

GLMRIS
GREAT LAKES AND MISSISSIPPI RIVER INTERBASIN STUDY
PUBLIC HEARING

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MINNESOTA VALLEY NATIONAL WILDLIFE REFUGE
3815 AMERICAN BOULEVARD EAST
BLOOMINGTON, MINNESOTA

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

2 MODERATOR:

3 Lauren Fleer
USACE, Chicago District

4

5 PANEL:

6 Colonel Frederic A. Drummond, Jr.
Commander, Chicago District, USACE

7

8 Dave Wethington, III
GLMRIS CAWS Project Manager

9 John Goss
Council on Environmental Quality

10

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

2 MS. FLEER: Good afternoon, everyone.
3 I'd like to welcome everyone to this afternoon's
4 meeting about the Great Lakes and Mississippi River
5 Interbasin Study, also known as GLMRIS. My name is
6 Lauren Fleer. I'm with the U.S. Army Corps of
7 Engineers Chicago District, and I'm going to be
8 moderating today's panel.

9 So before we get started, I'm going to just
10 address a few minor housekeeping issues. Out the
11 door and to your left is the bathrooms, and then out
12 the door and to either side is the exits. When you
13 arrived today, there were a few materials available
14 at the welcome table. The first was the meeting
15 agenda printed on green paper which shows what we
16 have planned for this afternoon. Secondly, there
17 was some frequently asked questions on a blue sheet
18 of paper. And thirdly, there was a summary of the
19 GLMRIS Report shown here, which is basically an
20 abbreviated version of the much lengthier study that
21 the Corps of Engineers released on January 6th. The
22 full study as well as the summary report are both
23 available at our website, which is glmris.anl.gov
24 which is the first web address shown on the back of
25 the pamphlet, so if you'd like more information at

1 any point in time, I'd encourage you to go to the
2 website.

3 I'd like to introduce you all to our panel
4 this afternoon. On your farthest left is John Goss,
5 who is from the White House Council on Environmental
6 Quality. In the middle is Colonel Frederic
7 Drummond, who's the Commander of the Chicago
8 District Army Corps of Engineers. And then on your
9 right is Dave Wethington, who is also from the
10 Chicago District of the Army Corps of Engineers and
11 who's the project manager for the GLMRIS study.

12 After our panelists give some brief
13 presentations, we're going to have plenty of time
14 for discussion. We really have two goals in today's
15 meeting. The first is to present the results of the
16 GLMRIS study, but secondly and more importantly is a
17 chance for us to hear from you, to hear your
18 questions and your comments as well, so I want to
19 thank those of you who have preregistered on our
20 website to speak this afternoon, and if you did not
21 have the opportunity to preregister but know that
22 you'd like to make a comment or ask a question, I do
23 encourage you to fill out a yellow comment
24 registration form. We'll have plenty of time, like
25 I said, to have lots of discussion afterward. So

1 thank you so much for coming out today. Without any
2 further ado, I'll hand it over to John Goss.

3 MR. GOSS: Good to see the really
4 concerned people here today. It's a great turnout
5 for a very cold day. Appreciate it. Thank you to
6 the GLMRIS team for bringing us what I think you'll
7 see is a very thorough analysis of alternatives in
8 the Chicago waterway. It's very complex. We need
9 your help. We are here representing federal
10 agencies -- Corps of Engineers, the
11 administration -- asking the region to look at these
12 alternatives and help us narrow the list down. We
13 really need to get it down to one alternative if
14 possible that the GLMRIS team could then move
15 forward on design and hopefully get moving on this
16 timeline. As you're going to see, it could be quite
17 long for some of these options.

18 And also, we're hoping that we can develop
19 a consensus from the interest groups, from the
20 states, from everyone who's concerned about this.
21 So try to think about what is it that is doable and
22 fundable and really has potential for congressional
23 action as an alternative that we can move forward
24 with.

25 Also, I'm going to give you just a quick

1 update on what's under Alternative 1, which are the
2 continuing Asian carp controls. I do work for the
3 White House Council on Environmental Quality and
4 I've had for the last three years the privilege of
5 coordinating the regional group that has worked on
6 Asian carp control, and I want to thank Minnesota
7 DNR for being very major contributors to that team
8 of people with their expertise and actually leading
9 on a number of areas in developing strategies. We
10 have a four-part strategy, which is an effective
11 electric barrier, extensive monitoring, developing
12 new control technologies, and the long-term solution
13 is the GLMRIS study which we're here today with,
14 replacing the original electric barrier this year
15 and next year with a new one, working also with the
16 barge industry.

