31st I think it  
11 was, within two weeks we took Barrier IIA to these  
12 higher operating parameters and have had that barrier  
13 operating at those parameters since. Within a month we  
14 went back to the administration and said because of the  
15 huge concern associated with Asian carp that now appear  
16 to be much closer than before, we feel a compelling  
17 need to get the third barrier, Barrier IIB, which is  
18 kind of an improved version of Barrier IIA that can  
19 operate at this higher parameter, to get that up and  
20 operational.

21           But the funding mechanism that Congress  
22 follows, as you may know, is at least a two-year  
23 process from the time the budget is developed, it's  
24 proposed by the President, it goes before the Congress,  
25 and Congress either acts or as happened this year does

1 not act and we operate under continuing resolution.

2           The administration said we think you're  
3 right. We need to put some more resource to this and  
4 we just so happen to have a capability that we normally  
5 don't have other than supplemental which is the  
6 American Recovery Reinvestment Act, the so-called  
7 stimulus funding. And so the administration agreed to  
8 allocate the funds that we needed to accelerate  
9 executing Barrier IIB by a year.

10           So we accelerated our design process and we  
11 began construction in the spring of 2010 and we  
12 completed the construction or the most major components  
13 of the construction in December and we've been doing  
14 safety and operational testing since then. So far that  
15 safety and operational testing has gone extremely well.  
16 We've had some minor issues we've had to work through,  
17 but we are approaching the end of that testing and we  
18 believe we'll be able to take Barrier IIB into full  
19 operation by the end of February.

20           Now for some reason if Barrier IIA went down  
21 we could turn Barrier IIB on now and it would be  
22 operating with confidence. There would still be  
23 testing we'd need to work through at some later date  
24 though. So at some time in the next few months we  
25 believe we're going to take Barrier IIA down for

1 maintenance and Barrier IIB will come up and it will be  
2 the primary operating barrier for some time. That's  
3 extremely important because it gives us redundancy in  
4 the Chicago Area Waterway System if something would  
5 happen to one barrier or the other.

6           What else have we done in 2010? Well, one of  
7 the things that Congress gave us in 2007, which we  
8 didn't get funds for until 2009, was an authority to do  
9 an efficacy study of the fish barrier. So what are we  
10 supposed to do? Well, figure out whether the fish  
11 barrier actually works as designed, will the fish  
12 barrier -- are there other pathways around the fish  
13 barrier that might be of concern and so forth.

14           So we executed the study and we cycled out  
15 four reports in 2010 in the space of just a few months,  
16 about eight months or less. Those four reports, first  
17 we looked at the possibility of flooding from the Des  
18 Plaines River spilling over into the Chicago Area  
19 Waterway System and the sanitary and ship canal. And  
20 if you look at where the electric barrier is, the star  
21 on the map, you can see that above that is kind of a  
22 blurred black and blue line. Well, the blue is the Des  
23 Plaines River and the black line is the sanitary ship  
24 canal. They are separated by only a few dozen meters.  
25 The closest point I think is about 150 to 200 meters

1 part, which is very close.

2           In higher rain events, the Des Plaines River  
3 has a habit of spilling over into the sanitary ship  
4 canal which is at a lower point in elevation than the  
5 Des Plaines River and that's a problem because if you  
6 have fish, Asian carp, that enter the Des Plaines River  
7 below the fish barrier and then migrated above it and  
8 we have some eDNA evidence to indicate that there may  
9 be Asian carp in the Des Plaines River, then they might  
10 be able in a flood event to spill over into the  
11 sanitary and ship canal.

12           So we investigated and built a 13-mile  
13 barrier under this efficacy study and authority  
14 provided by Congress to emergency actions to prevent  
15 that from happening, and that was completed in October  
16 of 2010 and it's working fine. It's a temporary system.  
17 We're going to continue some work to make it a more  
18 permanent system, but it is going to be very minor  
19 modifications to be able to do that.

20           What else did we do? We've continued our  
21 laboratory and field research on the efficacy of the  
22 fish barriers, the actual parameters themselves, and  
23 while that report is not complete, the fundamental  
24 bottom line is that the evidence that we have continues  
25 to reenforce that the current operating parameters are



1 appropriate to the situation.

2           So some people ask us, for example, why don't  
3 you turn up the barrier? You're not at the maximum  
4 voltage. That's true. The point is it's not  
5 necessary. It would create increased safety hazards  
6 because of the increased amount of electricity going in  
7 the water. It would put more stress on the system,  
8 which it's like riding in a car consistently at 140  
9 miles and hour versus 60 mile an hour. What's going to  
10 happen, the car is going to fail quicker. It could  
11 decrease the reliability of the system and it would  
12 cost a significant amount of additional money and,  
13 quite frankly, we're strained for money. We all read  
14 the papers. We don't get all the money we need  
15 necessarily. We have to figure those things out.

16           So that's still ongoing. We hope to have  
17 that report completed and published in June. However,  
18 like with much scientific research, there will continue  
19 to be probably over the months and years going on in  
20 the future continued research that we'll have to follow  
21 based on new information that becomes available to us  
22 over time.

23           Okay. What else did we do? Well, in January  
24 of 2010 we started looking at what we might do with  
25 what we have in the system without having to build

1 something new because it takes a long time to go from  
2 drawing board to construction to operation. You've got  
3 to get the authorities, you've got to get the money,  
4 it's a complicated process. You've got to get the real  
5 estate. You know, just because you find an ideal place  
6 doesn't mean the seller is going to be willing to give  
7 it to you.

8           What else can we do? We looked at all of the  
9 infrastructure that's in the Chicago Area Waterway  
10 System and we asked ourselves can we modify the way  
11 these structures operate in any way that might be  
12 effective to deter or lower the probability that Asian  
13 carp if they are present could get into Lake Michigan?

14           We went through this analysis and did  
15 actually two reports and the bottom line was the first  
16 report said there is a technology out there which is a  
17 combination of lights and sounds and bubbles that you  
18 can put in the water that deters fish, but it's not 100  
19 percent effective. It probably borders on a magnitude of  
20 less effective than the fish barrier, probably around  
21 70, 80 percent effective is what the science tells us.  
22 That could deter fish from going on a certain pathway  
23 under certain conditions, but it appears to be very  
24 expensive.

25           So we made the recommendation that that

1 should be considered and that's up in the  
2 administration and Congress is aware of it and whether  
3 the administration proposes it or Congress decides they  
4 want to fund it even if they don't, you know, remains  
5 to be seen. But the fish barrier continues to be  
6 clearly much more effective than that and the most  
7 effective tool that we have in the toolbox.

8           The other thing we did is we looked at the  
9 locks that enter into Lake Michigan and we looked at  
10 some of MWRD's facilities like the Wilmette pumping  
11 station for example, and we asked is there ways we can  
12 change these. We also looked at the outfalls from the  
13 overflow sewage system that MWRD operates. So one of  
14 the things we thought about was can we change dissolved  
15 oxygen levels in the water to make it more  
16 uninhabitable or inhospitable for fish?

17           The short answer to that is no because you  
18 have to violate the Clean Water Act. Effectively you  
19 have to drop more raw sewage into the sanitary and ship  
20 canal after we spent the last generation trying to  
21 clean it up. So that didn't work.

22           Intuitively we thought by changing the way we  
23 operate the locks on a less routine basis that we might  
24 be able to reduce the probability of fish passing  
25 through the locks. That's what we thought. After we

1 put a fish and wildlife assistants, we put a panel of  
2 fish biologists together, there was a wide variance of  
3 opinion, but the bottom line, the one thing they agreed  
4 on was that it's really not likely that that's going to  
5 make any big difference. And we cannot take just  
6 whimsical action. We have to have a good scientific  
7 basis, a factual basis to take action. So essentially  
8 based on the information they provided we couldn't take  
9 action at that time.

10 Under GLMRIS we will continue to study more  
11 long-term or permanent lock closure as a possibility  
12 alternative. Okay? So this study on the lock closure  
13 issue is not over, but we just couldn't do it on that  
14 timeline.

15 What else has been done? Fish and Wildlife  
16 and Illinois DNR have done a massive, massive effort to  
17 fish the waterways and try to detect Asian carp. It's  
18 well known by now that although we've caught hundreds  
19 of thousands of pounds of fish and killed tens of  
20 thousands of fish of all kinds of varieties, we have  
21 only found one Asian carp above the barrier. That was  
22 in Lake Calumet found in late June of last year.

23 So we have indeed found an Asian carp. We've  
24 continued to apply eDNA and we've continued to work  
25 with UND in that matter. We have cycled because they

1 are primarily a laboratory agency not designed to do  
2 long-term operational activities, we cycled the eDNA  
3 capability from the University of Notre Dame to the  
4 Corps of Engineers research and development center.  
5 They are handling that now.

6           We increased our capacity. We doubled it  
7 from about 60 samples a week to 120 samples a week that  
8 we can do now. And let me see, what am I missing? Oh,  
9 the Illinois DNR has also gone down to the pools,  
10 several pools below the Lockport lock and dam, which is  
11 the pool where the electric barrier is, to where we  
12 have a large concentration of Asian carp and they've  
13 done some intensive fishing down there to reduce the  
14 population and reduce the population pressure of fish  
15 trying to migrate up.

16           Why do they migrate? Well, more food. If  
17 they are in a pool where there's lots of food, there's  
18 a lower probability that they will continue to migrate.  
19 And then the Illinois government has done some things  
20 with trade agreements with China to try to ship the  
21 carp over to Asia and things like that.

22           So there's lots of things we have done in  
23 2010 and I'm not familiar with all of them. USGS has  
24 all kinds of research capabilities they are looking at,  
25 whether there's pheromones or other capabilities that

1 they might be able to put in the water that could --  
2 certain kinds of food that just Asian carp would eat  
3 and just kill them and all kinds of things that I also  
4 intend to look at. But those are the key things that  
5 the Corps of Engineers have done in 2010.

6           Okay. In addition in Indiana just north of  
7 here we found, what's the name of that swamp there,  
8 Dave? Eagle Marsh, thanks. In Eagle Marsh there are  
9 about 20, 30, 40 miles south of Eagle Marsh, the  
10 Illinois/Indiana DNR detected a breeding population of  
11 Asian carp. It created a big concern and Eagle Marsh  
12 is the area that floods almost every year. Every two  
13 or three years you get flood waters up to four feet  
14 high that move through this area and it allows a  
15 temporary pathway, aquatic pathway, for fish species to  
16 migrate between the two basins.

17           So working with GLRI funds, Great Lakes  
18 Restoration Issue funds, Indiana was able to put up a  
19 fence that is a temporary barrier to the migration of  
20 fish through that area and block off that pathway in  
21 the short-term at least.

22           We also accelerated one aspect of the Great  
23 Lakes and Mississippi River Interbasin Study which is  
24 looking at the other pathways. We had a plan to do  
25 that, but when we found out about the Eagle Marsh

1 issue, we accelerated that plan by just basically  
2 throwing more resources at it.

3 Mr. Mike Saffran, that was his full-time job  
4 for several months. And in coordination and  
5 corporation with all of the states and a whole host of  
6 local experts, we identified what today are 36, up to  
7 37 now?

8 MR. SAFFRAN: 36.

9 GENERAL PEABODY: 36 pathways. I think  
10 there's one in Minnesota that we're going to take a  
11 look at.

12 MR. SAFFRAN: That went away.

13 GENERAL PEABODY: That went away? Thanks,  
14 Mike. 36 possible pathways that under certain weather  
15 conditions might be able to open aquatic connections  
16 between the two basins.

17 It's very complicated. Mike is going to talk  
18 about this later, but the bottom line is the only one  
19 of major concern was Eagle Marsh. There are others  
20 under certain conditions that could be a problem, but  
21 in general to get to those points you have to go  
22 through or bypass some dams and other issues that are  
23 difficult to get around. So the risk associated with  
24 those while not zero is much lower. However, we're  
25 going to continue to work forward and get the facts we

1 need about what's the risk associated with these and  
2 then as we get a very clear understanding of what the  
3 risks are, we'll take a look at recommendations for  
4 dealing with the highest risk pathways.

5           And here's just some photographs of Illinois  
6 DNR and Fish and Wildlife personnel. We have had some  
7 Corps personnel helping them out periodically doing  
8 intensive fishing and gill netting that you see them  
9 doing there under winter conditions which is pretty  
10 unfriendly.

11           The December 2010 Asian carp control strategy  
12 I believe, help me out with the numbers here, 45  
13 separate actions that we have in that, 48 separate  
14 actions that are in that strategy framework. Again, I  
15 focus on the dozen or so that the Corps is responsible  
16 for, but there's all kinds of things that the other  
17 agencies are doing and I kind of hit the highlights of  
18 some of those.

19           I'm not sure what that's a picture of. Okay.  
20 The ongoing projects. We talked about the Great Lakes  
21 and Mississippi River Interbasin Study. I'll get into  
22 that more later. The bottom line is this is a very  
23 complex project. We feel good about our Program  
24 Management Plan that we published. The public scoping  
25 meetings are very important for us and we look forward



1 to your feedback as we go forward.

2 I already talked about the fish barrier.  
3 There's a couple things I want to highlight though. It  
4 has been alleged that the fish barrier is not  
5 effective, that we have no evidence that it's  
6 effective. Untrue. I want to state that  
7 categorically. Untrue. The fish barrier, everything  
8 that we have, all the evidence that we have indicates  
9 to us the fish barrier is not only effective but highly  
10 effective.

11 We are doing more research to confirm the  
12 data that we have, to get more data to increase our  
13 confidence. Let me tell you why we know. Two things.  
14 Number one, we've done a number of studies in the  
15 laboratory, and again, this will be published in a few  
16 months, the details of which, but we've testified to  
17 this in court so the information in generic terms is  
18 available, to determine the optimal parameters of the  
19 fish barrier and we have very high confidence that  
20 those parameters against adult fish or even juvenile  
21 fish are effective.

22 There are concerns that they may not be  
23 effective against small, what do they call them, the  
24 young-of-the-year fish, but there are no young-of-the-  
25 year fish in that area because they are about four

1 pools away where they have a breeding population.

2           The second thing is we've done a lot of field  
3 tests with telemetry, with Vixon cameras and other  
4 technologies to detect whether or not any fish are  
5 passing through the barriers. And even Barrier I we  
6 haven't found any fish passing through them. Well,  
7 four years ago we did some field tests and we have more  
8 field tests that are going on right now to look at  
9 Barrier I which is the lower parameters and there was  
10 one fish that went through or one I should say  
11 transmitter that went through and then it went through  
12 in the wake of a boat and shortly after the boat got  
13 through the barrier, it stopped, it stayed stationary  
14 and then died. They subsequently found the transmitter  
15 and it was not in a fish. So the speculation is it may  
16 have gone through somehow with the boat's wake or  
17 something.

18           There is a concern that fish, if they are  
19 just right underneath the metal hull of a barge or  
20 boat, that we do have evidence to indicate that in that  
21 very close area that that may nullify the effects of  
22 the fish barrier and we have research that we're going  
23 to be doing this year to examine that.

24           So is the fish barrier effective? Yes. Is it  
25 perfect? We don't know. We're looking at it. As we

1 do our research and find out whether there are areas of  
2 concern, then we'll attack those areas of concern. Oh,  
3 and to go back, you can see the order, from right to  
4 left is north to south. So Barrier I has been in place  
5 since 2003? 2002, thanks Dave. Barrier IIB has been  
6 operating since April -- IIA since April of 2009. IIB  
7 is finalizing tests right now and will be able to go in  
8 operation in about a month.

9           Okay. Again, there's all kinds of research  
10 and fishing that's being done by the natural resource  
11 agencies. This map portrays eDNA and let me just kind  
12 of focus on the left lower box there. And what you see  
13 there are a bunch of diamonds. Those diamonds indicate  
14 to you whether we had a positive or a negative result  
15 from the Asian carp eDNA test at those specific  
16 locations. And these are published on our [Asiancarp.org](http://Asiancarp.org)  
17 website. And you can see that, for example, I think  
18 this is the Des Plaines River, regardless, you can see  
19 that red dot just above the yellow highlight, that  
20 indicates that that particular sampling effort and the  
21 sampling efforts you go out for a day or two, you  
22 collect a couple dozen or a few dozen samples and bring  
23 them back and process them. There was one positive hit  
24 there.

25           Question, does eDNA mean there's live Asian

1 carp there? Answer, we don't know at this point  
2 because the research has not progressed to the point  
3 where we can say affirmatively that it does. There are  
4 opinions on both sides of that equation. We have an  
5 independent peer review of the eDNA technology that  
6 will be published I hope soon in the next month or so  
7 and that may shed more light on that question. But the  
8 fundamental issue is right now all it means is there's  
9 DNA evidence there. That's all it means. Did it come  
10 from a live fish? Maybe. Did it come from dead fish?  
11 Maybe. Did it come from eggs? Could be. I mean, we  
12 just don't know is the answer. There's many ways that  
13 DNA evidence could get in the canals.

14           Okay. Let's move on to GLMRIS now. I'm a  
15 little bit more familiar with this topic. So let me  
16 highlight a few things for you in these slides. What  
17 are we doing with this study? Well if you look at that  
18 authority, it basically tells you four things. First  
19 it tells the Corps of Engineers to do a study, and it  
20 tells the Corps of Engineers to study the range of  
21 options and technologies available. That means we can  
22 get them now or the very near future. What are the  
23 technologies and options we might apply to the issue of  
24 invasive species?

25           Two, what are we going to do to prevent the

1 spread of aquatic nuisance species? Where? Between the  
2 Great Lakes and Mississippi River basin. So not just  
3 Asian carp, not just from the Illinois River toward  
4 Lake Michigan but both directions, the whole basin, all  
5 1500 miles, 1500 miles of that very flat complex  
6 terrain. And it's complex because it's flat from a  
7 hydrologic perspective. Small nuances in the terrain  
8 along this entire divide make a huge difference about  
9 how water flows and what aquatic species might do.

10           And finally it tells us specifically to focus  
11 on the Chicago Sanitary and Ship Canal and other  
12 aquatic pathways. Those are the other pathways  
13 monitored that we use for everything outside the  
14 Chicago sanitary and ship canal.

15           So what are the special considerations we've  
16 taken from the interaction we've had with public and  
17 stakeholders thus far? Well, first of all there's lots  
18 of folks that believe that these solutions are  
19 hydrologic separation. The Corps of Engineers cannot  
20 take a position on an end state of a study. The whole  
21 purpose of the study is to determine what are the range  
22 of options and technologies.

23           So although the Great Lakes Commission is  
24 doing a study that's focused on how to execute  
25 hydrologic separation, and we hope to be able to use

1 that information if it meets our qualitative standards  
2 that they develop. We can not determine that that's  
3 what will be the recommendation. I can tell you that  
4 we're going to study that option, that will be part of  
5 what we take a look at.

6           Prevent. This has also caused some  
7 consternation by some people. The goal of the study is  
8 to do exactly what Congress told us to do, prevent the  
9 transfer of aquatic nuisance species between the two  
10 basins. However, our history tells us that it's  
11 possible that we may not be able to get to that perfect  
12 ideal end state of 100 percent prevention. We may end  
13 up finding that the current state of technology and  
14 options that are available to us can only reduce the  
15 risk to some smaller amount than 100 percent. And,  
16 frankly, that's what all our human experience tells us,  
17 that you can reduce risk, but you can never eliminate  
18 it completely.

19           We will still be focused on trying to prevent  
20 it as a goal, we just can't guarantee that we can  
21 recommend that because we don't know what the study is  
22 going to tell us because we haven't done the study yet.

23           Finally, it's 100 percent federally funded.  
24 Some people say that's a great thing. The federal  
25 government is going to cover it. Yeah, the federal

1 government will cover it, but that doesn't mean that  
2 the federal government can afford to give us all the  
3 funding we need to do the study efficiently. So we may  
4 be limited in how quickly we can progress with the  
5 study based on the resource limitations of the federal  
6 government.

7 I can tell you this, the administration is  
8 very aware of the importance of this study to the  
9 nation and this region and this is a priority study  
10 that will compete along with other priority studies for  
11 the limited funds that are available. Also I will tell  
12 you frankly and based on all my experience it's  
13 unlikely that this study will be 100 percent funded to  
14 our full efficient capability because I don't know of a  
15 single study that we have today that is funded 100  
16 percent to full federal capability. There may be one  
17 or two, but I'm not aware of them.

18 Okay. Now where are we going to do it?  
19 Well, this map kind of tells it all. It looks great  
20 and briefs great in a Power Point slide, but if any of  
21 us were to get out our hiking boots and our backpack  
22 and our water and walk along that line, it would take  
23 several months to do that. 1500 miles is no small  
24 thing.

25 The focus area is in the red square. Chicago

1 Area Waterway System, Mr. Dave Wethington, he's the  
2 man. He's been in charge of the study from the  
3 beginning and that's his focus area. That's the only  
4 pathway that we know of that's always open to aquatic  
5 species to transfer through the water from one basin to  
6 another; therefore, it is the priority. And that's  
7 where we're putting our priority effort.

8           The good news is because of the fish barrier  
9 and all the efforts I've talked about, we as a federal  
10 family feel very confident that the steps we're taking  
11 have reduced the risks pretty dramatically of Asian  
12 carp or other species transferring through. The bad  
13 news is, if you call it bad news, is we don't know  
14 everything we need to know and we've got to do a lot  
15 more research. Okay?

16           Now, let me highlight two other things. When  
17 we talk about the Great Lakes and Mississippi River  
18 basin, the Mississippi River basin includes not just  
19 the green area but kind of the gray area in the  
20 Missouri River and Arkansas and Red River deltas as  
21 well, basins as well off to the west of Illinois and  
22 Ohio. But the primary area we're going to focus on for  
23 the Mississippi River purposes is the upper Mississippi  
24 and the Illinois and Ohio River basin because it's the  
25 connecting areas into the Great Lakes and vice-versa



1 that are of concern. So that's kind of the basis  
2 that's the focus. The brown area is obviously the  
3 Great Lakes basin itself.

4           Okay. What's in and what's out? Here's your  
5 track record and here's your score card. What in? If  
6 it's aquatic pathway, we're looking at it. If it's  
7 terrestrial, ground-based pathway, if it's airborne,  
8 not doing it. We're going to look at anything that  
9 swims, floats or hitchhikes through aquatic pathways,  
10 fish, plants, parasites, insects. We're not going to  
11 look at insects that fly and we're not going to look at  
12 human release, at least that's not going to be the  
13 focus area. If there's information that comes to our  
14 attention that's of consequence, we'll consider it, but  
15 that's not the purpose of the study.

16           Where? I already showed you the map. The  
17 interface between the Great Lakes and the Mississippi  
18 River basin does not include the Atlantic slope, does  
19 not include the St. Lawrence Seaway, does not include  
20 Canada. We have no authority in Canada. That's of  
21 some concern that we've heard to some Canadians, and we  
22 will take into consideration any information provided  
23 by our Canadian allies, but that's not what we're going  
24 to focus on in this study. But portions of 31 states  
25 are included, and that's a pretty big area.

1           So, I've already talked about the elements of  
2 it, the options and technologies to prevent the  
3 interbasin transfers. It's not detailed biological  
4 research on aquatic nuisance species, that would take  
5 forever. We're not going there. We're basically going  
6 to take information that's off the shelf. If there's  
7 any information that we think we need from that off-  
8 the-shelf information that would inform the study,  
9 we'll work with our fish and wild life and our USGS  
10 brothers and sisters and ask them to help us out.

11           The last point, Environmental Impact  
12 Statement. This is subject to all of the laws that any  
13 study is subject to and it's not just the study  
14 authority itself. Okay? There's physical law, there's  
15 administrative law, environmental law. There's all  
16 kinds of law that this is subject to. And the  
17 environmental impact statement process is a tried and  
18 true, extremely good process for us to follow and it's  
19 the law and we're going to follow it whether we think  
20 it's right or not, but we do think it's right because  
21 the EIS process ferrets out all the issues of concern  
22 that have to be balanced and weighed, environmental,  
23 economic and social, in order to come to balanced  
24 judgments about the best thing to do with this issue.

25           Okay. What's our strategy? I talked about

1 the two focus areas, and the one is not really a focus  
2 area, it's everything else, the other pathways, but in  
3 general the other pathways have the same  
4 characteristics in that they are not open all the time,  
5 they are open intermittently.

6           The primary area is and always will be the  
7 Chicago Area Waterway System. We have organized for  
8 success both internal to the Corps of Engineers and  
9 executive steering committee that includes the federal  
10 family members that are primarily involved with  
11 authorities and capabilities that may help us, and we  
12 have all kinds of stakeholders we're reaching out to  
13 both informally and formally through this public  
14 hearing scoping process.

15           We will cycle out interim products and  
16 reports as the information is mature enough to do so.  
17 If it's pure facts and we are confident that we've got  
18 our arm around the facts, then we'll send out a report  
19 and say here are the facts that the study ferreted out.  
20 If there's analysis required that's more complex and we  
21 can only put it out there once it's mature enough and  
22 we have confidence that the analysis is complete enough  
23 for public scrutiny and comment, but the point is we  
24 intend to do that incrementally. And we may recommend  
25 incremental approaches to this issue because we

1 recognize that the issue of aquatic species, especially  
2 Asian carp, is a really important one to both of these  
3 basins and has a dramatic impact, environmental, social  
4 and economic, on our livelihoods in this region that we  
5 know and love.

6           And then we'll adapt to all the situations  
7 and new information as it becomes available, and as I  
8 mentioned, there's a whole host of legal and regulatory  
9 requirements that we have to follow. So I've hit most  
10 of this already. I think what's interesting in this  
11 slide is the pictures because you think aquatic  
12 nuisance species, I thought fish. I'm not a fish  
13 biologist. No. It's a heck of a lot more complex than  
14 that. It's basically anything that operates and lives  
15 in the waterway. So, yes, it's mostly fish, but  
16 there's plants, there's insects, there's all kinds of  
17 things that could have a negative biological impact if  
18 they transferred from one basin to the other. It's the  
19 non-native stuff that we're focused on primarily. But  
20 the point is not necessarily non-native to the Great  
21 Lakes, but if it's in the Great Lakes native, it's  
22 indigenous and it's not indigenous to the Mississippi  
23 River basin, it applies. And the reverse applies also,  
24 native to the Mississippi River basin, not to the Great  
25 Lakes, it applies.

1                   However, I would point out that about 4,000  
2 years ago there was a waterway connection between  
3 today's Lake Michigan and the Illinois River. So there  
4 is an actual factual history of having some waterway  
5 connection but that's silted in over time.

6                   Okay. Dave, do you want to talk about this  
7 slide first?

8                   MR. WETHINGTON: Thank you, sir. I just want  
9 to spend a couple minutes today familiarizing you with  
10 the Chicago Area Waterway System, some of the  
11 complexities of the study. Again, my name is Dave  
12 Wethington. I'm the project manager for the overall  
13 GLMRIS project. And on the right-hand side of the  
14 slide you see a map of the Chicago area waterways.

15                   There are five points along Lake Michigan  
16 numbered one through five at which waters of Lake  
17 Michigan and the waters of the Mississippi River basin  
18 have an opportunity to intermix, to interact with each  
19 other and those are the transfer points. You'll notice  
20 there are numbers, one, two, three, four, five, and  
21 there's also number six down there and basically what I  
22 want to point out is numbers one, two and six are what  
23 we call water control structures, whether they are  
24 pumping stations or a lock and dam, those are physical  
25 structures that can control the water flow between the

1 two basins.

2           If you look at four and five, which are  
3 wholly located within the state of Indiana the other  
4 three are in the state of Illinois, four and five are  
5 what we call uncontrolled. Basically it means there is  
6 no physical blockage between that those waterways -- no  
7 physical structures. And you can imagine the Chicago  
8 waterway system are kind of like the prongs on a fork.  
9 There are five prongs and they all flow into the one  
10 handle. The handle of the fork is basically the  
11 Chicago ship and sanitary canal. So all five of those  
12 points drain into the single connecting waterway.

13           If you look there's number seven. Number  
14 seven is where we have located the fish barrier. So  
15 that's why the fish barrier, the electronic barrier, is  
16 effective at controlling the spread of specifically  
17 Asian carp into the Great Lake system because it  
18 provides that choke point for all those waterways into  
19 the Great Lakes.

20           If you look on the left-hand side, basically  
21 this outlines the Corps of Engineers planning process  
22 that we are using for the interbasin study. Specifying  
23 problems and opportunities, that's what we're here  
24 doing today.

25           We put a team together. We're working with,

1 as General Peabody said, the federal family, non-  
2 federal state resource agencies, stakeholders and  
3 persons like yourself to see what are the problems,  
4 what are the potential opportunities for this study,  
5 what's important, what's significant, and just  
6 importantly, what may be not significant to the scope  
7 of this study.

8           From there we're going to inventory forecast  
9 conditions to basically develop a baseline. What is  
10 the status? What are the existing uses of the  
11 waterways? You might have heard a lot about commercial  
12 navigation and that's the main usage for the water.  
13 There are actually several other very important uses  
14 for the Chicago area waterways, those include but are  
15 not limited to recreation, industrial uses such as  
16 water supply, water discharge. The entire Chicagoland  
17 area has a wastewater treatment infrastructure that  
18 discharges into the Chicago Sanitary and Ship Canal.

19           About 70 to 80 percent of the total volume of  
20 the Chicago River is that industrial -- the local  
21 municipal wastewater discharge.

22           Another very, very important use of the  
23 Chicago area waterway is flood risk management. There  
24 are large storm events in the city of Chicago. It  
25 doesn't happen very often, maybe every couple years,

1 every five years. Usually storm waters flow into our  
2 system or we have excess storm water flowing into the  
3 Chicago Area Waterway System and be carried down toward  
4 the Mississippi River.

5           If we have a large enough storm events, we  
6 need to open up those locks at structure number two up  
7 there and allow water to backflow, so go the opposite  
8 direction from which it normally goes, into Lake  
9 Michigan to alleviate the pressure on the Chicago area  
10 sewer infrastructure. If that were not able to happen,  
11 you would have not only overbank flooding in the  
12 downtown area, you'd have enormous sewer backup  
13 throughout the Chicagoland area affecting millions of  
14 residents, businesses, industry, et cetera.

15           So once we collected all this information on  
16 what waterway uses are, then we have to look at what  
17 are the potential impacts of these controls that we are  
18 looking at for the study. So if you were to do  
19 hydrologic separation, for example, what are the  
20 impacts to water supply, water discharge, navigation,  
21 et cetera. So those are all the alternative evaluation  
22 processes that the interbasin study will look at as  
23 well as potentially lead to mitigate for any adverse  
24 impacts.

25           Again, as General Peabody mentioned several



1 times, we are collaborating with our state, federal and  
2 other regional agencies including Native American  
3 tribes, governmental and non-governmental  
4 organizations. With that, I'll turn it back to you,  
5 sir.

6           GENERAL PEABODY: Thank you very much. Other  
7 Pathways, as I talked about earlier, Mr. Mike Saffrin  
8 has been the lead for this and is most familiar with  
9 this and I will ask him to give comments on where we're  
10 at.

11           MR. SAFFRAN: Thank you, sir. It's a pleasure  
12 to be here today. I appreciate everybody that's come  
13 out to hear this and contribute your comments. The  
14 Other Pathways, when we started into the GLMRIS, a lot  
15 was known about the Chicago area waterways and the risk  
16 associated with Chicago sanitary and ship canal. Very  
17 little was known about other aquatic pathways and  
18 whether or not there was any risk associated with other  
19 pathways besides Chicago sanitary and ship canal. As  
20 General Peabody mentioned, there were some indications  
21 early last summer that there was a potential serious  
22 connection in the Fort Wayne area.

23           When he heard that, he basically tasked a  
24 division-led team to within 60 days produce a draft  
25 report that provided an inventory of all potential

1 aquatic pathways, a preliminary risk characterization  
2 to make sure if there was any significant risk  
3 especially associated with the interbasin transfer of  
4 Asian carp, that we identify those quickly because we  
5 made what's been described here as very significant  
6 investments in keeping the Chicago Sanitary and Ship  
7 Canal blocking the passage there. All those  
8 investments potentially could be compromised if it was  
9 around the flank, if you will, way for carp to get into  
10 the Great Lakes.

11           So anyway, that's where we started. As  
12 General Peabody mentioned, it's about a 1500-mile long  
13 basin divide there. It's a very subtle divide, very  
14 flat topography over a portion of that. So we knew  
15 there was a tremendous task that he challenged us with.

16           So first thing we did was say we need to get  
17 the best local experts to help us with that. And so  
18 there's eight districts of Corps of Engineers that are  
19 along that boundary. So we contacted hydraulics and  
20 hydrology folks in each of those eight districts. We  
21 also contacted the state DNR's, USGS, Fish and  
22 Wildlife. We got all of the stakeholder agencies that  
23 are in the region to help us get this done. And long  
24 story short, it worked very well.

25           We identified a total of 36 locations that

1 are shown along the divide up there. And again, as  
2 General Peabody said, one of those locations jumped out  
3 as really a very significant risk, which was Eagle  
4 Marsh. We actually found 18 locations that we thought  
5 the risks were significant or at least there was enough  
6 uncertainty in the risk that we needed to carry it  
7 forward and complete the risk characterization.

8 Eagle Marsh, I'll take a few minutes to  
9 briefly say what the conditions are there. General  
10 Peabody indicated when you have a significant rainfall  
11 event in the Maumee River basin, it's basically the  
12 headwaters of the Maumee are formed by two rivers, the  
13 St. Joseph River which drains from southern Michigan,  
14 southeast Michigan, towards Fort Wayne, and then the  
15 St. Mary's River which drains from central and western  
16 Ohio into up toward Fort Wayne. You have these two  
17 rivers that basically flow toward the west, one  
18 southwest and the other northwest, and they meet in the  
19 county of Fort Wayne.

20 When you have the largest storm you'd expect  
21 in any given year, those flood waters hit and water  
22 back flows across the basin divide into the Wabash  
23 River basin across Eagle Marsh. When you have a ten-  
24 year level event, the 2009 flood insurance study  
25 indicated that you have a four and a half foot depth of

1 water across the basin divide at that location.

2           When you couple that circumstance for the  
3 hydraulics with the fact that there's significant  
4 populations of Asian carp that have been observed in  
5 the Wabash River, which is the longest stretch of  
6 undammed river east of the Mississippi River, we knew  
7 we had a serious circumstance.

8           We held a meeting on site there in late July  
9 including all the stakeholder organizations I've  
10 already mentioned, the Indiana DNR stepped up and said  
11 we have the best ability to get this done quickly and  
12 in less than 60 days a temporary barrier was put across  
13 Eagle Marsh that is providing a barrier to prevent  
14 Asian carp from transferring across that location.

15           The Corp of Engineers is in the progress  
16 right now of completing a feasibility study for a more  
17 permanent solution. That's supposed to be completed  
18 this year. And last but on least on the other pathways  
19 is that we're in the process of developing a plan to  
20 complete the risk characterization at those other 17  
21 locations. And that effort is also scheduled to be  
22 completed this year. Thank you, sir.

23           GENERAL PEABODY: Thank you, Mike, appreciate  
24 it. Okay. Almost done, folks. Just a handful of  
25 slides left. So what have we done to date? I'm not

1 going to go into details here. You can see on the left  
2 side, this tells you our timeline, how we've managed to  
3 develop the Program Management Plan because this is  
4 really called a program because it's so much more  
5 complex than a normal study project is. And that has  
6 been limited by funding available up until this year we  
7 had just \$450,000 and we've got an infusion of GRI  
8 funds which has been decisive and has enabled us to  
9 move forward.

10 Simultaneously in addition to all the things  
11 I talked about relating to the Chicago Area Waterway  
12 System and the fish barrier which is part of this  
13 equation, we've done these specific things on the right  
14 related to the study itself. So this Asian carp  
15 literature review is a pretty thorough effort and we  
16 hope we get some input and criticisms from scientists  
17 and academia because there's probably stuff we haven't  
18 found that's out there.

19 We have a draft aquatic nuisance species  
20 white paper that we have developed in coordination the  
21 Fish and Wildlife Service to identify the species of  
22 concern and kind of hone those down to the ones that  
23 are the most concern that can have the most impact so  
24 we don't try to be perfect and get every little species  
25 that may have a marginal impact and really focus on the

1 ones with the major impact.

2           We've got the risk characterization report  
3 that Mike Saffran just talked to you about, Eagle  
4 Marsh. It sounds like a simple thing to put that fence  
5 up in Eagle Marsh, but you've got to get the real  
6 estate, you've got to get the permits, you've got to  
7 get the money and the authorities and it's not. And  
8 the fact that we could respond within a matter of about  
9 three months from the time we identified the problem to  
10 the time we finished the fence, maybe four months, it  
11 was pretty remarkable.