17 We've had some recent findings that some
18 small fish may still be moving through the electric
19 field, and we're going to have to work on that, and
20 the barges may in fact be able to move some fish
21 toward the electric barrier or into it. So we're
22 going to have a task force come up with a way to
23 solve that challenge. We're also field testing
24 other technologies besides the electric barrier that
25 could be fish barriers, deterrents such as carbon

1 dioxide, ozone, possibly chlorine, possibly some
2 other things that we have teams of people
3 researching right now.

4 Commercial harvesting of bighead and
5 silver carp continues. Over 50,000 fish were taken
6 by commercial harvesters in the two or three lock
7 pools below the electric barrier to continue to keep
8 the pressure of the fish population off the barrier.
9 And we continue to monitor above the barrier between
10 the barrier and Lake Michigan very extensively and
11 doing eDNA testing on a regular basis also. That
12 has expanded around the Great Lakes and many of the
13 tributaries also in the last year.

14 The Corps did complete a risk assessment on
15 the other possible water connections across the
16 Continental Divide from New York to Minnesota. We
17 had 18 of those that were fully evaluated. Only one
18 of those rated as a high risk, and that was in Fort
19 Wayne, Indiana, between the Maumee and the Wabash
20 River, and we do have a control strategy being
21 designed now with working with NRCS and Indiana DNR
22 to develop a permanent barrier for that one
23 high-risk location, and the other states are working
24 on the medium risk locations. Just wanted to assure
25 you that we haven't forgotten about those and we're

1 working on strategies to close all of those
2 connections also.

3 There is a National Carp Control Plan which
4 would include the Mississippi River, Ohio River,
5 Missouri, all the other areas of the country
6 threatened by Asian carp. Unfortunately, it's had
7 very minimal funding in the past, so as you're
8 thinking about what the options are, I think in
9 Alternative 2 you'll see that it proposes doing as
10 many best management practices as possible. That
11 would include in your area here on the Mississippi,
12 on the Ohio, further away from Chicago to help work
13 on this carp population and eventually moving
14 towards restoring our native fish populations.

15 We also need the help of all the states who
16 are in this area outside the Great Lakes. There are
17 13 species that are talked about in the report as
18 being the highest risk of concern. Ten of those are
19 in the Great Lakes threatening to move to the
20 rivers, to your areas, and certainly responses and
21 concern expressed in comments from all of the areas
22 outside the Great Lakes states are really important
23 if we're going to get the political momentum to get
24 funding and authorization to move ahead on these
25 actions that are proposed.

1 Just a few closing thoughts for me.
2 Collaboration is really important to finding
3 solutions, so think what projects can move forward
4 with the most support. We've gotten a lot of help
5 from industry groups, from environmental groups, and
6 we'll continue to rely on their comments and
7 recommendations and particularly on the states that
8 are partners in the project for their comments. We
9 need to move quickly while we've got some interest
10 and momentum and get something recommended to
11 congress that we can all agree on.

12 Just as a final thought, the Great Lakes
13 have had a lot of success on some very major
14 challenges and projects. Sea lamprey control is
15 probably the best example of invasive species
16 control that everyone has contributed to since the
17 1950s. Great Lakes Water Quality Initiative,
18 working with our Canadian partners is a really
19 significant accomplishment, as is the Great Lakes
20 Compact to protect our water levels. The Great
21 Lakes Restoration Initiative, which the Obama
22 administration has supported strongly and it has
23 been funded again in the 2014 budget, is providing
24 the resources for a wide range of restoration
25 projects that ten years ago we didn't know might

1 ever be possible, so we want to add Asian carp
2 control and invasive species control to that list.
3 With your help, I think we can accomplish that.
4 Thanks, and we do have a website if you want to
5 check on projects, asiancarp.us, and we want to
6 thank Fish & Wildlife Service and Katie, who's here
7 today who manages that website. Thanks.

8 COLONEL DRUMMOND: Well, good
9 afternoon, everyone. I'm certainly glad to be here
10 in the Twin Cities area to bring you the GLMRIS
11 Report and to have an open and frank discussion as
12 John had talked about. Before I go into that, I'd
13 like to make a quick announcement. I know we have
14 representation from the Mississippi River Valley
15 division here. Thank you for coming in. As well as
16 we got representation from the St. Paul District.
17 The DPM's here, thank you, as well as the St. Paul
18 Deputy Commander, Major Thompson, he's here. Been a
19 very good friend of mine. Colonel Deschenes is here
20 from Rock Island, so we've got good representation.
21 Rock Island works very closely with Chicago because
22 we both jointly own part of the Chicago Area
23 Waterway System.