12           So the project schedule. This is an area I'm  
13 sure that you'll have questions about because everybody  
14 wants us to go faster, but the horse has a top speed  
15 and the top speed is limited by a number of factors.  
16 It's limited by funds available. It's limited by the  
17 complexity of the problem and the need to get to the  
18 right standards of qualitative knowledge and  
19 understanding of the situation and the options and  
20 technologies to deal with it and all the impacts those  
21 options and technologies may have.

22           As I indicated, the top line there kind of  
23 talks to you what Dave walked you through, which is the  
24 study process, the pieces, the phases. As we go along,  
25 we do intend to put out these interim reports. This is

1 very important. This is unusual for the Corps to do  
2 this in a systematic way. The only way I know that  
3 we've done it systematically prior to this was with the  
4 efficacy study related to the fish barrier. It's the  
5 only way we can get the solutions faster than waiting  
6 for the study to be complete at the end, which we don't  
7 want to do if we can get to some partial solutions  
8 sooner.

9           The Other Pathways follows a similar process  
10 timeline, is a little bit different. You can see the  
11 details of the timeline at the bottom. I'm not going  
12 to go into that. I do want to highlight though there's  
13 an asterisk at the bottom and most people tend to  
14 ignore the asterisk and focus on the 2015. The  
15 asterisk says this is the best case scenario timeline.  
16 Okay. So if pretty much everything goes exactly right  
17 and we don't have any huge surprises, we don't have  
18 funding difficulties, we don't have any major issues  
19 that have to cause additional investigation. We can get  
20 to 2015.

21           That's not satisfying to very many people.  
22 It's not satisfying to me quite frankly, but it is what  
23 it is and we really have to do this properly in order  
24 to come to proper judgments about the best way to  
25 approach this and not just jump the gun and go to some

1 solution that we may end up finding out later on if we  
2 had just thought about it with more discernment we may  
3 have chosen a different alternative.

4 I've already talked about this. There are  
5 some interim products that are published already that  
6 are out there. They are indicated on this slide. They  
7 are indicated on previous slides. One of the things we  
8 need to get at is the navigation study and surveys  
9 because the big concern that the Michiganders have and  
10 Wisconsin and other Great Lakes states is we've got to  
11 close the locks. Close the locks, that's the answer.  
12 Actually the fish barrier is the answer in my personal  
13 opinion and I'm very confident in that and if we close  
14 the locks we still have other pathways that are  
15 unhindered by major physical obstacles that will allow  
16 fish to migrate through.

17 We do have to understand, however, what the  
18 impact to navigation is of closing the locks, the  
19 impact to the water quality, impact to social activity,  
20 the uses of the waterways, and we need to understand  
21 the impact of the fisheries and the recreation on Lake  
22 Michigan and the other Great Lakes if Asian carp were  
23 to get in there.

24 Now, can we understand that to perfection?  
25 Probably not. The USGS is going to help us out in this



1 regard because they have some capabilities that the  
2 Corps just doesn't have. At least that's our plan and  
3 everything is subject to funding.

4 Well, what can you do for us? First of all,  
5 thanks for coming to this meeting. We really appreciate  
6 your interest. We really look forward to your input  
7 and we need you and we encourage you to stay engaged  
8 and there's some examples of social media and other  
9 techniques to stay engaged. Again, I'm not going to go  
10 through the list. You can read it, but there's a  
11 number of inputs that we need from other agencies to  
12 help accelerate this study or at least go as fast as we  
13 possibly can.

14 We can't do it alone. There's no way the  
15 Corps of Engineers is smart enough. There's no way we  
16 have enough capabilities. There's no way we have enough  
17 local knowledge. And that's where we really need the  
18 states to help us out, not just the states themselves,  
19 the local county resource experts, the local fishermen  
20 that have some local knowledge about how water flows in  
21 the areas. We need help from pretty much everyone that  
22 has a capability to apply to this study that we can use  
23 because this is just a massive, massive study. There  
24 is no simple way to get at this issue or single  
25 approach that's going to work on all 19 of the

1 identified high risk pathways that are out there, 19  
2 includes the Chicago Waterway System.

3           We are at number seven, meeting number seven.  
4 Meeting number eight in Ann Arbor has been postponed  
5 until March 8th thanks to Mother Nature, we bow to her  
6 power. That is far beyond our control and we're going  
7 to get diverted here tomorrow to go do some emergency  
8 management support to FEMA for this winter storm  
9 because Indiana and Ohio in particular are going to get  
10 some ice and we're going to have some snow north of  
11 that line and the Corp of Engineers is FEMA's engineer.  
12 We do some power support for them and so forth.

13           You can see we're going all the way down to  
14 New Orleans with this effort. We added Milwaukee and  
15 New Orleans at the request of some stakeholders at  
16 previous meetings.

17           If you're into social media, our kids are,  
18 I'm not, some adults are, you can stay engaged that  
19 way. We're definitely on the web and I think we've got  
20 copies of the slides so you can take them home and you  
21 can punch them into your laptop and you can pull up the  
22 website or pull up the social media connection and get  
23 in there. Okay?

24           All right. Thanks for your time and  
25 attention. I'll turn it back over to you to mediate.

1 MR. ZABOROWSKI: Thank you, General. And  
2 before proceeding to the oral comment portion of this  
3 meeting, I'd like to reiterate the General's last  
4 comments that the GLMRIS website is a good source for  
5 study information. We update it constantly. Any  
6 products or documents, like all of our handouts here  
7 today, are available for download off of our website.  
8 Also you can, the Corps of Engineers has an e-mail list  
9 that you can sign up for there to get project updates.

10 Lastly I would like to reiterate because John  
11 Goss didn't make it here, if you would like more  
12 information on Asian carp efforts being conducted or  
13 interagency Asian carp efforts, please visit  
14 [Asiancarp.org](http://Asiancarp.org).

15 As the General mentioned at the beginning of  
16 the meeting, I think we're going to skip our more  
17 formal proceedings as far as giving oral comments.  
18 Normally we like to limit people to three minutes just  
19 to give everybody an opportunity to speak. I don't  
20 think we're going to have an issue with that today. So  
21 at this point in time I'm just going to call in order  
22 the people that came to the registration table. Before  
23 doing that, I would like to mention that we have a  
24 stenographer with us, so when you go come to the  
25 microphone, please first give us your first and last

1 name and if you wouldn't mind spelling your last name  
2 so that we can have that clear in our records, and then  
3 also give us your zip code. And then again, just speak  
4 slowly and clearly when you come to the microphone to  
5 give our stenographer a chance to keep up.

6 At this point in time I would like to call  
7 number one, which is Tim, and I apologize if I  
8 pronounce it wrong, Guilfoile.

9 MR. GUILFOILE: My Tim Guilfoile, G-U-I-L-F-  
10 O-I-L-E, and the zip is 41017.

11 I wanted to say first of all that I'm very  
12 pleased to be in the blue line because when I selected  
13 my shirt today I was hoping I would be and I appreciate  
14 that. Second is that I have absolutely no idea how to  
15 get back to the garage in which I'm parked. The  
16 University of Cincinnati is the most intimidating place  
17 I've ever been. It took me two and a half hours once I  
18 got to -- I'm kidding.

19 First of all, I want to thank you for coming  
20 to Cincinnati. I think it's unusual, but I'm really  
21 thankful that you did. So again thank you. My  
22 background is healthcare. I spent 30 year in  
23 healthcare, 22 at Children's Hospital Medical Center  
24 which is the largest Children's Hospital in the United  
25 States, first as a clinician and then as a researcher

1 and then as an administrator. So I do know something  
2 about how to design, first construct a hypothesis,  
3 design a research study, execute it and then implement  
4 the results.

5           And it's not as big as this, but I'm going to  
6 give you some other examples that are actually bigger.  
7 Now once retired I joined the Sierra Club's Water  
8 Sentinels Program. I'm the Deputy director. We train  
9 volunteers all over the country. We have 51 programs  
10 in 20 states, about 12,000 volunteers doing water  
11 quality monitoring, stream side assessment, grab  
12 samples for metals and bacteria and you name it,  
13 habitat assessment and biological assessment of  
14 invertebrates. And in addition I'm an avid fly fisher  
15 and I do fish tributaries to some of the Great Lakes.  
16 So I'm personally involved. I'm not an engineer. I'm  
17 not a hydrologist, so quite honestly I'm not going to  
18 make suggestions or be presumptuous enough to make  
19 suggestions about engineering stuff and stuff that is  
20 better addressed by a hydrologist.

21           I'm also not going to repeat the obvious. We  
22 all know what the consequences of this are, both in  
23 ecological terms and in economic terms. Nobody  
24 disagrees. So that said, what the hell do I have to  
25 say? Well what I have to say is what -- is it Colonel

1 or General?

2 GENERAL PEABODY: General. I was a Colonel  
3 once, you can call me that if you want.

4 MR. GUILFOILE: No, no, I don't want to be  
5 disrespectful. But what the General had to say about  
6 timing. And I feel very strongly about this. The  
7 timetable is completely and totally unacceptable.  
8 Believe me, I do understand that this is a really,  
9 really complicated problem. But we in the United States  
10 have faced actually far more complex problems, grabbed  
11 them by the neck, wrestled them to the ground and fixed  
12 them. Now my background is in medicine so the examples  
13 that I'm going to give you are medical. I'm not an  
14 engineer, and the first one has to do with polio.

15 The Salk vaccine, research began on it in  
16 1952. Now remember. Salk didn't have mass  
17 spectrometers and genetic markers. He had test tubes,  
18 Bunsen burners and lab rats. And by 1955, three years,  
19 he had developed, tested and distributed the oral polio  
20 vaccine throughout the United States and he cut the  
21 rate of polio dramatically. However, this polio  
22 vaccine didn't fix it all. Right? Didn't fix the  
23 intestinal infection portion.

24 And so Dr. Sabin, right here in Cincinnati,  
25 Children's Hospital where I worked, he began his

1 testing in 1955 and by 1960 the drug, the vaccine, was  
2 being distributed throughout the United States. Now  
3 that's five years, but that's five years to discover,  
4 to test and to distribute the drug, and what we're  
5 talking about here is five years looks like minimally  
6 to do the study, right? And I guess we really don't  
7 have any idea how long it's going to take to implement  
8 the recommendations.

9           Now, I believe in research. I believe we  
10 have to, absolutely have to study the issue and I think  
11 to presume that we know the answer, whether it's a  
12 barrier or whether it's a hydrologic solution or an  
13 ecologic solution or a combination of some of those or  
14 all of those, we don't have the answer to it. Right?  
15 We don't. You know that better than I do. So we have  
16 to do the research, and I believe that with all my  
17 heart.

18           In 1982 the AIDS virus was characterized and  
19 by 1987 we had developed antiretroviral drugs. Right?  
20 We had developed them, tested them and they were in use  
21 in five years. We develop a brand new flu vaccine  
22 every single year and the first flu vaccine took about  
23 three years to develop. Now fine.

24           The human genome project, and there is no  
25 more complicated research study than this, I mean, I

1 think we all know that as well. And you talk about the  
2 1500 miles that we have to deal with, you put those  
3 genes back to back, it's a hell of a lot longer than  
4 that.

5           Now, the federal government took ten years to  
6 complete the project at a cost of \$3 billion. That's  
7 the human genome project conducted by the federal  
8 government, the Center of Disease Control, \$3 billion,  
9 ten years. Celera Corporation, a private gene research  
10 company, did this on a parallel track. They developed,  
11 they completed the gene mapping in three years for \$300  
12 million.

13           Now, I know dealing in the federal government  
14 is much more complex and much more difficult, a lot  
15 more hurdles than in the private sector, but we have an  
16 opportunity here to take those barriers, grab them by  
17 the neck, wrestle them to the ground and fix them and  
18 get them out of the way. If you need help, as you said  
19 you might, I will bring to the table hundreds and  
20 hundreds of people at the front door of Geoff Davis our  
21 congressmen and I'll bet you in every congressional  
22 district that has any kind of connection to this  
23 project, they'll do the same damn thing. So don't take  
24 this personally, please.

25           GENERAL PEABODY: We don't.



1           MR. GUILFOILE: But I do feel very strongly  
2 that a five-year study timetable and then an  
3 implementation of who knows what is absolutely and  
4 completely and entirely unacceptable. And I will do,  
5 and I'm sure there's a hell of a lot of other people  
6 that will do anything that we can to speed it up. And  
7 I think we have lots and lots of examples where we as a  
8 nation have done things equally complicated and have  
9 done it in a much shorter period of time. So thank you  
10 very much. I appreciate the opportunity.

11           MR. ZABOROWSKI: Thank you, Mr. Guilfoile.

12           GENERAL PEABODY: Mr. Guilfoile, thanks very  
13 much. I appreciate your thankfulness that we came all  
14 the way to Cincinnati. I hate to tell you this, but my  
15 office is on the 10th floor of the Federal Building  
16 downtown so for a change I didn't have a very long  
17 trip. Now Dave came from Chicago, Mike came from  
18 Louisville, John came from downtown Cincinnati with me  
19 and some of our other staff came from other places  
20 also.

21           You know, your comment about the timeline is  
22 probably, I don't know if it's -- I don't have the data  
23 to prove this, but it's probably the most common  
24 concern and criticism that we receive. I appreciate  
25 the analogies to other major research challenges that

1 this country or specific individuals in this country  
2 have faced and overcome. You can come up with dozens  
3 and hundreds of them I'm sure, not just in the health  
4 arena but other scientific endeavors as well.

5 I say this with all respect, but I'm not sure  
6 that the analogy equates. Now I'm not a scientist.  
7 I'm an engineer, probably not even a very good one, I'm  
8 kind of a B student, and they hired me for this job  
9 though because of my leadership experience. And I just  
10 ask you to consider these thoughts, and that's really  
11 all they are is kind of thoughts, I don't think that  
12 the folks that, well, the federal government certainly  
13 had processes they had to follow when they did the  
14 human genome project, but Celera, is that a company  
15 that did it for a tenth of the cost?

16 MR. GUILFOILE: Yes.

17 GENERAL PEABODY: There are processes, legal  
18 requirements, that we must abide by. I learn to my  
19 chagrin every single day that there's some other legal  
20 issue that I was either not aware of or had not  
21 properly considered in approaching a variety of issues  
22 that further complicates my ability to deal with one  
23 issue or another.

24 In the case of this study, there are a host  
25 of laws we have to follow. The fundamental ones though

1 are several laws and policies that are derivative of  
2 those laws that tell us how to do a study. Okay? And  
3 we have to abide by the regulations just like we have  
4 to abide by the laws.

5           Now, here's the good news. The good news is  
6 the Corps of Engineers has recognized that our study  
7 process is, in your words, unacceptable. It's too  
8 complex, it's too bureaucratic, it's just too pedantic.  
9 It's takes too darn long. The chief of engineers has  
10 directed in his senior people in the civil works  
11 directorate, which is led by a Two-Star General, are  
12 coming to closure soon and I think in the next couple  
13 months; is that right, John, on the planning study,  
14 where we're trying to come up with an ability to get a  
15 simple study done in 18 months.

16           Now, this is not a simple study, but we  
17 recognize that we've kind of made this more difficult  
18 on ourselves in some cases than we need to. Now all of  
19 the processes that we follow were added over about a  
20 40-year period one at a time and each for a very good  
21 reason but collectively when you put it all together  
22 it's cumbersome. So that's the good news.

23           And we have suggested that this particular  
24 study may be an appropriate pilot to look at this. It  
25 may not fit actually because it is so complex, but

1 whatever comes out of the new study guidelines we  
2 intend to apply as aggressively as we can to abbreviate  
3 the timeline to every degree possible.

4           Now the problem with this particular issue as  
5 compared to the human genome project or polio and the  
6 other, I'm missing something, I think there was another  
7 example you cited, is that we also have to address the  
8 consequences of the alternatives, and that's why I say  
9 I'm not sure that the examples are entirely analogous.  
10 And I don't mean this as a criticism, but polio was  
11 very difficult thing to understand but it's clearly  
12 bounded, fix polio. We have to consider economic  
13 consequences to navigations, to fisheries, to  
14 recreation users, to water supply, to the industrial  
15 uses, all the folks that Dave kind of outlined when he  
16 was talking about it, social consequences,  
17 environmental consequences. And each one of these  
18 issues in and of itself is not necessarily that hard,  
19 but when you put them together and you have to balance  
20 them, it can be difficult to understand. Let me give  
21 you an example.

22           There is a study that Dr. Mark Pegg has  
23 conducted, I think he published it in 2008, that  
24 hypothesizes that it's unlikely that Asian carp are  
25 going to be able to get into Lake Michigan and develop

1 a sustainable population because in his study he  
2 indicates that there's what amounts to a toxic zone or  
3 a plankton dead zone in the near shore area of Lake  
4 Michigan, that they would have to swim through and get  
5 to sources of other foods to be able to, you know,  
6 thrive to survive and multiply. I have no idea whether  
7 it's true or not.

8           The point is that's the only study that I'm  
9 aware of that specifically addresses the specific  
10 environmental aspects of Lake Michigan and whether  
11 Asian carp could survive or not. All the other  
12 information that I'm aware of, at least to this date,  
13 is essentially drawing conclusions from general  
14 information about the kinds of climates that Asian carp  
15 can survive in. There's no doubt they can survive in  
16 the Great Lakes climate. Is there any other studies  
17 I'm not aware of not aware of that you've found, Dave?

18           MR. WETHINGTON: No.

19           GENERAL PEABODY: We have to understand that  
20 in order to understand whether it's appropriate, you  
21 know, to close the locks as one of the alternatives as  
22 an example. So because there's a whole range of  
23 options and technologies that we have to look at, it's  
24 not a single, it's not a well-bounded problem I guess  
25 is the way I would characterize it. It's not -- it is

1 bounded, that's a good thing, but it's pretty complex  
2 in our minds.

3 I'm not sure if I'm answering your concern  
4 appropriately, but I will tell you this, we are  
5 committed, Mr. Guilfoile, to execute this study as fast  
6 as we can. We clearly understand the public's concern  
7 related to the timeline. We'd like to go faster as  
8 well, but we also have a host of policy requirements  
9 that must be met. We have qualitative information  
10 requirements that must be met. They are all in the  
11 public interest and we will be limited by funds. I  
12 don't expect we're going to get \$300 million much less  
13 \$3 billion to fund the study. We do expect we'll be  
14 funded to -- we hope we'll be funded to a reasonably  
15 robust degree. We don't expect to be funded to our  
16 full capability.

17 MR. GUILFOILE: I'll note I've got to leave  
18 right after this, don't take that personally either, no  
19 disrespect intended. Just wanted to point out two  
20 things. Number one, I also appreciate the fact that it  
21 appears as if you're taking interim steps pretty  
22 quickly. I mean, you're responding, and I think that's  
23 great and I appreciate it and thank you. Finally, I  
24 think that the development of drugs and other medical  
25 breakthroughs have almost all of the ramifications that

1 you've described in terms of complexity. More  
2 importantly, it involves human life. It's a life or  
3 death situation.

4           So as far as I'm concerned, I mean, this is  
5 really important and it will kill economics and it will  
6 kill the ecology, but it's likely not to kill any  
7 person and if you screw up on the things that I've  
8 articulated, people will die. So that's it. So just  
9 let's not minimize that.

10           Again, I apologize I have to go and I  
11 apologize I can't listen to anybody else, but I really  
12 do -- it's likely to take me three hours to find my  
13 parking spot.

14           GENERAL PEABODY: Thank you, sir. We  
15 appreciate your input.

16           MR. ZABOROWSKI: Thank you, Mr. Guilfoile.  
17 At this point I'd like to invite Michael Toombs to the  
18 microphone.

19           MR. TOOMBS: I'm Michael Toombs, T-O-O-M-B-S,  
20 and my zip is 45230.

21           Although I lived here in Cincinnati, I'm a  
22 board member of a cottage association on the  
23 northernmost edge of Lake Huron. Almost 70 percent of  
24 our members are residents of the U.S. I come to speak  
25 to those Americans and the rest of Americans about the

1 Great Lakes and the Asian carp problem which is an  
2 American problem to fix.

3           There's a sense afoot these days that the  
4 Americans are dragging their feet. After 30 years of  
5 trying to stop them, now they want to do five more  
6 years of study. The carp are getting in. They achieve  
7 sufficient numbers. As global warming progresses they  
8 will devastate the Great Lakes in a generation. They  
9 must be stopped now and permanently prevented from ever  
10 getting in.

11           According to the newest environmental DNA  
12 data coming from the University of Notre Dame, it is  
13 now indisputable that some Asian carp are already  
14 getting into the Great Lakes of Chicago. When there  
15 are enough of them and they begin establishing  
16 reproducing populations, they will spread over the  
17 entire Great Lakes, its shallows, tributary rivers and  
18 waterways like McGregor Bay and strangle them of their  
19 native fish stocks. The only solution is to close all  
20 of the rivers and canals in the Chicago area and return  
21 their flows to their original watersheds so that in the  
22 end besides protecting the Great Lakes watershed we  
23 also protect the Mississippi and its watershed.

24           Given that the problem is on the American  
25 soil and while its resolution will affect the entire



1 Canadian heartland, it's our problem to solve and the  
2 only solution before global warming really gains a  
3 toehold in North America is to permanently separate the  
4 two watersheds at the Chicago crest the way it used to  
5 be before the white man came.

6           Except for the commercial interests of a  
7 handful of barging companies and local tourist  
8 industries and marina owners in the Chicago area,  
9 though not to be denied compensation, we must first  
10 stop the carp from getting into the Great Lakes now,  
11 even if it means closing the locks of the Chicago  
12 river. The Great Lakes belong to all of us not just a  
13 few.

14           While we in McGregor Bay are about as far  
15 away as one can get, we urge bay Americans and all  
16 Americans to contact their Congress people, their  
17 president, the governors, the Army Corps of Engineers,  
18 and the USEPA to urge them to do everything they can to  
19 stop the carp now and remake the Chicago crest. The  
20 Great Lakes don't belong just to the Canadians, they  
21 belong to Americans too, and we should do more of our  
22 fair share in taking responsibility for them.

23           When most folks dream of their time in  
24 McGregor Bay they see the trees, the rocks, the sky,  
25 the sun and the water. Of all of these it is the water

1 that is primary. It is its spiritual center. Of all  
2 of these it is transportation, it is recreation and  
3 sport. It is what separates us gladly from our  
4 neighbors. It reflects the morning sun. It grows flat  
5 and hard at noon and softens to misty tints in the  
6 gloom of evening light. It can bristle with white caps  
7 under the pressure of the wind and lay flat and fallow  
8 seeming in sheltered bays, its surface broken only by  
9 Terns and Ospreys spiking from above. Though only a  
10 few dare drink it straight, it fills our sinks and  
11 washes our clothes and cooks our pasta but except for a  
12 very few among us who angle in our dreams, what lies  
13 below its implacable surface is unknown. As long as it  
14 doesn't threaten what's above, under water is the  
15 deepest mystery to most. Since we have no gills to  
16 speak of, what's below is a world separate where  
17 curiosity and reflection stop. But what lurks there is  
18 the heart of the Great Lakes, and the ecology of its  
19 littoral is entirely dependent upon its diversity.

20           As global warming inexorably pushes north and  
21 the waters of the upper Great Lakes are drained away,  
22 if the Asian carp ascends to the top of the food chain,  
23 in a generation the Great Lakes watershed is said to  
24 become Planet Earth's newest dead zone. While most  
25 none anglers will never note its decline, its

1 ecological decay will haunt our nightmares.

2           The most recent pieces in the New Yorker and  
3 on National Public Radio here in the states serve only  
4 to remind us of how helpless we are so far to stop it.  
5 If we don't stop the Asian carp at Chicago now, in the  
6 future McGregor Bay will be our own personal reminder  
7 of how vast and arrogant is the hand of man who  
8 uncomprehendingly turns the entirety of nature to the  
9 interest of commercial enterprise unto eternity. When  
10 we are gone, our children's children's children see  
11 what we have not done to stop it, may we hope for their  
12 forgiveness. Thank you.

13           MR. ZABOROWSKI: Thank you, Mr. Toombs.

14           GENERAL PEABODY: Mr. Toombs, if I could  
15 comment, that's one of the most powerful statements  
16 I've heard. Are you a writer?

17           MR. TOOMBS: Yes.

18           GENERAL PEABODY: I figured as much. I  
19 appreciate your concern. I grew up on the shores or  
20 near the shores of Lake Erie actually. And I remember  
21 as a kid going to Nickle Beach here in Ohio, not Lake  
22 Huron. And when I ate my lunch, I had to hold my nose  
23 because of the stench of the dead fish that lined the  
24 beach. And I remember very clearly the front pages of  
25 the Cleveland Dealer, the Cleveland Plain Dealer I

1 think in July of 1969 when the Cuyahoga River caught  
2 fire.

3           So I share your emotional attachment to the  
4 Great Lakes and I personally am committed to doing  
5 everything we can within our power to prevent not just  
6 Asian carp from getting into Lake Michigan but to  
7 follow the study authority and prevent the spread of  
8 aquatic species into either of the basins. There's  
9 already great damage done down in the Mississippi now  
10 because of the Zebra mussels that got into the  
11 Mississippi River basin, whether through the Chicago  
12 Area Waterway System or other means, we're not sure.

13           I'd like to make a couple of comments if I  
14 may and if you have questions, I'd be happy to answer  
15 them. In your statement you indicated that we need to  
16 close the rivers and the canals in the Chicago Area  
17 Waterway System. We will certainly study that as part  
18 of the alternatives and options and technologies  
19 available. We have to though understand what the  
20 impacts are to doing that. And that's under law. We  
21 have to balance those impacts and make recommendations,  
22 and fundamentally it will be up to the administration  
23 and the Congress talking to each other to determine,  
24 you know, what they want to do.

25           Some of the impacts that we know about though

1 that are of serious concern not just to the navigation  
2 or the recreation or the tourism industry that uses the  
3 passenger vessels that uses the Chicago Area Waterway  
4 System, firefighters from Chicago pass through the  
5 Chicago lock on a frequent basis, police boats do as  
6 well. So there's a safety and security aspect to that,  
7 Department of Homeland Security uses that system.

8           The concern that I as an engineer am most  
9 concerned about is the flooding impact that could  
10 happen because it's a very flat area. So on a frequent  
11 basis when we get heavy rains, we have to backflow  
12 water and it would happen naturally if there were no  
13 locks there from the Chicago Area Waterway System from  
14 moving south and it backflowed going north into Lake  
15 Michigan. And it happened most recently in August of  
16 this past year when we had a massive rain event in the  
17 Chicago area.

18           The locks are not something that we operate  
19 under our own authority. They are operated under  
20 several different statutory authorities that have been  
21 developed by the Congress for primarily the purposes of  
22 navigation, water diversion and flood control and also  
23 water quality, and we have to follow the law as we  
24 understand the law. Now that case was is under  
25 litigation now. People are familiar with the judgment

1 that's been rendered thus far and I'm not going to  
2 comment on the litigation, but so far our judgment as  
3 to our ability to operate that lock has been upheld by  
4 the courts.

5 If you have any questions, sir, I'd be happy  
6 to follow-up on any specific questions. Thanks for  
7 attending, sir.

8 MR. ZABOROWSKI: Next I'd like to invite Mr.  
9 Josh Lillard up to the microphone.

10 MR. LILLARD: Josh Lillard, L-I-L-L-A-R-D,  
11 41048. I'd like to thank you guys for coming out here  
12 and talking to us today. It's been a real pleasure to listen  
13 to what you've said. I'm here on behalf of the Northern  
14 Kentucky Fly Fishers. I'm the president of that  
15 organization. And we as a club strongly believe that  
16 the timeline is too long as well. I'm not here to tell  
17 you guys how to do your job, but if my boss told me  
18 that, he would -- that timeline wouldn't be acceptable.  
19 I'm not a biologist. I'm not a scientist. I'm just an  
20 avid fisherman and a fly fisherman at that. And I've  
21 probably fished nearly every river that exits Lake Erie  
22 and Lake Michigan for salmon, steel head trout, small  
23 mouth bass, during my 33 years, and we just ask that  
24 you do everything that you can to prevent Asian carp  
25 from inhabiting the Great Lakes and beyond that, to get

1 rid of Asian carp from the United States. I have no  
2 further comments. Thank you.

3 MR. ZABOROWSKI: Thank you. At this point in  
4 time we have invited everybody that indicated that they  
5 wished to make a comment to the microphone. Is there  
6 anybody else in the audience that would like to come up  
7 and make a comment to the panel or ask a question to  
8 the panel? Please, sir, I just ask when you approached  
9 the microphone that you give your name.

10 MR. TIMMERMAN: My name is Raymond J.  
11 Timmerman. I'm kind of a visitor. I was attending a  
12 class over just across the way and saw your table and  
13 said can I come? Because I belong to the Sierra club,  
14 I'm probably the oldest member around.

15 MR. ZABOROWSKI: Can I ask you to state your  
16 full name.

17 MR. TIMMERMAN: Beg pardon. Raymond J.  
18 Timmerman, T-I-M-M-E-R-M-A-N. I live in Fort Thomas,  
19 Kentucky, 41075, and I'm a retired physician. I know  
20 Dr. Guilfoile slightly, but not that well and I know  
21 he's a member of our club, but I didn't know that until  
22 today, but I just thought about this as I sat there and  
23 it's been my impression over my years that it's very  
24 hard to get rid of everything that appears. You've got  
25 a job. We have a lot of native species in the United

1 States that used to be foreign species, they were the  
2 fish of maybe my day or before that appeared in the  
3 United States. There's several trout species. There  
4 are a number of other creatures and animals and what  
5 have you that are here.

6           What I wanted to say is I don't know what the  
7 experience has been with these Asian carp and the  
8 mussels and I wonder if this has been studied by anyone  
9 of significance. The Chinese I would guess know  
10 something about Asian carp. I guess that's where they  
11 are from, and they just finished a huge dam system and  
12 they must have thought about it and they must have been  
13 concerned with it.

14           Now I don't know about the other way over in  
15 Europe or the other creatures, but I suspect they too  
16 have been known about and there are many people  
17 aggravated with them and perhaps there have been  
18 problems that they have been able to solve, and I just  
19 propose that this information. If it's not known be  
20 known before we decide on any course. I heard a lot of  
21 very diffuse talks. The talks I heard were very good.  
22 I thought that we're talking more about mechanical  
23 problems if, in fact, engineering, then we're talking  
24 about the creatures themselves. What do you do with  
25 the darn things? But that's enough for me. Thank you



1 very much for allowing me to speak.

2 MR. ZABOROWSKI: Thank you, sir.

3 MR. WETHINGTON: Thank you again for coming  
4 by today and sharing your thoughts with us. There have  
5 been others who have study Asian carp and part of the  
6 literature review that General Peabody spoke to that we  
7 have compiled does include information from other  
8 countries, other folks. One of the people on our team  
9 actually did her Master's work looking at Asian carp,  
10 the life profile, et cetera. So we are incorporating  
11 all information that's available to us as part of the  
12 Asian carp study.

13 But again what you mentioned that is really  
14 critical is this is -- it is kind of an engineering  
15 study. We're not looking at necessarily what the Asian  
16 carp themselves may or may not do but looking at the  
17 potential options or controls that could be implemented  
18 to prevent the transfer of Asian carp and other aquatic  
19 nuisance species from between the Great Lakes and  
20 Mississippi River basin. So as you did state, we are  
21 looking at the engineering type solutions on how to  
22 prevent the transfer and not necessarily going about  
23 the what-if scenarios. Thank you for coming today and  
24 I appreciate your thoughts.

25 MR. ZABOROWSKI: Thank you. Sir. Please,

1 come to the microphone.

2 MR. BETTS: Could I ask a specific question  
3 about the carp itself? I don't know whether that's in  
4 your --

5 MR. ZABOROWSKI: Sure. We'll answer it if we  
6 can.

7 MR. BETTS: My name is Andy Betts, B-E-T-T-S,  
8 zip code 45243. Although my family does own a cottage  
9 just north of the fourth S in Mississippi, about 45  
10 minutes north of where you guys were a couple days ago  
11 I believe.

12 I was listening to an NPR program, it might  
13 have been science Friday, and there was an expert on or  
14 someone who was purported to be an expert and he  
15 essentially shrugged off the question of carp in the  
16 Great Lakes or the problem because he said, well, the  
17 Asian carp are a warm water fish, this is cold water.  
18 And then that was pretty much all there was.

19 So my question is, well first of all, I think  
20 if that was absolutely the case we wouldn't be here  
21 right now. But my question is how does temperature  
22 affect these fish? Are the shallows of Lake Erie going  
23 to be more susceptible to them than Lake Superior, et  
24 cetera?

25 GENERAL PEABODY: That's a great question. I

1 appreciate it. I am not a fish expert, but I've spent  
2 a lot of time talking to people both in the USGS and  
3 the fish and wildlife and some of our Corps employees  
4 are fish biologists as we and, Dave, I'd like you to  
5 follow up on this, but here is what they've told me.

6           First of all, if you look at the latitude of  
7 where these fish are native, it corresponds in Asia and  
8 it corresponds with the Great Lakes. So in general you  
9 have the same kind of temperate climate in Asia that  
10 these fish are native to as you do in the United  
11 States. One other comment I will make, I don't know  
12 what this means, but we have -- we know for sure that  
13 these fish are producing what you call biological  
14 combinations with each other. So they are not  
15 necessarily pure silver, Asian silver carp and the big  
16 head carp any more necessarily. They are mutations.  
17 So we found that. I have no idea what that means to  
18 their survivability to climatic conditions.

19           The second thing they told me is assuming Dr.  
20 Pegg is wrong and there is no plankton dead zone or at  
21 least it's not sufficient impact to prevent them from  
22 establishing themselves so at least migrating through  
23 the dead zone and surviving in Lake Michigan, the area  
24 that they are likely to establish themselves in is the  
25 near shore area and the tributaries and near shore,

1 because they are a riverine fish, that's their native  
2 habitat.

3           The other thing is they respond, their mating  
4 habits respond to water velocity. So in general in the  
5 springtime in Asia when you have increased water flows,  
6 that triggers whatever in these fish to spawn and  
7 procreate. Okay? So I'm also told that they need at  
8 least 60 miles or kilometers? I forget the exact  
9 distance, but they need a fairly substantial length of  
10 riverine habitat in which to spawn.

11           So while they are clearly prolific eaters,  
12 and one of the species, I forget which one, has no  
13 stomach and has to basically eat constantly and they  
14 can grow to huge sizes over 100 pounds and they have  
15 been shown to crowd out much of the native habitat in  
16 portions of the Mississippi basin. There are  
17 susceptibilities or unique characteristics that may  
18 make them susceptible to their ability to survive in  
19 the Great Lakes.

20           The way they would probably affect the Great  
21 Lakes is by consuming the plankton, vital plankton and  
22 zoo plankton, basically consuming the bottom of the  
23 food chain and algae in the near shore area. How that  
24 would affect the fisheries of the lakes themselves, the  
25 deep water fish, I have no idea. Again. This is why

1 we've asked the USGS to help us with the study of these  
2 specific issues so that we have as great a clarity as  
3 we can get without actually putting the fish in the  
4 lake, and nobody wants to do that. Does that answer  
5 your question, sir?

6 MR. BETTS: Not really.

7 GENERAL PEABODY: I'll pass it to Dave.

8 MR. BETTS: But it was useful to hear.

9 MR. WETHINGTON: Unfortunately I'm going to  
10 have the same, as well I'm not a fish expert, Asian  
11 carp expert, so I'm probably not going to tell you a  
12 whole lot new, but I will tell you that this issue is  
13 being cited by the ecologic survey as well as the  
14 Canadian natural resource agency that just recently  
15 kicked off a detailed risk assessment on looking at the  
16 survivability of the Great Lakes in the Lake Michigan  
17 and Great Lakes watersheds. So the Canadians are  
18 looking at this. Specifically they are looking at  
19 within the next year or so to finalize that risk  
20 assessment.

21 And again, you know, what General Peabody  
22 said and what a lot of the experts have said is  
23 basically you can argue it either direction. The same  
24 renowned expert in Asian carp could make arguments as  
25 to why Asian carp could and the similar could not

1 survive in the Great Lakes. We at this point in time  
2 don't know. We're trying to find out and do risk  
3 assessments to evaluate that to the best potential. We  
4 may never know, but at this point in time there are  
5 dedicated scientists in both scores looking into  
6 answering this question for the best of our abilities.