24 So why are we here. GLMRIS is a complex
25 study that examines opportunities to prevent aquatic

1 transfer of any ANS, not just the fish like Asian
2 carp that you hear about in the paper, but other
3 species. John hit on it a little bit. You're going
4 to hear tonight the term 13. Ten of them are coming
5 from the Mississippi River, from the Great Lakes
6 down to the Mississippi, and then three are moving
7 up from the Mississippi into the Great Lakes. The
8 GLMRIS Report's going to outline a variety of
9 potential prevention methods and presents an
10 evaluation of criteria to help members like you sort
11 of understand the various alternatives. The purpose
12 of the GLMRIS Report is to paint an objective
13 picture of several alternatives to offer
14 decision-makers, stakeholders, and the public like
15 yourself with information about these alternatives.
16 This report is very unique in comparison to most
17 Corps of Engineer reports in that it identifies a
18 range of options and is adaptable for incorporation
19 of future technologies, and Dave will hit on several
20 of these tonight.

21 Apart from the GLMRIS Report, the Corps of
22 Engineers is going to stay heavily involved in the
23 Asian Carp Regional Coordinating Committee, which we
24 have been, and I'd like to tell most folks, in the
25 last two and a half years of my dealing with the

1 ACRCC, it is probably one of the flattest
2 organizations in the federal government. And when I
3 say "flat," you know, my PM has a direct line to the
4 ASA. John Goss has got a direct line to Nancy
5 Sutley, and so the system is very flat and various
6 levels of government have listened in this ongoing
7 problem.

8 You're going to hear tonight a little bit
9 about shared responsibility, and we do believe that
10 this whole GLMRIS Report, what it's going to do is
11 outline a range of options and technologies. It's
12 going to require a shared responsibility from
13 everybody, whether it's state, local, state DNR, and
14 other organizations.

15 Just wanted to point out, you know, we've
16 been doing this on the road here for the last two
17 weeks. The GLMRIS Report came out on the 6th of
18 January. The first day, we briefed 53
19 representatives in congress and their various
20 staffs, got the information, started that. The
21 report's been published in well over 7,000 media
22 stations, so the information is getting out.

23 Tonight when you came in, you should have
24 received what we call a small executive summary
25 book. It's about 25 pages in length. I call it a

1 good primer. Once you start reading this, it's
2 going to really make you want to go to the full
3 report, which is 232 pages. And then if that's not
4 enough, we have the Tom Clancy novel of about 10,000
5 pages of technical data. So there's a lot of
6 information out there, and by all means, I would
7 encourage you, after this brief tonight, to go back
8 to the website and just sort of analyze this and
9 digest it. You'll see that the range of options has
10 got a little bit for everybody out there.

11 What's going to happen now, I'm going to
12 turn it over to Dave Wethington. He's the PM. He's
13 going to go through about 18 slides, about
14 20 minutes, and then we're going to turn this mic
15 around and we're going to have a discussion with
16 you, because that's why we're out here. We want to
17 hear from the public. We want to hear your thoughts
18 and ideas. And Dave will tell you also, throughout
19 the next 30 to 45 days, how you can get online and
20 submit your thoughts and ideas as you further
21 analyze this very -- what I call a very complex
22 report covering the Chicago Area Waterway System and
23 prevent, you know, the interbasin transfer of
24 aquatic nuisance species. So without further delay,
25 I'd like to turn it over to Dave. Dave?

1 MR. WETHINGTON: Thank you, sir. Can
2 everybody hear me all right? Yeah, it's pretty
3 loud. Actually turned this mic on earlier. They
4 gave me a live-air mic, which is dangerous because
5 I'll start moving around.

6 I want to thank everyone for coming tonight
7 to spend a little bit of time with us. I think one
8 of the most important things that come out of
9 tonight are what Colonel Drummond and John Goss
10 already mentioned to you: The idea that aquatic
11 species control is a shared responsibility and that
12 your voice is important are really the two key
13 things for us to understand this evening.

14 I want to spend a few minutes talking about
15 the GLMRIS Report itself, the process that we used
16 to come to these eight alternatives I'll present as
17 well as really outline them so that you can help
18 answer questions, ask questions, and we'll try and
19 keep you engaged.

20 So the scope of the study, we were given
21 authorization to begin GLMRIS in November of 2007.
22 We received funding to actually begin the study in
23 about midyear 2009. My name is Dave Wethington.
24 I've been the project manager for the GLMRIS study
25 since its inception in 2009. I'm very lucky to have

1 a very talented team of engineers, scientists,
2 biologists, and many others who helped put this
3 report together. I think Colonel Drummond mentioned
4 the expanse of the team. We have over 19 different
5 districts that were involved in putting this
6 together. Somewhere around a hundred different
7 people, a hundred individuals, touched this report
8 in some way.