7 MR. BETTS: So my best bet would be to wait  
8 for the Canadian group to issue their report?

9 GENERAL PEABODY: Depends on what it says. I  
10 think the take-away that I have is, yes, they can  
11 survive. It is possible. In fact, some would say it  
12 is not only likely but probable. Again, Dr. Pegg,  
13 there's one study out there that talks about the near  
14 shore area and plankton dead zone, I don't know if it's  
15 one of the areas we want the USGS to look at. Some  
16 people say it's true, plankton dead zone area, but  
17 these fish can travel a long way, so maybe they can get  
18 to it. Again I'm not an expert.

19 Could they survive in the Great Lakes? I  
20 think the answer is definitely yes. There are  
21 limitations to their ability to procreate because of a  
22 need for riverine habitat. There's little doubt that  
23 the fish experts believe that they would have a  
24 negative, unbalanced negative impact at least in the  
25 near shore area in the riverine area, the streams and

1 tributaries that flow into any portion of the Great  
2 Lakes that they would migrate toward.

3           So it's definitely a possibility. In fact,  
4 most people I think thinks it's a likelihood, but we  
5 don't have any definitive studies to give us the  
6 qualitative information that we require in order to  
7 have some really informed, make some informed judgments  
8 on this issue. We just need more information and  
9 that's part of what this process will do. I hope that  
10 satisfies.

11           MR. BETTS: Thank you.

12           GENERAL PEABODY: Thank you, sir.

13           MR. ZABOROWSKI: Again, at this point in time  
14 if there's anybody that would like to come to the panel  
15 and ask a question or make any additional comments, we  
16 invite you to do so now.

17           So seeing no hands go up, it is now 3:53 p.m.  
18 and we will close the oral comment period for this  
19 first session. Is there anyone on the panel that would  
20 like to make any additional comments?

21           GENERAL PEABODY: John?

22           MR. ZIMMERMAN: No.

23           GENERAL PEABODY: The last comment I would  
24 say is we'll stay here for as long as people would like  
25 to chat with you informally. Again, it won't be part of

1 the formal scoping hearing process, but we'd be  
2 delighted to engage with you on anything that's of  
3 interest to you.

4 MR. ZABOROWSKI: And as the General has  
5 stated, the panel will be available for informal  
6 questions and answers, but please note that because it  
7 is not going to be included in the formal oral comment  
8 period, we will not be able to include your comments in  
9 our NEPA scoping process.

10 And again just to remind you, please stay  
11 involved. Our GLMRIS business cards and some of our  
12 other handouts today have our website, Facebook,  
13 Twitter, how to mail in any information. And last note  
14 that the NEPA scoping comment period ends on March  
15 31st. Thank you very much for coming today and we  
16 appreciate your input and time.

17 (Concluded at 3:53 p.m.)

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C E R T I F I C A T E

I, Lisa K. Keller, a Registered Professional Reporter, do hereby certify that the foregoing is a full, true and correct transcript of my notes taken in the above-styled case and thereafter transcribed by me.

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Lisa K. Keller, RMR

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GLMRIS  
GREAT LAKES AND MISSISSIPPI RIVER INTERBASIN STUDY  
PUBLIC HEARING

FEBRUARY 1, 2011

5:30 P.M.

UNIVERSITY OF CINCINNATI  
TANGEMAN UNIVERSITY CENTER  
2766 UC MAIN STREET  
CINCINNATI, OHIO

1 A P P E A R A N C E S

2 PANEL:

3

4 GENERAL JOHN PEABODY

5 MR. DAVE WETHINGTON, III

6 MR. MIKE SAFFRAN

7 MR. JOHN ZIMMERMAN

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10 List of Speakers:

11 John Hallock 43

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1 P R O C E E D I N G S

2 MR. ZABOROWSKI: Welcome to the Great Lakes and  
3 Mississippi River Interbasin Study or GLMRIS, NEPA  
4 public scoping meeting. My name is Kendall Zaborowski.  
5 I'm from the Chicago District of U.S. Army Corps of  
6 Engineers and I'll be moderating tonight's meeting.

7 Before beginning the presentations I would  
8 like to tell everyone that the bathrooms are located  
9 just if you hang a right, pass the tables and then the  
10 first hallway on the left if you need to use the  
11 restrooms.

12 Now I'd like to introduce tonight's panel.  
13 To my left we have Major General John Peabody. He's  
14 the commander of the Great Lakes and Ohio River  
15 Division of the U.S. Army Corps of Engineers. Next to  
16 him is Dave Wethington, the GLMRIS project manager.  
17 Then we have Mike Saffran, the Other Pathways project  
18 manager. And finally John Zimmerman, the chief of  
19 planning and policies for the Great Lakes and Ohio  
20 River Division.

21 When you arrived today the following  
22 materials were available at the welcome and  
23 registration tables. We have the GLMRIS business card  
24 which has ways to stay in touch or stay informed about  
25 the study. We have the tri-fold brochure which is

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4

1 basic information about the study and its goals. Then  
2 there's the green meeting agenda which outlines our  
3 course of action for tonight. Then we have the white  
4 written comment forms which has space for you to write  
5 any comments that you may have and instructions on  
6 mailing any comments. Please note that the NEPA  
7 scoping period ends on March 31st of this year and any  
8 comments that you wished to be considered in our  
9 scoping period need to be submitted to us by that date.

10 Then we have this purple sheet which is  
11 frequently asked questions about the study that we'll  
12 be discussing tonight. We have this peach sheet which  
13 is frequently asked questions about other aquatic  
14 nuisance species efforts that the Corp of Engineers is  
15 undertaking or involved in. And lastly in that packet  
16 of information is a copy of tonight's presentation.  
17 You would have also received a light blue booklet which  
18 is detailed information on GLMRIS.

19 I forgot to mention when I was introducing  
20 the panel that normally we have a representative from  
21 the White House Counsel of Environmental Quality.  
22 Tonight it was supposed to be Mr. John Goss who is the  
23 Asian Carp Director for the White House, and due to the  
24 weather he was unable to make it. So General Peabody  
25 will try to do his best to give Mr. Goss's

1 presentation.

2 GENERAL PEABODY: Ringing endorsement there.

3 MR. ZABOROWSKI: I would like to mention that  
4 if you registered online to speak at today's meeting  
5 and have not checked in at the registration table,  
6 please do so. Similarly, if you did not register  
7 online but would like to make a comment tonight, please  
8 go to the register-to-speak table. In either case we  
9 would ask you to look at this yellow form for people  
10 that registered online, we need your privacy statement  
11 consent. And then for anybody else we would just need  
12 you to fill out the form.

13 And continuing on that line, if you have any  
14 prepared statements that you would like to leave with  
15 us tonight, if you would just grab one of these light  
16 blue forms. Again they can be found at the  
17 registration table and fill that out and leave your  
18 statement with us and we will ensure that it is  
19 included in our NEPA scoping documents.

20 Our GLMRIS team has organized this public  
21 meeting to accomplish two goals. First is to present  
22 information about the study and second, to solicit your  
23 comments on what you feel to be significant issues that  
24 should be included in further study and similarly the  
25 insignificant issues that could be eliminated in

1 further studies.

2           The Corp of Engineers is hosting 12 public  
3 meetings such as this within the study area in an  
4 effort to provide people that live within the study  
5 area an opportunity to learn about the study and to  
6 give us their input and their comments. And again,  
7 please note that the NEPA public scoping period ends on  
8 March 31st of this year.

9           Now as indicated on the green agenda, this is  
10 the second session of today's meeting. A brief  
11 presentation will be given after I'm done here and then  
12 following that we will open up the floor to oral  
13 comments or questions for the panel. Seeing as how the  
14 crowd is not very great, we will forego our normal more  
15 formal process and turn it to more of an open question  
16 and answer session. I would like to note that we are  
17 scheduled to end at 8:00 p.m. If you have any  
18 questions or concerns during the presentation. Please  
19 find somebody with a red lanyard and we'll try our best  
20 to help you out.

21           At this point in time I would like to turn it  
22 over to General Peabody. He will begin the  
23 presentation portion of this.

24           GENERAL PEABODY: That is to the best of my  
25 ability. Thanks, Kendall. That's good. First of all,



1 I really want to thank people for braving the weather  
2 and coming out tonight /we're supposed to get up to a  
3 tenth of an inch of ice I guess, especially in the  
4 north and west area of Cincinnati, so if anybody is  
5 going that direction particularly, take care leaving  
6 tonight but take care regardless. As important as this  
7 is, it's not worth anybody getting hurt.

8           The primary purpose of this session is really  
9 to do a scoping meeting in accordance with the National  
10 Environmental Policy Act for the Great Lakes and  
11 Mississippi River Interbasin study. But we typically,  
12 as Kendall indicated, have had Mr. John Goss the Asian  
13 Carp Director from the Counsel of Environmental Quality  
14 attend these sessions because much of the public's  
15 interest related to this issue has been focused on  
16 Asian carp. So I'll briefly, as briefly as I can, go  
17 over a few key aspects of where we're at with the Asian  
18 carp efforts and then we'll get into the Great Lakes  
19 and Mississippi River Interbasin Study, for short we  
20 call GLMRIS, is the acronym.

21           We've actually gone through three iterations  
22 of the control strategy to deal with Asian carp coming  
23 up the Illinois waterway system and without going into  
24 a great deal of the history of it, this kind of  
25 exploded very rapidly over a few short months in the

1 summer and fall timeframe of 2009, and as a result, the  
2 federal agencies have really been working together very  
3 cooperatively and very closely to deal with this issue.

4           The federal agencies that are the key  
5 agencies that have capabilities and authorities to  
6 respond to this situation include obviously U.S. Army  
7 Corps of Engineers which operates the fish barrier and  
8 has other authorities related to the Chicago Area  
9 Waterway System, specifically the locks but some others  
10 as well, the Environmental Protection Agency which  
11 includes Mr. Cameron Davis. He's the special advisor  
12 for Great Lakes issues to the administrator of EPA, and  
13 Mr. Bill Bolen who is one of the professionals at EPA  
14 Region 5 in Chicago, the U.S. Coast Guard currently led  
15 by Admiral Mike Parks out of Cleveland, Ohio, and they  
16 have an office, a Coast Guard captain on Lake Michigan  
17 that handles the Chicago area system. Mr. Charlie  
18 Wooley is the deputy administrator for Fish and  
19 Wildlife Service region out of Milwaukee, Wisconsin,  
20 and I've got the lead for the Corps of Engineering  
21 aspects overall but Vincent Quarles, Mr. Dave  
22 Wethington's boss in Chicago, the Chicago District  
23 commander and he's really leading the vast majority of  
24 the detailed efforts on the ground.

25           And then we also have Mr. Leon Carl from the

1 U.S. Geological Survey who is supporting a lot of the  
2 research efforts that we're doing. Jim Bredin who is  
3 also on that chart works for John Goss. He's on loan  
4 from Michigan Department of Natural Resources  
5 supporting Mr. Goss directly. In addition we have the  
6 regional coordinating committee which includes all the  
7 other agencies listed there, Great Lakes Fisheries  
8 Commission, NOAA, Department of Transportation. They  
9 largely have an advisory capacity plus all the states  
10 that have, the Great Lakes states that have an interest  
11 in this, plus the City of Chicago and the MWRD stands  
12 for the Metropolitan Water Reclamation District, that's  
13 the district that manages the water flow in the Chicago  
14 Area Waterway System. So we've been working in a  
15 collaborative fashion together kind of ad hoc in 2009.  
16 Became more formalized late 2009, early 2010, to deal  
17 with this issue.

18 In addition, Dr. Phil Moy who is with Sea  
19 Grant, Wisconsin came to us and said we'd like to form  
20 this non-federal technical policy group to consult with  
21 you and provide advice. So Mr. Goss agreed to do that.  
22 You can see all the kinds of capabilities and  
23 specialists that are associated on this team,  
24 scientists, industry academia, tribal interests,  
25 recreational interests, passenger vessels, navigation

1 interests and so forth.

2           Okay. What have we done? Some of the key  
3 things we've done in 2010. First and foremost, the  
4 star on that chart and the blowup above it which kind  
5 of shows you how the barrier system is laid out  
6 geographically from north to south, you have Barrier I  
7 which is the demonstration barrier, and that has an  
8 upper limit on its operating capabilities. And then  
9 Barrier IIA and IIB, both of which are operable right  
10 now. IIA is in operation and IIB we're finishing  
11 testing on. We'll bring that online in about a month  
12 or so. That's where it is.

13           The fish barrier has been constructed to  
14 prevent invasive species or any fish for that matter  
15 from transitioning between the two basins. Now the  
16 fish barrier was originally built not for Asian carp  
17 but for the round goby. Unfortunately by the time we  
18 got funding to execute the demonstration barrier, the  
19 round goby had been found to transition south of the  
20 fish barrier. I don't have any information on numbers  
21 related to the round goby.

22           You can see the red squares indicate other  
23 physical barriers to migratory passage in the  
24 Chicagoland area. They include the locks and dams  
25 below the fish barrier and then the Hoffman Dam, the

1 Wilmette Pumping Station, the Chicago Lock and Dam,  
2 and the O'Brien Lock and Dam in Chicago and south of  
3 Chicago.

4 I want to point out that there's two  
5 waterways to the lower right of the O'Brien Lock, which  
6 is the lower right red square and that is the Little  
7 Calumet River and the Grand Calumet River. Those  
8 pathways are effectively unobstructed. There's a small  
9 weir in the Grand Calumet, but they are effectively  
10 unobstructed pathways that fish can currently migrate  
11 between Lake Michigan and the Chicago Area Waterway  
12 System.

13 Okay. What have we done? Very simply, we've  
14 built a demonstration barrier. Based on information we  
15 gathered from that, we improved and put into operation  
16 Barrier IIA and increased the operating parameters of  
17 Barrier IIA which allows us to operate along a range of  
18 electrical parameters and we can adjust those and we're  
19 operating those now currently based on the best  
20 laboratory information indicating what's most effective  
21 against Asian carp because that's the species of  
22 greatest concern today.

23 We'll continue to research and adjust those  
24 parameters as science dictates and indicates, but right  
25 now we're operating on that information and we're very

1 confident that we have it about right. We don't know  
2 that we have it perfectly because we need to do some  
3 more research. That will follow.

4           Barrier IIB has been constructed well over a  
5 year ahead of time. It probably would have taken two  
6 years to construct under normal funding patterns, but  
7 when we got the evidence, the environmental DNA  
8 evidence, that Asian carp were closer than previously  
9 thought, within a matter of two or three weeks we went  
10 to the administration and requested additional American  
11 Recovery and Reinvestment Act funding that has allowed  
12 us to accelerate the design and construction process  
13 for that barrier. So without the stimulus funding  
14 being available, we would not have been able to do  
15 that.

16           Originally it would have gone into operation  
17 sometime probably FY12, maybe FY13. Now we're putting  
18 it in early operation FY11. It should be operational  
19 in about a month. That's important because that gives  
20 us the capability to have redundancy if something were  
21 to happen to one of the two primary barrier systems.

22           The other thing we did this year in 2010 is  
23 we produced four studies, interim reports, as part of a  
24 larger study called the efficacy study that allows us  
25 to look at whether the fish barrier is effective or

1 not. It's authorized and funded by Congress. The  
2 first report, interim one, allowed us to build a 13-  
3 mile barrier to flood waters that are able to pass  
4 between the Des Plaines River and the sanitary and ship  
5 canal when you have high water. And that's a problem  
6 because the fish, if you look below the barrier right  
7 above Lockport lock and dam, you can see the Des  
8 Plaines River enters the sanitary and ship canal right  
9 below there. So fish can get in the Des Plaines River,  
10 swim past the barrier in the Des Plaines River and then  
11 in a flood event spill over in the sanitary and ship  
12 canal. They no longer can do that because this barrier  
13 we completed in October.

14           The second thing we did is we looked at  
15 starting in January and we completed the report I  
16 believe in June, it was approved in June, we studied  
17 whether or not it is possible to change the way we  
18 operate the infrastructure that's in the Chicago Area  
19 Waterway System now. So today, for example, we looked  
20 at Wilmette pumping station and the metropolitan water  
21 reclamation district looked at how they could change  
22 that to minimize the chance that fish could swim  
23 through the pumping station.

24           We looked at outfall canals and we considered  
25 whether we're going to modify the outfall canals from

1 sewage disposal to modify the water quality. Can't do  
2 it because of the Clean Water Act, but we looked at it  
3 as a way to impede fish from moving in the area.

4 We also looked at modifying the way we  
5 operate the locks and under the notion that if we  
6 change the frequency, we'll change the probability the  
7 fish might move through. We put that before a panel of  
8 fish biologists from a variety of agencies and the  
9 panel concluded that effectively no, you're not really  
10 going to change the probability by changing the way you  
11 modify the locks. So we can't take action if it's not  
12 going to be effective, so we were not able to do that  
13 either.

14 The fourth report that -- the third report  
15 that we executed was a report that looked at a  
16 technology that allows us to put bubbles and lights and  
17 sound in the water that would deter fish. It's a  
18 rather expensive technology. Our initial indicators  
19 were that it would be relatively off-the-shelf and  
20 inexpensive. That turned out not to be the case. So  
21 pending finding, that may or may not happen as another  
22 deterrent and another reinforcement in the system.

23 Finally we've done a fair amount of  
24 laboratory research on what the most effective  
25 parameters are to deter Asian carp or to prevent them



1 from moving through the fish barrier. That report is  
2 not complete, but we've applied that information as it  
3 becomes available. Now there's a host of other things  
4 that some of our partner agencies have done and I'll  
5 discuss those as we go through here.

6           What you see here is a picture of a fence,  
7 kind of a standard chain link fence but it's in a key  
8 location. It's in Eagle Marsh in Indiana near Fort  
9 Wayne and this marsh is a point where we can get fairly  
10 high water on a fairly frequent basis that would allow  
11 when the waters in this marsh, it doesn't look like  
12 much of a marsh in the photograph, but it frequently is  
13 covered in water and several feet of water not  
14 infrequently, allows a transition point for any fish to  
15 migrate either between Lake Erie through the Maumee  
16 River and the Wabash River basin or vice-versa and  
17 because we found some Asian carp, the Indiana DNR found  
18 some Asian carp spawning near that area about 25 miles  
19 south of that area in the summer of 2010, we  
20 immediately worked to take action in this regard. And  
21 you can see what we've done there today. So it's a  
22 temporary measure. It's imperfect, but it would  
23 prevent any adult fish from swimming through that  
24 location. And this star on the map here indicates the  
25 approximate geographic location of where that is on the

1 map.

2 Now the other thing we've done this year is  
3 we've investigated, done the initial investigation of  
4 what we call the other pathways. Other pathways being  
5 all those pathways outside of the Chicago Area Waterway  
6 System. And you can see all the numbered points here,  
7 those are indicated in the 18, including the star in  
8 Eagle Marsh, the 18 points we've identified there at  
9 significant risk of a water event occurring that would  
10 open up a pathway between the two basins. There's  
11 actually a grand total of 36 locations that we found.  
12 So literally half of them are consequential enough that  
13 we think we need to investigate further and take more  
14 steps to deal with that.

15 We're working with the local DNR's for all  
16 the states to prosecute this investigation further.  
17 We've got an excellent baseline and we know with a good  
18 degree of fidelity where the locations are. Now we  
19 need to get to the specific issues of what to do about  
20 each of those locations and we have more research to do  
21 to indicate what the real risk is. For example, some  
22 of these locations there's dammed streams and rivers  
23 that fish would have to go through or bypass. We need  
24 to understand whether it's actually physically possible  
25 to for fish to bypass those dams.

1           You see here some photographs of some hardy  
2 souls from the Illinois Department of Natural Resources  
3 and Fish and Wildlife Service doing some fish netting  
4 for Asian carp in the Chicago Area Waterway System.  
5 These photos actually were taken about this time last  
6 year and we really intensified our fishing efforts in  
7 the Chicago Area Waterway System to try to confirm what  
8 the environmental DNA indicated that there might be  
9 life Asian carp present.

10           So far, as is widely known, we have found  
11 only one Asian carp in the, what was the name of the  
12 lake, the Calumet Lake, just north of the O'Brien lock  
13 and dam in late June of 2010. And this is out of tens  
14 of thousands of fish that have been captured or killed  
15 and hundreds of thousands of pounds of fish that have  
16 been captured or killed.

17           So the Asian carp strategy is a living  
18 document. We update it as situations warrant. The  
19 latest version is December 2010. If you'd like to read  
20 it you can go to [Asiancarp.org](http://Asiancarp.org) and download it. There  
21 are currently 48 separate actions that all the agencies  
22 are taking to deal with this issue, and the Corp of  
23 Engineers has 12 or 15 -- how many do we have specific  
24 in the framework? Do you know, Ernie?

25           UNIDENTIFIED SPEAKER: 12.

1           GENERAL PEABODY: We have 12. Thanks. The  
2 number does vary from time to time. New projects. I'm  
3 not sure which project. This is John Goss's slide, so  
4 I'm not sure what this is showing. I believe it's  
5 related to some of the research we're doing in tagging  
6 some of the fish in the Chicago Area Waterway System.

7           So, for example, we put transmitters in some  
8 of the fish and tag them and we have receivers along  
9 the sides of the canal near the fish barrier and  
10 through telemetry we can determine whether any fish are  
11 bypassing or swimming through the fish barrier system.  
12 And so far our research indicates very strongly that's  
13 not happening. We'll have about 200 fish, I forget the  
14 precise number, tagged by sometime this spring and  
15 summer.

16           I'm going to talk about this, the GLMRIS  
17 study, in the next portion, so I'm going to skip over  
18 this. I do want to highlight though the bottom major  
19 bullet on collaboration. We really do have a federal  
20 and local and state, a number of partners collaborating  
21 with us and without that collaboration we just can't be  
22 effective in taking the actions that we need to on this  
23 issue.

24           This is simply a detailed view of the fish  
25 barrier system. North is to your right in this view

1 instead of the top side of the screen and you can see  
2 the barrier, the Barrier I, which is the demonstration  
3 barrier, still in operation, but it's not -- it cannot  
4 operate at optimal parameters that Barrier IIB and IIA  
5 can operate at. IIA, the one on the left, is the one  
6 in operation today. It needs to come down for  
7 maintenance very soon. IIB will be in operation in  
8 about a month, maybe five or six weeks according to  
9 current projections. Once we complete all our safety  
10 and operational testing and then we'll take IIA down  
11 for maintenance. But this does give us redundant  
12 capability which is essential.

13           And that just shows you some of the more  
14 fishing operations. I want to emphasize, one of the  
15 additional things we started this year, the Illinois  
16 DNR did, is they went down to the pools where there are  
17 large concentrations, we know there's large  
18 concentrations of Asian carp because we find them  
19 easily and we have not been able to find them in the  
20 Chicago Area Waterway System and they've been doing  
21 some intensive fish netting operations in those  
22 locations to reduce the population pressure of the fish  
23 so that they are nice and happen with the food sources  
24 there and they don't feel compelled to migrate further  
25 north.

1           Lastly, this just shows an example of an  
2 environmental DNA document that indicates where we've  
3 sampled. And if you look at the lower left-hand box,  
4 that highlights a specific area that we sampled. This  
5 looks like it's in the area of the fish barrier, and  
6 the little diamonds indicate whether you have positive  
7 or negative hits from Asian carp eDNA.

8           We've been sampling. We've taken hundreds, I  
9 think well over 200,000 samples to date, and the  
10 positive hit rate above the fish barrier has been  
11 trending around two percent lately. It has been as  
12 high as close to five percent. We don't know if that  
13 means that live Asian carp are there. Some people say  
14 that it does; some don't. All we can say for certain  
15 at this stage of the scientific process is that it is  
16 evidence that Asian carp DNA is present. How it got  
17 there is another story. We're not sure. Live Asian  
18 carp is a possibility so we're taking this very  
19 seriously.

20           Okay. Now let's go to the purpose of the  
21 scoping meeting, which is the study that we're carrying  
22 out to meet the intent of Congress on aquatic invasive  
23 species. So here's the extract of the authority. This  
24 was passed I think in very late 2007, the Water  
25 Resource Development Act. We got our funding for the

1 first time in the summer of 2009. So over a two-year  
2 timeframe from the time Congress passed this until we  
3 got funding to do something with it and we need both of  
4 those capabilities in order to take actually take  
5 action under the law.

6           What does it tell us to do? First it tells  
7 us to do the study at full federal expense of the range  
8 of options and technology available. So figure out  
9 what's currently available, both technologies and  
10 management options that we might take, construction,  
11 whatever, to prevent the spread of aquatic nuisance  
12 species, so the goal is prevent aquatic nuisance  
13 species, between where the Great Lakes and Mississippi  
14 River basins and specifically through the Chicago  
15 Sanitary and Ship Canal and other aquatic pathways. So  
16 the words that we use are specified in the authority  
17 there.

18           Some special considerations are we will  
19 include hydrologic or eco-separation, ecological  
20 separation as part of the study. We will not do what  
21 the Great Lakes commission is doing and that's presume  
22 that the proper end state is hydrologic separation and  
23 then study how to achieve hydrologic separation. We  
24 will take any information that the Great Lakes  
25 commission can provide us that's useful and that meets

1 our qualitative standards of information and science  
2 and we'll apply that to the study. So we look forward  
3 to what they have to offer.

4 Prevent. Much has been made of this a month  
5 or so in the press because we've talked about risk  
6 reduction. The goal and what Congress told us to do is  
7 prevent and that's what we're going to give them ranges  
8 of options and technologies to consider to prevent.  
9 However, all of our experience and all human endeavors  
10 inform us that perfect prevention in the natural world  
11 by human beings is usually perhaps a close  
12 approximation but rarely if ever perfect. So it's with  
13 a certain amount of humility that we approach this,  
14 understanding that we may not be able to get the  
15 technologies and options that can meet the intent of  
16 Congress.

17 What we are committed to doing is getting the  
18 best technologies and options that come as close to  
19 possible to prevent. If we think we can actually 100  
20 percent prevent, we'll include that in the study, but  
21 there's probably going to be some amount of residual  
22 risk no matter what we recommend and no matter what we  
23 actually do and we believe by what we're told by our  
24 other policies and other authorities that we are  
25 required to make that a part of our study process and



1 we're going to do that.

2           And lastly the study is 100 percent federally  
3 funded. That doesn't mean that the federal government  
4 will definitely fund 100 percent of our capabilities.  
5 All it means is that it's going to be funded 100  
6 percent out of the source of federal funds. It is  
7 extremely rare, in fact, I don't know personally of any  
8 cases where the federal government has 100 percent  
9 funded the capability of any one study in any  
10 particular year. I will tell you that this study is a  
11 very high priority for the administration and it will  
12 be very competitive for the limited sources of funding  
13 that we have to carry out the study of the Corps of  
14 Engineers.

15           This actually shows you where specifically  
16 we're authorized to do the study. Now primarily we're  
17 going to focus on the brown area of the Great Lakes  
18 basin in the United States side of the border, not  
19 Canada. We don't have authority in Canada. That  
20 includes the lakes themselves that are under U.S.  
21 jurisdiction, and we're going to look at the upper  
22 Mississippi basin which includes the upper Mississippi  
23 River, the Illinois River and the Ohio River basin,  
24 primarily those areas that are closest to the actual  
25 basin divide itself. We're not going to exclude

1 anything that's not in the Mississippi River basin  
2 because that's what the study tells us to do.

3           So if there's information that comes from the  
4 Missouri River Basin or the Arkansas or Red River  
5 Basin, we will use that information and apply it to the  
6 study, but that's not going to be a primary focus area  
7 unless information comes to our attention to indicate  
8 that we need to pursue things in that region.

9           Okay. This is kind of a score card that  
10 tells you what's in and what's out. So what's in? If  
11 it swims, it's in. If it walks and doesn't swim, it's  
12 out. If it flies, it's out. If it gets in there  
13 because humans have brought it in, it's out. If it's a  
14 natural swimmer or floater or hitchhiker, an insect,  
15 parasite, plant, algae, fish, it's in part of the  
16 study. It's not just fish though. It's anything that  
17 operates biologically in an aquatic ecosystem.

18           Locations, I've addressed this. I want to  
19 emphasize it does not include the Atlantic slope. So  
20 we're not going over the Appalachian Mountains. It  
21 does not include St. Lawrence Seaway and it does not  
22 include Canada. That does not mean if we get  
23 information from sources in these areas that are of  
24 concern we won't consider it; we will. It does mean we  
25 will not actively seek to go look at those areas.

1           Really in the elements we've already covered.  
2 I do want to emphasize the last point in the bottom  
3 left of that slide that's the environmental impact  
4 statement. That is one of the major other laws that we  
5 must abide by, the Natural Environmental Policy Act, so  
6 we'll do an Environmental Impact Statement that  
7 assesses the economic, social and environmental and  
8 other impacts and the benefits and the costs and we'll  
9 weigh and try to balance out what the benefits and  
10 costs are and make recommendations based on what the  
11 facts tell us.

12           Our strategy. So we're going to study two  
13 areas. And if you go back to this slide, notice that  
14 this is a 1500-mile divide by the way. That's a long  
15 way. That's a big area. The red square is the primary  
16 focus area, the Chicago Area Waterway System. One  
17 simple reason, that's where water flows continuously  
18 between two basins. It's the only place that water  
19 flows continuously between the two basins that we know  
20 of, and all the research we've done so far confirms  
21 that. If we get more information to tell us otherwise,  
22 then we'll perhaps modify our approach, but that's the  
23 primary focus area. Everything else is secondary. But  
24 we don't want to ignore the fact or the possibility  
25 that aquatic nuisance species might outflank us and get

1 around the primary contact, which is the Chicago Area  
2 Waterway System. So those two areas.

3 We're organized internally. We've got some  
4 great organizational charts that we won't dazzle you  
5 with, but we feel very confident that we have the right  
6 team and we're able to leverage all of the capabilities  
7 of the Corp of Engineers internally and then we're  
8 going to reach out. We must reach out to federal,  
9 state and local partners, tribal authorities, NGO's, to  
10 get the information they and some of you have available  
11 to you.

12 Simply put, we cannot do this alone. We're  
13 not that smart, we're not that good. This is way two  
14 complex. We've got to have the local knowledge and the  
15 good ideas that come from a whole range of other  
16 authorities to help us out. So fundamentally we need  
17 your help. We need your good ideas. We'll be happy to  
18 take your criticisms. Those count too, but we really  
19 need your good ideas on not just what to do but how to  
20 do it better. Specific information and facts,  
21 scientifically based, are of most value to us.

22 Now just like we did with the efficacy study,  
23 we will cycle out -- which is still not complete by the  
24 way, we've got four interim reports and the study is  
25 not complete -- we almost never do that in the Corps.

1 Usually we'll wait until the whole study is complete  
2 before we do anything. That's not the approach we're  
3 going to take here. We will cycle out information as  
4 it is completed, and we're confident in the quality of  
5 the information and we will cycle out perhaps  
6 recommendations if we can become confident that  
7 particular recommendations can provide interim  
8 improvements in the ability to prevent aquatic nuisance  
9 species from transmitting between the two basins.

10 Okay?

11 And then the last two bullets are we've got  
12 to adapt to the information that's evolved, so we may  
13 have to change some of our approaches and that might  
14 lengthen the study period and there's a whole host of  
15 other legal and regulatory guidance or requirements  
16 that we have to follow and abide by.

17 So we really kind of already hit this, but  
18 what's interesting to me on this slide is the pictures  
19 in the middle there and that brings out some of the  
20 complexity and some of the unique species, not just  
21 fish but plant, micro plants, you know, small aquatic  
22 insects that are at issue here that we're going to  
23 include in the study. It doesn't show any mussels, but  
24 mussels are part of the study as well.

25 Okay. I'd like Mr. Wethington, Dave, who is

1 the project manager, program manager I'd like to say,  
2 for the Chicago Area Waterway System component to talk  
3 about how he's going to execute the primary focus and  
4 the principle aspect of the study. And Dave is also  
5 the author, the intellectual author of practically  
6 everything I've said here today.

7 MR. WETHINGTON: Thanks. I appreciate the  
8 compliment. Thanks for showing up tonight. My name is  
9 Dave Wethington. I'm with the Chicago District Army  
10 Corps of Engineers. What I want to speak very briefly  
11 about is some of what General Peabody has already  
12 covered this evening. The map on the right-hand side is  
13 a depiction of the Chicago Area Waterway System and  
14 there are a couple things I like to point out so that  
15 you're familiar with this as you can be.

16 There are points numbered one through five  
17 along the shoreline starting at the top and going down  
18 through the state of Illinois to the state of Indiana  
19 that indicates five points at which the Great Lakes  
20 basin and the Mississippi River basin have the  
21 opportunity to interact. Those are the potential  
22 connection points through the Chicago Area Waterway  
23 System because it can be kind of described as a fork.  
24 So the five prongs of the fork are spots, are points  
25 one through five, they all funnel into a single

1 channel, the Chicago Sanitary and Ship Canal, which  
2 would be analogous to the handle of the fork.

3           So what you can see on this map is point  
4 number seven is where we have established and continued  
5 to operate and maintain the electric barrier that  
6 General Peabody spoke about earlier. So that's how that  
7 one single choke point is what we're using as an  
8 effective means to prevent the spread of Asian carp  
9 specifically from the Mississippi River basin into the  
10 Great Lakes basin.

11           Another element about the Chicago Area  
12 Waterway System I'd like to note very briefly, points  
13 one through three, number one being the Wilmette  
14 pumping station, number two the Chicago lock and the  
15 third one actually is point number six which is the  
16 O'Brien lock and dam and those are what we call control  
17 structures. So those are physical points where we can  
18 control the flow of water between the Great Lakes and  
19 Mississippi River basins. You'll notice that points  
20 four and five are what we call uncontrolled points. So  
21 there are no physical structures that exist today that  
22 will stop or block the flow of water between Lake  
23 Michigan and -- I'm sorry, between the Great Lakes and  
24 the Mississippi River basins.

25           On the left hand side is basically the

1 process, the planning process the Corps of Engineers is  
2 using to approach the study. Number one, specifying  
3 opportunities, we put together a team. General Peabody  
4 has spoken a lot to who all is involved, not only the  
5 Corps of Engineers but the federal family, non-federal  
6 agencies and other stakeholders. Part of the reason  
7 why we're here today is specifying these problems and  
8 opportunities, how do we approach this project. And  
9 your input today is just as important as anyone else's.

10           After we have specified these problems and  
11 opportunities we'll move down to forecasting conditions  
12 and by doing that what we want to do is collect the  
13 data necessary to evaluate the uses of the waterways in  
14 the Chicagoland area specifically.

15           You might have heard a lot about commercial  
16 navigation as being a primary use. It is a use, but  
17 there are a number of other very important uses for the  
18 Chicago area waterways to include but not limited to  
19 recreation, industrial use, water supply, water  
20 discharge. For example, the Chicago Area Waterway  
21 System is a primary outlet for the Metropolitan Water  
22 Reclamation District's municipal wastewater discharge.  
23 About 70 to 80 percent of the flow of the Chicago River  
24 is made up of wastewater discharge.

25           Another very important thing to the folks in



1 Chicago and surrounding suburbs is the role of the  
2 Chicago Area Waterway System in flood risk management.  
3 It doesn't happen very often, maybe every couple years,  
4 five years, but we get significant rain in the  
5 Chicagoland area that instead of allowing water to just  
6 flow down river as it normally does when it collects in  
7 the Chicagoland area, we must open the gates at control  
8 structure number two and allow water to backflow or  
9 flow into Lake Michigan to alleviate the flood pressure  
10 of the water in the Chicagoland area.

11           If we weren't able to do that, you'd see  
12 significant overbank flooding in downtown Chicago as  
13 well as due to the way the Chicago infrastructure is  
14 constructed, significant basin flooding throughout  
15 downtown Chicago and well into the suburbs affecting  
16 potentially millions of people. Although this sounds  
17 like kind of an inconvenience, it does pose a health  
18 and human safety risk.

19           So once you've identified what all these uses  
20 of the Chicago area waterways are, what we're going to  
21 do is look at applying these aquatic nuisance species  
22 controls. So the purpose of our study is to evaluate  
23 and see what happens when we apply a physical barrier  
24 or a barrier system and see what the effects on the  
25 existing condition of the baseline condition are when

1 we apply certain aquatic use nuisance species controls  
2 and if there are any adverse impacts of that, we also  
3 must identify the means to mitigate for those.