9 The scope of what we were trying to do was
10 identify a range of options or technologies that
11 were available to prevent the transfer of aquatic
12 nuisance species between the Great Lakes and
13 Mississippi River basins. That basin divide, that
14 interbasin line that our focus was on, is outlined
15 in kind of the brown color behind me.

16 The goals of our study were two-fold.
17 Number one, try and prevent aquatic nuisance species
18 transfer. We did that through the application of a
19 range of different options and technologies and
20 then, with the implementation of those options and
21 technologies, investigate what kind of impact those
22 may have on the existing uses and users of the
23 Chicago Area Waterway System and, if there were
24 adverse impacts identified, ways to mitigate or to
25 kind of compensate or overcome those adverse impacts

1 directly as a result of those alternatives.

2 As both Colonel Drummond and John
3 mentioned, stakeholder engagement has really been a
4 key aspect of GLMRIS since its inception. We formed
5 an executive steering committee in late 2009, early
6 2010 which was comprised of federal agencies and
7 governmental agencies and regulatory agencies. It
8 helped oversee the formulation of this study to make
9 sure that we were plugged in with all of those folks
10 who needed to be plugged in at the federal and state
11 level in coming up with this range of alternatives.
12 Your input was equally as important, which is part
13 of why we are here today.

14 In July of 2012, we received legislation,
15 intervening legislation, that kind of modified the
16 scope of our study a little bit. It asked to do a
17 few things. Number one, it asked for us to complete
18 the study on an expedited timeline: Within
19 18 months. We received the legislation on July 6th
20 of 2012 and 18 months later, on January 6th of 2014,
21 turned in a completed report. It asked us to focus
22 our efforts on the Chicago Area Waterway System, the
23 CAWS, as we call it. Now, you'll see this line
24 behind me, and Mr. Goss spoke to it a little bit
25 previously, but there are other aquatic pathways

1 that may align along that interbasin divide. We've
2 done a lot of great work as the Corps of Engineers
3 and partnering with other agencies to identify where
4 those potential pathways may lie. Those other
5 pathways, which are primarily episodic, which means
6 that they usually only form during significant
7 precipitation events when you have a headwaters of a
8 couple streams combining to form a temporary
9 pathway, as well as a couple of them which are
10 terrrainial, but they're much simpler in terms of the
11 connection itself than the Chicago Area Waterway
12 System, perhaps something like a farmer's ditch.

13 So this legislation asked us to really
14 focus on the most complex issue with regard to the
15 other pathways, focusing on the Chicago Area
16 Waterway System. It also asked us to evaluate
17 hydrologic separation or the placement of a physical
18 barrier to potentially prevent the transfer of
19 species within the Chicago Area Waterway System.

20 Now, the CAWS, as we call it, is a very --
21 kind of a complex multiuse waterway. Some of the
22 primary uses are listed up there behind me:
23 Navigation, commercial cargo navigation,
24 recreational boating, water supply, water
25 conveyance. Something that I didn't know coming

1 into being project manager of this study is that
2 somewhere between 65 to 85 percent of the total
3 volume of the Chicago River is actually comprised of
4 municipal treated wastewater, and so the Chicago
5 Area Waterway System serves as a very important
6 conduit to move water out of the system through
7 Chicago. It also serves as a very, very important
8 tool for flood risk management. While water
9 normally flows from Lake Michigan into any one of
10 these five points and flows downstream toward,
11 eventually, the Mississippi River, when we have
12 significant precipitation events, significant
13 rainfall within the Chicago area, we are able to
14 operate the Chicago Area Waterway System such as we
15 can draw down the water or, during significant
16 precipitation events, backflow water such that water
17 can come out back into Lake Michigan from the city.
18 This is a very important tool for the nearly 9.2
19 million residents that live in the Chicago area as
20 well as the surrounding suburbs.

21 The Chicago Area Waterway System is the
22 primary aquatic pathway between the two basins, and
23 so it serves as the primary connection for potential
24 aquatic nuisance species transfer. The GLMRIS
25 Report itself provides a range of alternatives

1 designed at a conceptual level. It also provides
2 for mitigation -- so again, those adverse impacts
3 which are a direct result of any implementation of
4 alternatives -- at that same kind of conceptual-
5 level design. It provides cost estimates for each
6 one of the potential alternatives, and the cost
7 estimates are best used for comparing among the
8 different alternatives. While we used a Corps of
9 Engineers cost estimating process to estimate the
10 costs among the various alternatives, because of the
11 conceptual-level design, they're really best used,
12 again, as a comparison tool among the different
13 alternatives.

14 The most important use of the report itself
15 is a tool for decision-makers. I'll speak to it
16 near the end of my presentation, but we list a
17 number of evaluation criteria or elements of each
18 alternative that can be utilized to evaluate and
19 look at tradeoffs among different alternatives.
20 Examples include total cost, time to implement,
21 potential other impacts, economic impacts,
22 environmental impacts, etc. There would be
23 additional analysis, additional detail work, design,
24 perhaps completion of environmental compliance
25 documentation if you were to proceed with the

1 implementation or construction of any single one of
2 these alternatives.

3 So, again, we're at a conceptual level of
4 design, conceptual level with costs, but enough
5 information and enough data to provide
6 decision-makers, members of the public such as
7 yourselves, enough insight into kind of the pros and
8 cons of each one of the alternatives.

9 Very briefly, looking at how we put
10 together the range of alternatives in GLMRIS, we did
11 three things. Number one, we identified the
12 pathways. Here the focus was primarily on the
13 Chicago Area Waterway System. Second, we looked at
14 what species were potentially of concern. We
15 identified over 200 species, and of those, 35 were
16 of particular concern for potential transfer between
17 the basins. Of those 35, we identified 13 that were
18 high or a medium risk with regard to their ability
19 to transfer to the opposite basin and become
20 established and have some sort of adverse impact if
21 they did establish. We also evaluated possible
22 controls. Since we knew what species we had, we
23 knew the pathways we were working with, we could
24 look at the full range of possible controls, and we
25 went out to the public, we went out to the technical

1 experts to get a range of potential controls. Of
2 those controls, we identified over 90 individual
3 types that could be potentially applied. We
4 screened them down based on input, again, from the
5 public and from technical experts.

6 So we took this information on the
7 connections, on the species, and the controls and
8 put that all together utilizing background
9 information about economies with regard to
10 commercial cargo navigation or recreational fishing
11 to help provide the wealth of information that's
12 within the GLMRIS Report.

13 Before I get into speaking about each of
14 the individual alternatives, I want to spend a
15 moment with the technologies. Over on the far
16 right-hand side, you'll see a description or a
17 picture of the physical barrier. It's a pretty
18 simple concept: We use some sort of a physical
19 structure to prevent untreated surface waters from
20 either basin to intermix. You may be familiar with
21 the concept of electric barrier, but in GLMRIS,
22 we've taken that idea and kind of turned it up a
23 notch. We include the construction of an engineered
24 channel that allows us to refine and optimize the
25 construction of the barrier system as compared to

1 how it's being implemented near Chicago today.
2 Currently the barrier is placed at the bottom of an
3 unimproved channel, but having a constructed channel
4 allows us to place the arrays of the electric
5 barrier in different configurations, so perhaps
6 construct insulated properties into the barrier so
7 that we don't have issues with stray current.

8 In the GLMRIS report, we also came up with
9 some novel applications of existing ideas. The
10 GLMRIS lock on the upper left-hand corner is one of
11 those examples. The idea of the GLMRIS lock is
12 fairly simple. It takes a traditional lock chamber
13 and introduces a pumping action such that water is
14 flushed through the lock, cleaning it of floating
15 aquatic nuisance species. How does it treat the ANS
16 treated water? From an aquatic nuisance species
17 treatment plant. Again, a conceptual idea based on
18 existing technologies in drinking water. We use
19 screens, filters, and UV light to inactivate
20 potential aquatic nuisance species that make it
21 through the treatment train. So you combine
22 something like a GLMRIS lock with an ANS treatment
23 plant with an electric barrier to try and address as
24 many different species as you can.

25 On the upper right-hand side are really the

1 most simple way to look at what species are
2 potentially transferred in the basins. We've done a
3 lot of specific research identifying 13, you know,
4 fish or algae or viruses, but really, when you look
5 at how aquatic nuisance species move in a channel,
6 they can swim, they can float, or they can
7 hitchhike, "hitchhike" meaning they can move through
8 like on a barge train or with navigational rec nav
9 boats, etc.

10 So we use each one of these potential
11 technologies, either alone or in combination, to try
12 and address as many of those methods of movement of
13 aquatic nuisance species. So I'll spend the next
14 few minutes going over each of the alternative
15 activities. I believe that everyone has one of
16 those summary books. You can follow along if you'd
17 like. The lower left-hand corner of this screen
18 will tell you what alternative I'm on and the book
19 will have limited additional information, but I
20 would also like to put forth the full version of the
21 GLMRIS Report. It is on our website. The location
22 of the website is on the back of your summary book:
23 glmris.anl.gov. It's on the back of the book. It's
24 got a lot of fantastic information about the report
25 itself as well as the other pathways, and it's

1 really a very helpful tool.