4 That basically kind of steps down through the  
5 process of formulating the plans, evaluating the  
6 effects of the plans, as well as comparing alternatives  
7 and selecting the recommended plan which we will  
8 provide through the Secretary of the Army to Congress.

9 Again, as has been pointed out earlier, we  
10 are in collaboration with not just the federal  
11 stakeholders but also state and regional governmental  
12 agencies, Native American tribes, hydro industries and  
13 non-governmental agencies. I thank you for I'm your  
14 attendance and I'll turn it back to General Peabody.

15 GENERAL PEABODY: Thank you very much. I'd  
16 like Mr. Mike Saffran now who is the project manager  
17 for the Other Pathways to talk about the efforts we've  
18 done to date and what we're going to do going to do  
19 going forward.

20 MR. SAFFRAN: Thank you, sir. It's a pleasure  
21 to be here tonight and I appreciate the folks that have  
22 made it here. The Other Pathways portion of the GLMRIS  
23 was virtually unknown I guess this time last year, what  
24 was really entailed with that. A lot was known about  
25 Chicago's Sanitary and Ship Canal. There's been

1 significant investments as already has been described  
2 in preventing species transfer through that particular  
3 pathway, but we knew very little last summer relative  
4 to where aquatic pathways could exist outside of the  
5 Chicago area waterway and whether or not it poses any  
6 risk. So last year, end of June sort of timeframe,  
7 General Peabody tasked the division team to develop a  
8 plan and implement it to produce a report by the first  
9 of September, a draft report that provided an inventory  
10 of all the potential aquatic pathways along that 1500-  
11 mile long divide and then to conduct a preliminary risk  
12 characterization to determine if any of them posed a  
13 significant risk that could potentially compromise all  
14 the investments we have in the Chicago area waterways  
15 to prevent species migration. In other words, is there  
16 a location where Asian carp could outflank us and get  
17 to the lakes through another avenue.

18           Given just the sheer size of that, the basin  
19 divide, there are eight different Corps of Engineers  
20 districts that abut either side of the basin divide.  
21 When we started into it, the first thing we did is  
22 something that large and so locally specific, the  
23 requirements for information was we contacted each of  
24 the state DNR's and the folks responsible for water  
25 management in the states. We contacted USGS and Fish

1 and Wildlife Services for help in understanding what  
2 the universe of what all the aquatic nuisance species  
3 are. So we got the best and brightest folks that we  
4 could to help us form individual teams to go out and  
5 identify the pathways and perform the risk  
6 characterization.

7 Long story short, we developed an inventory  
8 of about 36 different aquatic pathways. We performed a  
9 risk characterization, 18 of those 36 we determined had  
10 significant risk or there was enough uncertainty  
11 relative to the risk that we could not dismiss them at  
12 that preliminary stage. One of the 18, the Eagle Marsh  
13 in Fort Wayne, really jumped out as a very significant  
14 potential aquatic pathway that posed risk and near term  
15 risk.

16 That location there was a combination of two  
17 things. First of all, it's an intermittent aquatic  
18 pathway where a storm event equal to the largest storm  
19 you would expect to occur in any given year initiates  
20 flow from the Maumee River basin across the Eagle Marsh  
21 and into the Wabash River basin. When you have a  
22 really large storm event, the St. Mary's River and the  
23 St. Joseph's River comes from the north and the south  
24 into Fort Wayne and form the Maumee River which flows  
25 to the northeast out of Fort Wayne. When you have a

1 big event there, the water gets into Fort Wayne so  
2 quick and naturally overflows into the Wabash basin.

3 We had a 2009 flood insurance study there  
4 that indicated that from the biggest storm you'd expect  
5 in a ten-year period, the depth of water across that  
6 basin divide is four and a half feet. So we had that  
7 information that indicated that we have an intermittent  
8 but potentially significant aquatic pathway that forms  
9 there and then about 22 miles below that location we  
10 had significant evidence of reproducing Asian carp  
11 population. So the combination of those two things led  
12 us to quickly identify we need to do something.

13 We had a meeting with all of the interested  
14 stakeholders, again, all the agencies that were  
15 mentioned earlier, as well as some of the local folks.  
16 We quickly came to a solution that we needed some sort  
17 of an interim remedy that could be placed very quickly  
18 and then needed some sort of a long-term solution for  
19 that location as well. The Indiana DNR stepped up to  
20 the plate and said we can do this interim solution. We  
21 can get that in place quickly. The USEPA and other  
22 partners came through and helped supply some of the  
23 money for it. Long story short, less than two months  
24 after that meeting the fence was up and in place. And  
25 the state biologist Doug Keller really sweated that the

1 size of the openings in it but is very confident that  
2 the chain link fence is going to prevent Asian carp  
3 from migrating across that location. So the smaller  
4 fish would not have the ability to migrate where they  
5 have been spotted to get that far up the little river  
6 which is generally a very -- has very little flow in  
7 it.

8           Currently right now the Corps of Engineers  
9 Louisville District is completing a feasibility for a  
10 long-term remedy at that location. And then to ramp up  
11 the work we have on the other pathways we're right now  
12 completing the plan, have been discussing with the  
13 state DNR's the plan to complete the risk  
14 characterization at all 18 locations. And both  
15 feasibility report for Eagle Marsh and the risk  
16 characterization for all other 18 pathways are  
17 scheduled to be completed this year. And that's the  
18 other pathways.

19           GENERAL PEABODY: Thank you. Okay. We're  
20 almost done with the presentation here. Just a few  
21 more points to emphasize. First, we've done a fair  
22 amount in the last year and a half on this already.  
23 You can see we didn't get funds until June of '09 and,  
24 in fact, without additional funding from the EPA using  
25 the Great Lakes restoration initiative funds, we would

1 not be even close to where we are today.

2           The Other Pathways component, we would just  
3 have probably some interim data and that's all we would  
4 have and we certainly would not have been able to do  
5 anything in Eagle Marsh without the Great Lakes  
6 restoration initiative funding from the EPA.

7           On the left side of this chart you can see  
8 the process issues that we followed and the steps.  
9 This is part of our process to form the team and to get  
10 the information and to gather it and develop the plan.  
11 And the plan development includes a fairly significant  
12 public engagement as well, especially the federal  
13 agencies. And then simultaneously in addition to all  
14 the things I talked about related to the fish barrier  
15 and the Asian carp and the Chicago Area Waterway System  
16 and the efficacy study, in addition to all that, which  
17 is supportive of that study effort, you can see the  
18 other things we've done on the right-hand side.

19           So literature review is not a small thing as  
20 you can see, about 700 pieces of literature on Asian  
21 carp and aquatic nuisance species, that's what the ANS  
22 stands for. We've got 154 species of concern between  
23 the two basins that we've identified and we know  
24 there's over 180 species in the Great Lakes alone. Not  
25 all of those are necessarily of concern to the

1 Mississippi basin.

2 We talked about the risk characterization  
3 report from the Other Pathways and about Eagle Marsh.  
4 So we've done a lot. We recognize that it does not  
5 satisfy the public's need for urgent action, so we're  
6 moving forward as best as we can.

7 Now the project schedule. You can see the  
8 schedule here at the top follows the planning process,  
9 major steps that Mr. Wethington talked to you about,  
10 and notionally depending upon information development  
11 and analysis capabilities and the material of that  
12 information, we will cycle out interim products. That  
13 may be reports about certain facts that we've developed  
14 because we want that out there so the scientific and  
15 academic community in particular can review it. And if  
16 they say hey they are missing something, we know of  
17 something over here, they can give that to us and help  
18 inform the development process.

19 It's possible, although uncertain, that we  
20 may cycle out other interim recommendations depending  
21 upon the urgency of the information related to the  
22 other pathways or if there's a certain promising  
23 technology or capability that we discover where we  
24 said, you know, this is something that we can do before  
25 we go to some final product.



1           It's impossible to know whether we'll be able  
2 to do that at this point, but we definitely did that  
3 with the efficacy study and we certainly want to follow  
4 that model for the rest of this study.

5           The last thing I want to emphasize on this  
6 slide is the lower left-hand corner. You see the  
7 asterisk there, it says best case scenario.  
8 Unfortunately that's the truth. The schedule that we  
9 have assumes that we have no major new information to  
10 uncover, no major new leads to go after, no major  
11 complicating factors that need to be studied and that  
12 is just the whole nature of the study is uncertainty.

13           We are trying to uncover things that we don't  
14 know today, develop those into options that we can look  
15 at, weigh the impacts of those options using the EIS  
16 process and then develop recommendations after all that  
17 information has been taken together and gathered and  
18 it's anything but simple.

19           So this just lists some of the possible  
20 interim products. I want to emphasize about the middle  
21 of the slide, see the navigation surveys and below that  
22 is the fishery surveys. That is really all about the  
23 concern related to the locks. So we did the study  
24 about whether we could modify the locks or not and we  
25 concluded that we didn't have enough information to

1 justify that.

2 Now going forward we will be doing detailed  
3 navigation studies to get as much information as we can  
4 to understand the economic and social impacts of  
5 closing the locks as well as the environmental impacts  
6 and the possible environment, economic and other  
7 impacts to Lake Michigan and the Great Lakes if Asian  
8 carp were to get into Lake Michigan and if they were to  
9 be able to establish a sustainable population.

10 That last piece is a question we don't know  
11 the answer to today. Can they establish a sustainable  
12 population? That is something that the U.S. geological  
13 survey will be undertaking on our behalf and we look  
14 forward to the results of that survey. And there's a  
15 bunch more detail we can go into, but you get the gist.

16 How can you help? This is really important.  
17 We need your help. If you have access to somebody you  
18 think has the capability or scientific knowledge or  
19 specific geographic information related to a possible  
20 transition point between the basins or whatever, we  
21 need your recommendations. We need your suggestions.  
22 We get a lot of criticisms and we welcome those, but  
23 the criticisms don't necessarily help us execute the  
24 study. It's recommendations on how to do the study, on  
25 how to get after the criticisms that really, really is

1 going to help us do what you want us to do and that is  
2 go faster, go better and come up with a solution as  
3 quickly as we possibly can. I'm telling you we can't do  
4 it alone.

5           You see listed on this slide all the  
6 different things we are pursuing currently to  
7 accelerate or leverage the capabilities of multiple  
8 other authorities out there, the federal, the state,  
9 the local and the NGO communities that may be able to  
10 assist us. If you think that you can help in this  
11 regard, get active, get on our social media, send us e-  
12 mails, send us recommendations. We'll look into it.

13           We're on the seventh of 12 planned public  
14 scoping meetings. February 1st, the one in Ann Arbor,  
15 Michigan which was planned for this Thursday has been  
16 postponed until March 8th. Many of us have a number of  
17 commitments in late February in Capital Hill and other  
18 places that prevent us from doing this sooner. So  
19 because of the weather we're not going to try to fight  
20 Mother Nature, but we'll go back up to Ann Arbor on  
21 March 8th is the date and the detailed information will  
22 be published once we have that through our web sites  
23 and execute that there. You notice we're going down to  
24 New Orleans also at the suggestion of a previous  
25 scoping meeting.

1           Finally, there's lots of ways to stay in  
2 touch. Your physical presence here is really  
3 appreciated. We look forward to your comments and  
4 recommendations, but you can stay in touch via the  
5 websites listed there and via the social media as well.  
6 With that, Kendall, I'll turn back to you and we can  
7 get to the question and comment portion. Thank you  
8 very much.

9           MR. ZABOROWSKI: Thank you, General. Just to  
10 follow up on the General's last comments there, I would  
11 like to note that the GLMRIS website, the project  
12 website, is a great source of study information. On  
13 the website you can sign up on our e-mail list and we  
14 will send you updates about the study and any  
15 information or products that have been developed. Also  
16 I would like to note that if you are interested in  
17 learning more about Asian carp or the interagency  
18 efforts regarding them, please visit [Asiancarp.org](http://Asiancarp.org).

19           And as I mentioned earlier, I think we're  
20 going to try and forego our more formal comment  
21 process. So anybody that has indicated they would like  
22 to make a comment, please come up to the central  
23 microphone, that would be easier for everyone. And  
24 then I'd like to note that we also have a stenographer  
25 with us, so when you approach the microphone to make

1 your comments, first please state your first and last  
2 name, if you wouldn't mind taking the time to spell  
3 your last name, that would be greatly appreciated and  
4 also say your zip code. And then from there proceed to  
5 give your comment or ask a question.

6 So at this point in time I would like to call  
7 or invite Mr. John Hallock up to the microphone.

8 MR. HALLOCK: John Hallock, H-A-L-L-O-C-K,  
9 zip code 45140. I'm going to speak to you as a rock  
10 hunter. The manmade link between the Mississippi River  
11 and the Great Lakes is an invasive species superhighway  
12 and it has to be closed. I am a rock hunter. I'm here  
13 to talk to you about the Asian carp crisis.

14 First it is a crisis, an environmental crisis  
15 and a crisis of leadership. The ecosystem containing  
16 one-fifth of the world's fresh surface water supply, 84  
17 percent of North America's supply, needs to be  
18 preserved and cherished. If a president is going to  
19 claim to be the Great Lakes president, he shouldn't be  
20 hanging tight with his cronies in Illinois. He should  
21 expect to be held accountable to that water resource  
22 and his Great Lakes legacy seven generations from now.

23 Asian carp are not like Zebra mussels  
24 slipping in unknown through the dark of night. Once  
25 the Asian carp have established breeding populations,

1 like 9/11, the world will have changed permanently.  
2 Personally I'm tired of reading articles this past year  
3 saying if they get in or if they get past the barriers.  
4 Truth is they are getting in and they have been getting  
5 in since December 2009, by the U.S. Army Corps of  
6 Engineers' own press release January 19, 2010.

7           The eDNA science behind that announcement has  
8 gone through an exhaustive review over the past year  
9 and is coming through with flying colors. The reality  
10 is the politicians with the power to stop this, want to  
11 defer, delay and equivocate until they can say, well,  
12 it's too late. We tried.

13           I call upon each of you to also have a voice.  
14 Here is an opportunity to stop one, or we just going to  
15 let it happen? We know exactly what we need to do to  
16 stop it. We have to stop wasting time and money to try  
17 to slow the Asian carp down and take the real medicine  
18 and seriously stop them in the their tracks now, like  
19 yesterday, not in five years. We have to close the  
20 locks now.

21           The manmade link between the Mississippi  
22 River and the Great Lakes is clearly injuring the Great  
23 Lakes ecosystem and has to be closed. Fresh water is  
24 the most valuable resource we have. The economic  
25 concerns of closing the Chicago Shipping and Sanitary

1 Canal are myopic. Shouldn't we be looking out seven  
2 generations from now? It's not that far.

3 I myself am actually a fifth generation  
4 cottager on the coast of Georgian Bay, Lake Huron, and  
5 I can tell you there's a whole lot more economy out  
6 there than the \$7 billion fishing industry they like to  
7 prattle on about. Entire economies have been built  
8 around the Great Lakes lifestyle. Call it tourism,  
9 call it cottaging, visiting, buying, owning, staying,  
10 but if that lifestyle forever changes, there will be  
11 cascading negative economic consequences. The Great  
12 Lakes basin is the second largest economy in the world.

13 Have so many people fought so hard to keep  
14 our native fish populations thriving just to let the  
15 Asian carp steal their food supply and kill them off?  
16 Are we losing our natural way of life? The Great Lakes  
17 are already an ecosystem under serious stress. It's  
18 irresponsible not to protect them.

19 The manmade link between the Mississippi  
20 River and the Great Lakes is an invasive species  
21 superhighway and it has to be closed. Thank you.

22 MR. ZABOROWSKI: Thank you, Mr. Hallock.

23 GENERAL PEABODY: Sir, we appreciate your  
24 testimony. Did you have any particular questions you'd  
25 like us to answer for you?

1           MR. HALLOCK:  What's it going to take to  
2 close the locks?

3           GENERAL PEABODY:  Fundamentally it would take  
4 a change in the law.  Those locks were constructed and  
5 built under several statutes from Congress, mostly in  
6 the 30's and 40's, but those statutes are authorized  
7 for several purposes, the primary one of which is  
8 navigation but also a water diversion, flood control  
9 and environmental quality, so the water quality  
10 component to operating those locks as well.

11           So we do what Congress tells us to do.  If  
12 the Congress or the president were to change the law or  
13 propose a law change the law to operate those for  
14 purposes of Asian carp prevention, we would do so.  We  
15 want to emphasize though that that would not stop the  
16 pathway between the Lake Michigan and Chicago Area  
17 Waterway System from being closed because you'd still  
18 have the pathways open in the Grand Calumet and Little  
19 Calumet Rivers.  So that's something we are studying as  
20 part of this process also what we can do about this.

21           MR. HALLOCK:  There are several lawsuits  
22 going 100 years back relating to all this that can be  
23 shown that the locks are harming the Great Lakes and  
24 can be closed.

25           GENERAL PEABODY:  I'm not sure I understand



1 the question.

2 MR. HALLOCK: I believe there are several  
3 open lawsuits that were brought up initially to the  
4 Supreme Court. Has anyone rejected it at this point?

5 GENERAL PEABODY: I'm not at liberty to  
6 discuss pending litigation. As you may be aware, the  
7 basis for that lawsuit is still under litigation, and  
8 if you have any questions related to that, Department  
9 of Justice can field questions for it about the  
10 lawsuit. Thank you, sir. Appreciate it.

11 MR. ZABOROWSKI: At this time I'd like to  
12 invite Mr. Nathan Holscher. Please start with your  
13 name and spell your last name.

14 MR. HOLSCHER: Nathan Holscher, last name, H-  
15 O-L-S-C-H-E-R, and I don't yet have enough information  
16 to offer comments and criticisms, but I have a  
17 question. I'm with Rivers Unlimited, we're an Ohio  
18 River protection organization and we're trying to study  
19 the threat that can be posed to the rivers, the  
20 tributaries of Lake Erie and eventually the tributaries  
21 of the Ohio and to understand with rivers, many of  
22 which have some higher velocity of flow than say the  
23 Illinois River, is they are the same kind of threat to  
24 have a compromised ecosystem. And a lot of the  
25 tributaries in the State of Ohio that we've seen, you

1 know, that the population is decimating the Illinois  
2 River. Just any insight and color you guys can provide  
3 on that would be greatly appreciated.

4 GENERAL PEABODY: If I can ask you to clarify  
5 then I'm going to refer to one of you guys. Is this  
6 question related specifically to Asian carp?