2 So Alternative Plan 1 is what we call the
3 baseline alternative or the no new federal action.
4 I prefer to call it the staying activities
5 alternative because there's, in fact, a lot of
6 action that is currently going on. There are
7 efforts being implemented by federal, state, and
8 local resource agencies at controlling, managing,
9 trying to prevent aquatic nuisance species from
10 moving around within the basins or the rivers.

11 Baseline activities also include Corps of
12 Engineers specific work, such as the operation and
13 maintenance of existing electric barriers, the
14 construction of a new barrier, or other activities
15 that are supplemented through the Great Lakes
16 Restoration Initiative Program, such as the
17 monitoring and the fishing that John Goss described
18 a little bit earlier. This baseline alternative we
19 use as a yardstick to measure the additional risk
20 reduction that is potentially achieved by each of
21 the subsequent alternatives. This establishes our
22 baseline. This is what is going on currently and
23 what is expected to continue over the next 10, 25,
24 or 50 years.

25 Alternative Plan 2 is a nonstructural

1 technologies alternative. And very simply, these
2 are potential control technologies that could be
3 implemented without the construction of a physical
4 structure. What kind of activities would they
5 include? Active management. Something like John
6 described as fishing down carp populations or, as
7 the picture at the top kind of depicts, the
8 identification of where perhaps an aquatic invasive
9 plant may be in a certain area and the application
10 of that aquatic herbicide to control the spread of
11 that plant, thereby preventing the transfer of that
12 plant between basins.

13 It includes elements of education and
14 outreach: Why is it a good idea to clean your boat
15 when you move it from one waterway to the other or
16 why is it a bad idea to just dump the bait bucket
17 over the side when you're done after a day of
18 fishing.

19 It includes things like education and
20 outreach, laws and regulations, things like the
21 promulgation of the Lacey Act to prohibit live
22 transfer of certain aquatic nuisance species of
23 concern. Bilge and outflow management is another
24 very important non-structural measure.

25 So as mentioned earlier, the successful

1 implementation of these and of any of the other
2 alternatives I'll be presenting today truly is a
3 shared responsibility. It's anglers such as
4 yourselves or boaters such as yourselves that can
5 help make this be a successful route to at least
6 trying to slow down if not completely prevent
7 aquatic nuisance species transfer. Unfortunately, I
8 can't stand here today and tell you that this full
9 range will be successful at preventing this -- the
10 transfer of aquatic nuisance species. What they
11 are, however, is best management practices, and so
12 we include the implementation of non-structural
13 controls with each one of the following alternatives
14 and we include the estimated cost, which was
15 comprised by coming up with average cost per state,
16 multiplying it by the number of states that these
17 potential technologies could be implemented at along
18 that Great Lakes and Mississippi River basin divide.

19 Alternative Plan 3 is the first of your two
20 technology alternatives. What this alternative does
21 is very simply identify control points within the
22 system. Here's one on the upper part of the system
23 and the lower part of the system that can be
24 utilized to control the two-way or bidirectional
25 transfer of aquatic nuisance species. Very simply,

1 it implements an aquatic nuisance species treatment
2 plant that reroutes the flow of the channel at those
3 two points through that treatment plant; hence, flow
4 bypass. The aquatic nuisance species treatment
5 plant is effective at removing aquatic nuisance
6 species of concern from the water at each one of
7 those points. In order for navigation to continue
8 as part of this alternative, we have also included
9 the implementation of a GLMRIS lock. Again, that's
10 that flushing lock structure with electric barriers
11 in those constructed navigation channels book-ending
12 that lock on either side. Those electric barriers
13 control the transfer of swimming aquatic nuisance
14 species like fish from coming into that lock chamber
15 area and, again, the lock chamber uses a flushing
16 action to clear the lock of aquatic nuisance species
17 that are floating within the chamber. These two
18 control points we believe serve as effective
19 controls for a number of the aquatic nuisance
20 species of concern.

21 Now, if you were having -- if you're going
22 to design an aquatic nuisance species control
23 treatment plant, you would likely design it for a
24 dry weather flow, so the flow that you see most
25 often coming through that point in the river. When

1 Chicago has a significant precipitation event, you
2 will see the flow in the river increase
3 exponentially, and so in order to deal with those
4 significant volumes of water, in order for that
5 control point to remain effective, you need to find
6 a way to channel and contain that water until it is
7 able to be treated appropriately. You need a number
8 of additional tunnels and reservoirs within this
9 area to control for those large possible
10 precipitation events. For this reason and for the
11 reason for that mitigation, we see an estimated
12 completion time of about 25 years with estimated
13 costs of nearly \$15.5 billion.