7 MR. HOLSCHER: It is, yes.

8 MR. ZABOROWSKI: Before you answer it Mr.  
9 Holscher, can I get your zip code?

10 MR. HOLSCHER: 45232.

11 MR. ZABOROWSKI: Thank you.

12 MR. WETHINGTON: I'll say a couple words and  
13 then pass it on to maybe Mike or John. I don't know if  
14 we're going to be able to give you a good answer. The  
15 scope of the interbasin study that we're describing  
16 today is really looking at preventing the transfer of  
17 aquatic nuisance species in the Great Lakes. And  
18 that's the focus of our study and the work that we've  
19 been doing.

20 My recommendation would probably be, if  
21 you're looking at rivers in Ohio, is to work with the  
22 state of Ohio Department of Natural Resources  
23 Environmental Policy Act. There are folks there like  
24 Mike Saffran has worked with the Other Pathways study  
25 who can provide you with more detailed information

1 about the specific habitats in the state of Ohio with  
2 regards to the rivers.

3           Additionally there's probably other  
4 literature out there looking at, you know, the habitat  
5 requirements for a carp that really aren't being  
6 considered specifically as part of the invasive study.  
7 Do you want to add anything else to that?

8           MR. SAFFRAN: First I appreciate the question  
9 because we haven't gotten that question very much.  
10 There's been much more concern about impacts of the  
11 Great Lakes than we've heard all on the inland rivers  
12 and lakes that we have. And to be honest, I have no  
13 real direct information on Ohio, but I do have some  
14 pretty good anecdotal information in Indiana.

15           In the Wabash River, again, the Asian carp  
16 are very prevalent and in the lower parts of the Wabash  
17 River are the only species being found. Mr. Goss tells  
18 a story about the White River through Indianapolis and  
19 the dams that most believed would be impenetrable to  
20 Asian carp being able to migrate above that location.  
21 He said there was a single rainfall I guess in the last  
22 year or so and that there are significant populations  
23 of Asian carp now above that 20-foot dam structure.

24           So the answer is, yes, the Ohio streams are  
25 at risk. I don't think there's a lot of data right now

1 on numbers or locations. The difficulty with the Asian  
2 carp is that they have to be there in great numbers  
3 before you detect them in general. They are not the  
4 type of fish you catch on a hook.

5 Again, I appreciate the question and I think  
6 it's a very good one because I've not seen the  
7 sensitivity for the ecosystems in the inland streams  
8 and lakes that we have seen for the Great Lakes which  
9 are obviously irreplaceable treasures. Thanks.

10 MR. ZABOROWSKI: Thank you. At this point  
11 I've actually gone through the list of people that have  
12 indicated that they wanted to make a comment before  
13 they came into the meeting. Is there anybody else in  
14 the audience that would like to come to the microphone  
15 or come back to the microphone and ask a question or  
16 make any additional comments on our panel? Don't be  
17 shy. Is there anything that the panel would like to  
18 convey again?

19 MR. ZIMMERMAN: I'll add something to the  
20 answer that Mike gave. Again I'll just say that number  
21 one, we don't have a lot of factual data that  
22 illustrates numbers in terms of population quantities  
23 off the tributaries of the Ohio River. I will say that  
24 we have some sightings that have been authenticated  
25 that tell us that there's a potential that the

1 migration of the Ohio River has gone at least as far as  
2 a facility we have which is pretty far east of here.  
3 There are not a lot of control structures that prevent  
4 fish from getting in the tributaries and while we  
5 believe that the Illinois River is a tributary of the  
6 Mississippi and is one of the primary migration paths  
7 this far for whatever reason, nutrition load, whatever.

8           There are estimates out there that say in the  
9 Illinois River, for example, the Asian carp population  
10 constitutes somewhere around 90 to 95 percent biomass  
11 in the river. It has surplanted (sic) all the other  
12 native species. We know that there are the presence of  
13 Asian Carp as far as the Upper Mud. We know on the  
14 lower end of the river in Kentucky and on Wabash and  
15 some of the other tribs down there that we have a  
16 significant population. Do the math and figure it out,  
17 but without significant barriers or prevention of any  
18 further migration it may be too late. Quite frankly  
19 that's my opinion, not necessarily one that's shared by  
20 biologists in the field that you probably do have some  
21 problems that have not grown to the level they are  
22 apparent to in the other tributaries linked to Ohio.

23           MR. ZABOROWSKI: Thank you, John. Sir, if I  
24 could ask you to please come to the microphone and then  
25 if you could state your name again before you begin.

1           MR. HALLOCK: John Hallock, 45140. I have a  
2 question about the Eagle Marsh chain link fence up  
3 there now. So what's going to stop the smaller Asian  
4 carp? Is there a long-term plan.

5           MR. SAFFRAN: In the town of Huntington which  
6 is 22 miles west of Fort Wayne there's the Wabash River  
7 separates from the Little River, the Little River is  
8 the headwaters that run up to Fort Wayne. Typically  
9 the Little River runs less than a foot depth of water.  
10 The biologists for the state of Indiana are very  
11 certain that the fish have not mated above Huntington.

12           There's eDNA testing done this past October  
13 in the Eagle Marsh and the tailwaters of the Roush  
14 Dam and basically the Little River right in the  
15 Huntington. So they did eDNA testing on that side of  
16 the river as well as on the Maumee side and St.  
17 Joseph's river as well and no eDNA for Asian carp were  
18 found there. The thought process is that there's none  
19 above Huntington, but if we have another real big storm  
20 event, that that would create the condition that the  
21 adult fish can swim up above that and the Asian carp,  
22 some reports say they'll travel as much as 50 miles in  
23 a day. So from an adult fish perspective, they can very  
24 much -- very likely make that trek, that 20-mile trek  
25 once the water runs high.

1           MR. HALLOCK: What about the smaller fish  
2 coming along for the ride?

3           MR. SAFFRAN: Smaller fish would have to swim  
4 upstream and the thought is they would not have the  
5 ability to navigate that 20 miles up the stream that  
6 would be necessary. They wouldn't have the locomotive  
7 capacity to do that.

8           MR. HALLOCK: That assumes it's a one-day  
9 cycle then.

10          MR. SAFFRAN: Again, I'm telling you what the  
11 basis is. Everybody knows there is an interim  
12 solution.

13          MR. HALLOCK: I guess that's my question, is  
14 there a longer-term plan?

15          MR. WETHINGTON: Mike might be able to answer  
16 that, but we are looking at specifically at a long-term  
17 remedy at the Eagle Marsh location. This is just an  
18 interim risk reduction recognizing that there are adult  
19 Asian carp within about 20, 25 miles of the potential  
20 Interbasin.

21                 So we work with the state agency. They have  
22 the representative authorities to construct something  
23 which the Corps of Engineers. We have to basically dot  
24 our I's and cross our T's in order to recommend a long-  
25 term term solution because, very honestly, Eagle Marsh

1 is a floodway for the city of Fort Wayne. So we can't  
2 necessarily build a dam cross there because again the  
3 impacts of implementing control may have significant  
4 adverse impacts.

5 We have to look what the impacts are, but  
6 Mike and his team are spending more time and he can  
7 address that more.

8 MR. SAFFRAN: I guess two things, one, that  
9 the feasibility study for the long-term is to be  
10 completed this year, so we should have something by the  
11 end of the year to recommended.

12 Another thing about the chain link fence,  
13 another thing about the chain link fence is it has the  
14 ability to catch netting or other things to it that can  
15 make the effective diameter, if you will, smaller. So  
16 that in combination with the plain monitoring program.  
17 There's risks there, but they are being managed, its  
18 effects are managed, but with the process thought that  
19 we need to get the permanent remedy in as soon as  
20 possible.

21 MR. ZIMMERMAN: I would add too that we  
22 didn't just go out and pull the chain link as whatever  
23 is available in garden variety. There was a great deal  
24 of scientific thought exactly along the lines about the  
25 question of small fish being able to swim during



1 certain conditions. And Mike is right, you have to do  
2 this on a risk-based standpoint, what is doable, what's  
3 affordable in the interim period and what would be the  
4 most effective. And so all those things went into  
5 consideration of the sizing of the chain link.

6 And as Dave said, there's some concern about  
7 inducing flooding that is not there right now if we  
8 would go out and create a barrier that, you know,  
9 during extremely high water events could cause the  
10 flooding problem. So it would prevent any potential  
11 and would give us a relative zero risk factor as far as  
12 the passage of the small fish.

13 All things were considered, and based on  
14 scientific input from other agencies and entities,  
15 academia. Also we came to the conclusion that this was  
16 the best solution. Now we don't know what the final  
17 solution may be out there. It may include some  
18 mechanisms similar to this and it may include other  
19 things of all the control structures.

20 MR. HALLOCK: The problem I have with a lot  
21 of this and a lot of other people is the whole idea of  
22 risk reduction seems like we're slowing them down and  
23 not really out to permanently stop them. Risk  
24 reduction of the goby, they built the electric fences  
25 for the goby, they are a disaster. I believe there's

1 an effort to stop them because they slipped in through  
2 ballasts.

3 But all these things are changing the  
4 ecosystem. The goby changed the way of life up there  
5 already. I'd like to see us getting ahead of the  
6 bowling ball or the Asian carp. It's going to  
7 massively change boats you're able to use, what you're  
8 able to do on the water, how you can travel, when you  
9 can travel. Thank you for your efforts.

10 MR. ZABOROWSKI: Thank you again. I'll ask  
11 you to start with your name.

12 MR. GRAHAM: My name is David Graham, G-R-A-  
13 H-A-M, and my zip code is 45212. I have a couple of  
14 questions and it's kind of a long-term thing. We have  
15 a place up on Lake Huron so I have seen all the  
16 invasive species come in. And I guess my question is  
17 first of all do we know that the Great Lakes are a good  
18 fit for the Asian carp or do the Asian carp, I mean, do  
19 they fit just every where? Do they have natural  
20 predators, that kind of thing? And also what I've  
21 noticed with the other invasive species is, sure, they  
22 come in and explode out like typical populations when  
23 they get their nitch, but then somehow things start to  
24 adjust and then they can come back and then it kind of  
25 self-controls itself. Yes, they will always be there

1 and whatever, but do we have any information on that  
2 kind of thing? Thank you.

3 GENERAL PEABODY: Yes, sir. None of us are  
4 fish biologists or fish experts, so a caveat. I think  
5 you deserve an answer and so the easiest way is for me  
6 to say I can't answer that question, but you deserve an  
7 answer. To put it very simply, the fish experts that  
8 we talk to, which are primarily the USGS, the U.S.  
9 Geological Survey, U.S. Fish and Wild Life Service,  
10 Illinois DNR, our own biologists and Corps of  
11 Engineers, in general they believe two things.

12 Number one is it's very unlikely that Asian  
13 carp are past the fish barrier in any numbers that  
14 could establish a sustainable population and inhabit  
15 the Great Lakes and propagate. Okay? It's not  
16 certain, as Mike pointed out, these fish are difficult  
17 to find, but despite intensive efforts that we've had  
18 above the fish barrier, we've not been able to validate  
19 the environmental DNA evidence with live Asian carp.

20 We found one Asian carp in Lake Calumet. It  
21 was a bighead and we didn't find any bighead eDNA in  
22 Lake Calumet. We found some silver carp eDNA in Lake  
23 Calumet. That's my first point.

24 Second, and the other thing I want to  
25 emphasize is eDNA does not equal live Asian carp under

1 our current understanding. There are some people who  
2 believe that; the federal government does not. And the  
3 reason we don't believe that is because the state of  
4 the science, this is an emerging technology that is  
5 still undergoing independent external peer review. It  
6 has not been replicated by other independent scientists  
7 outside of UND and it just needs to go through more of  
8 the scientific process to get to the point where we can  
9 make that judgment. It does tell us and we have very  
10 high confidence that eDNA does tell us that there's DNA  
11 evidence from an Asian carp where the sample was taken.

12 Third point, what would be the effect if they  
13 got in the Great Lakes? I think the short answer is we  
14 don't know, but the fish biologists that I've talked to  
15 believe that it would likely be serious, major  
16 consequential, and it would likely be in the near shore  
17 area and the tributaries. Now there's a lot of factors  
18 about this fish. Every species has its unique nuances.  
19 One of the issues with this fish is for them to spawn  
20 they have to have a certain flowing velocity in a river  
21 and you need to have a certain river that's so long.

22 I'm not sure how long that is. But in general the  
23 tributaries tend to be fairly short going into the  
24 Great Lakes.

25 Having said all of that, USGS is looking at a

1 number of possible biological approaches to control or  
2 kill this species in the habitat that they are in and  
3 we're going to research the question of their  
4 sustainability in Lake Michigan if they were to get in.  
5 And that's part of what the geological study is going  
6 to do for us.

7 MR. ZABOROWSKI: He asked about natural  
8 predators.

9 GENERAL PEABODY: Yeah. Again, I'm not the  
10 expert. What they've told me, and I can let Dave  
11 comment on this, but when they are small, like young-  
12 of-the-year, fish eat them, but when they get big, they  
13 don't appear to have to our knowledge any natural  
14 predators. So once they get big enough they are not  
15 going to be consumed by the native habitat, then they  
16 are only going to die of natural causes. Dave?

17 MR. WETHINGTON: I would echo what the  
18 General said. There was a gentleman who I met a couple  
19 times who has been a long-time fisherman on the Great  
20 Lakes and he came to our meeting, we had a meeting in  
21 Traverse City last week and he was wearing a shirt that  
22 said perch -- and there was some other fish on there --  
23 perch and walleye eat baby Asian carp. So that's  
24 obviously kind of just coincidental-type information,  
25 but there is some indication that as young-of-the-year

1 they have some predators.

2 Another thing to note that this is also just  
3 facts you can do whatever you want to with, there have  
4 been I believe four instances of adult Asian carp  
5 pulled from Lake Erie between 1998 and 2005. So the  
6 idea that the fish have never seen the Great Lakes is  
7 not -- you can go to the U.S. Geological website and  
8 find the four or five instances between those years  
9 when Asian carp species have been pulled from Lake  
10 Erie. But there's also an indication at this point in  
11 time that they've been able to develop a sustaining  
12 population. Some experts say yes; some say no.

13 We're doing a lot of work, the geological  
14 survey is doing a lot of work. Our brethren in Canada  
15 are doing a dedicated risk assessment looking at the  
16 potential for Asian carp specifically to survive and  
17 thrive in the Great Lakes system. So I believe that  
18 that research will be completed within about next year  
19 as well.

20 MR. GRAHAM: Do you have links to that kind  
21 of thing where you can look at it?

22 MR. WETHINGTON: Asiancarp.org, I believe you  
23 can find a lot of Asian carp specific information.  
24 And, again, you can search on the U.S. Geologic website  
25 for those times when Asian carp were pulled and they

1 identify when and where they are pulled.

2 MR. ZIMMERMAN: You can actually Google that  
3 and get the newspaper articles. You can see the  
4 articles from the local communities when they've done  
5 that.

6 MR. SAFFRAN: USGS has a wonderful database  
7 that you can get to and find locations where silver,  
8 bighead carp have been collected. The Preliminary Risk  
9 Characterization Report used the databases from those  
10 to plot those locations relative to the aquatic  
11 pathways. Again, that report is available on the  
12 Chicago District website.

13 MR. ZABOROWSKI: Okay. Thank you for your  
14 questions. At this point in time would anybody else  
15 like to come to the microphone and ask a question of  
16 the panel or make any more comments? Again I'll ask the  
17 panel if there's any outstanding comments that they  
18 would like to make?

19 GENERAL PEABODY: I again want to thank  
20 everybody for coming out tonight. We appreciate it.  
21 But the thing I would conclude on is this is not a  
22 simple problem. It's a complex problem, especially  
23 when you're looking just beyond Asian carp. Asian carp  
24 is only one species. It's a species that gets most of  
25 the attention today or concern, but we need to look at

1 all the invasive species in accordance with the  
2 authority and we intend to do that.

3           The anecdote that Asian carp were found above  
4 a dam that was presumed to be impenetrable is one that  
5 we need to take seriously. And that indicates to us  
6 that, you know, you may have a physical object that  
7 appears to be impossible to bypass or get around and  
8 yet somehow the species got past it.

9           So we need to have great clarity on what are  
10 the factors of how these species migrate and have a  
11 multi-pronged approach. Simple physical separation,  
12 even if we were able to fund it and achieve it and if  
13 it was technologically feasible, none of which is  
14 certain at this point in the Chicago Area Waterway  
15 System, such a separation would not necessarily achieve  
16 the intent.

17           So we really have to have a multi-pronged  
18 approach to this. We have to use all the biological,  
19 scientific capabilities that we have to attack this in  
20 biological ways, not just engineering and physical  
21 solutions, and we have to weigh on this complex problem  
22 against the cost of making changes to the way the  
23 system operates today. And there are always costs to  
24 somebody when you make changes. Under the law that's  
25 what we intend to do.



1           Lastly we are simply following the law. As  
2 the Corps of Engineers we're doing our very best to  
3 attack this as quickly as we can with the limitations  
4 of funding and the current state of knowledge. And if  
5 you have -- I want to emphasize, if you have access to  
6 any information, facts, data, scientific data,  
7 resources, academics, scientists that you know of that  
8 may have knowledge that can help us accelerate this  
9 study, we really encourage you to have those people get  
10 into contact with us and we'll work with them and the  
11 information they provide to propagate the study. Thank  
12 you very much.

13           MR. ZABOROWSKI: In closing then I would like  
14 to remind everybody that again you can see any updates  
15 on our study website that can be found on several of  
16 the handouts that you were given today. And I would  
17 like to remind everyone that the NEPA scoping period  
18 ends on March 31st. So if you have any additional  
19 comments that you would like to make after tonight's  
20 meeting, you can submit them in written form or through  
21 our project website.

22           And just as a reminder, that all forms of  
23 comments submitted will be weighed equally. The time  
24 now is 7:02 p.m., and this will conclude the oral  
25 comment session this evening.

1                   GENERAL PEABODY: We'll hang around and talk  
2 to you informally as long as you'd like.

3                   MR. ZABOROWSKI: Thank you.

4                                 (Concluded at 7:02 p.m.)

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C E R T I F I C A T E

I, Lisa K. Keller, a Registered Professional Reporter, do hereby certify that the foregoing is a full, true and correct transcript of my notes taken in the above-styled case and thereafter transcribed by me.

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Lisa K. Keller, RMR

Capital Reporting Company  
GLMRIS Public Meeting - II 02-01-2011

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