14 The second of the two technology
15 alternatives is what we call the CAWS buffer zone
16 alternative. What this concept does is take the
17 idea of aquatic nuisance species control and,
18 instead of having single point for two-way control,
19 spreads them apart, initiating a one-way control
20 point book-ending either side of the Chicago Area
21 Waterway System. The map on the left demonstrates
22 several control points at or near the shore of Lake
23 Michigan that will institute the one-way control of
24 aquatic nuisance species in from the lakes, whereas
25 there is another control point downstream, what we

1 call the Brandon Road control point, that would
2 inhibit the passage of species upstream. Again, the
3 implementation of this is through GLMRIS locks and
4 aquatic nuisance species treatment plants.

5 You also notice that there are a couple of
6 physical barriers that are implemented at or near
7 northwest Indiana. The reason for this is because
8 the two streams that are being controlled at those
9 points are primarily not navigable. You can get
10 through them in a canoe or a Jon boat, perhaps, but
11 there doesn't need to be this significant
12 recreational or cargo traffic that goes through, so
13 the implementation of a physical barrier in those
14 two points with the appropriate mitigation for this
15 flood risk is most appropriate at those locations.
16 Because you have a much smaller amount of tunnel and
17 reservoir conveyance that is necessary for that
18 flood risk mitigation, you have a relatively quicker
19 time frame for implementation, at about ten years,
20 at a relatively lesser cost of about \$7.8 billion.

21 If you look within your books, in the gray
22 tables either in the lower right-hand or lower
23 left-hand corners, those will identify what the
24 different kind of levels of cost are and there will
25 be one that speaks to the total cost of aquatic

1 nuisance species control measures and there are
2 others that will speak to the costs attributable to
3 flood risk mitigation, and you can see how flood
4 risk mitigation in Alternative Plan 3 and 4
5 contributes significantly to the overall cost.

6 I'd also like to draw your attention to
7 this one alternative before I move on to kind of
8 give an example of adaptive management. We use
9 adaptive management and the ability to kind of look
10 at how we can implement different types of controls
11 in the future as they become available. Here we
12 have a range of different technologies that can be
13 applied at either side of the system depending on
14 what species are being targeted. We also uniquely
15 have a way for advance risk reduction if, for
16 example, there was only concern about species coming
17 up from the Mississippi River basin toward the Great
18 Lakes. Since there is only a single control point
19 down here at Brandon Road and no associated
20 mitigation, it is possible that the potential exists
21 that this particular structure could be constructed
22 more quickly than that ten-year time frame at a cost
23 less than 7.8 billion. However, in order to get
24 that full two-way control of species that is
25 initially anticipated by this alternative, you're

1 looking at that estimated time of completion of ten
2 years and about \$7.8 billion.

3 Alternative Plan 5 is the first of two
4 hydrologic separation alternatives. In this
5 alternative, we place physical barriers, hydrologic
6 blocks, if you will, at four points at or near the
7 lakefront, as the title suggests. Again, because we
8 lose the ability to move water freely through the
9 system and there is additional controls and
10 technologies that are necessary to mitigate for
11 potential water quality impacts, you see significant
12 estimated time for completion and a significant
13 estimated cost of about \$18.4 billion.

14 When approaching the other ways to try and
15 physically separate the basins, the team really
16 thought about, you know, hey, we've got these
17 significant costs attributable to mitigation in both
18 the technology alternatives as well as the lakefront
19 hydrologic separation alternative, so how can we get
20 to cracking this nut of flood risk management within
21 the Chicagoland area. So what the team decided to
22 do was place two barriers at or near where the
23 original kind of hydrologic divide would be. We
24 call it a divide; it's kind of overestimating it.
25 Chicago is a very marshy, flat area, and so we're

1 dealing with a very hydrologically complex
2 topography because it's so flat. However, we were
3 successful in identifying these two locations as
4 places to potentially minimize that flood risk
5 management impact.

6 However -- there's always a "however" --
7 when you open up the Chicago River to Lake Michigan
8 from this point on and from this point at Alsip on,
9 you open up a bit of a can of worms. There are two
10 significant water reclamation plants, up on the
11 north side here and on the south side here that
12 contribute significant flows, somewhere around 300
13 or so million gallons per day at each particular
14 water reclamation plant. Now, I know Chicago has a
15 storied past of having historically bad wastewater
16 and that Chicago needs to clean its water better.
17 I'm not here to talk about that today. I'm here to
18 talk about what would happen if Chicago, like
19 Milwaukee or like Detroit, put in the same kind of
20 water into Lake Michigan.

21 If you have two water reclamation points
22 with each at 300 million gallons a day for a total
23 of 6 to 700 million gallons a day of clean, treated
24 wastewater, you would still be having a significant
25 load of pollutants to Lake Michigan. You would be

1 loading things like nutrients, like some particular
2 organic pollutants, things that water reclamation
3 plants or water treatment plants don't even clean
4 today, like pharmaceuticals, and so what we've
5 chosen to do, instead of adding this new load of
6 potential pollutants into a significant natural
7 resource, was reroute the system to points
8 downstream, maintaining the existing flow of the
9 water stream.

10 We did this for another reason, which is
11 actually kind of very essential to the Corps's
12 mission. I mentioned there was a significant volume
13 of flow from each of those points. This waterway
14 feeds the Illinois waterway which then feeds the
15 Mississippi River, and so we wanted to maintain this
16 volume of water for navigation. In opening up the
17 Chicago River and associated channels to Lake
18 Michigan, you also open up several combined outfalls
19 as well as a host of some potentially contaminated
20 sediments which, taking the conservative approach,
21 we chose to mitigate such that there are not adverse
22 impacts to the water quality of Lake Michigan. So
23 while we did not have significant costs for
24 mitigating for flood risk to the nearly 9.2 million
25 residents of the Chicagoland area, there are

1 significant costs for mitigation to water quality
2 impacts to Lake Michigan, which are exemplified by
3 that 25-year time frame and the estimated cost of
4 about \$15.5 billion.

5 The last two scenarios, 7 and 8, are hybrid
6 scenarios, and we look at essentially placing a
7 physical barrier on either the upper part of the
8 system or the lower part of the system. As you can
9 see from the title, this lower part of the system is
10 fed by the Cal-Sag channel, whereas this upper part
11 of the system is fed by the Chicago Sanitary and
12 Ship Canal, so in the Cal-Sag Open scenario, we
13 leave this lower part of the system from the lake
14 down through Brandon Road open with the
15 implementation of technologies while placing a
16 physical barrier on the Chicago Sanitary and Ship
17 Canal. Obviously, as was with previous either
18 physical separation or technology alternatives,
19 there would be necessary mitigation, and so that is
20 reflected on the map on the right-hand side,
21 contributing again to a total estimated time of
22 about 25 years implementation and total estimated
23 cost of about \$15.1 billion.

24 The alternate, while it still has a very
25 similar length in time for implementation, in order

1 to get all those mitigation efforts up to speed
2 prior to implementation of physical barriers, it
3 does have a significantly smaller cost, about half
4 that of the previous hybrid scenario.

5 At the outset, I mentioned that the GLMRIS
6 Report is really best as a tool for decision-makers
7 and I mentioned evaluation criteria, and these are
8 examples of some of the criteria that are in the
9 report. If you look up the report itself, if you
10 look at the end of the executive summary or look at
11 table 4.2 in the report, there will be a matrix, a
12 table, multicolored, that will give you really a
13 quick snapshot of what's in the report. It will
14 talk about each one of these potential criteria, but
15 you'll certainly want to go back and read in detail
16 for each alternative what the potential
17 environmental impact or economic impacts may be as
18 well as how does that duration of implementation
19 translate to potential risk reduction for that
20 particular alternative.

21 Before I conclude today, I want to touch on
22 a couple points that I hope I've had the opportunity
23 to cover during my presentation. First,
24 mitigation -- so ensuring that there is not adverse
25 impacts as a result of construction of any one of

1 these alternatives -- is really the critical driver
2 for cost and for timing. Residual risks will exist
3 with any one of these potential alternatives. While
4 our charge was to look at the prevention of aquatic
5 nuisance species transfer within an aquatic pathway,
6 there are other ways for aquatic nuisance species to
7 transfer between the basins. Human mediated
8 transport. Physically bringing an aquatic nuisance
9 species from one basin into the other. If you don't
10 think it happens, trust me, it does. Duration of
11 implementation. A lot of these, we talked about
12 25 years for potential implementation, and I
13 realize, I understand that may be too long, but
14 that's a significant risk.

15 And so this is part of the conversation
16 we're here to have with you today is the
17 identification of what is the biggest concern. What
18 alternatives may help buy down that risk while we
19 get toward the ultimate kind of consensus goal,
20 whatever that may be, toward long-term aquatic
21 nuisance species management if you look at adaptive
22 management throughout the number of different
23 alternatives to see how technologies could adapt and
24 which technologies would be utilized as we move out
25 into the future.

1 Again, I'll hit on that kind of final topic
2 that aquatic nuisance species control is a shared
3 responsibility. That's why we're here today, that's
4 why we're here speaking to you is because your
5 input, your viewpoints are very important. No
6 matter what, there will be a significant investment,
7 whether it's from our taxes, our waterways, or
8 whatever, toward the future implementation of any
9 one or more of these technological alternatives.
10 Same goes for any of the non-structural
11 alternatives, and non-structural alternatives are
12 even more important that you, as the anglers, the
13 boater, are engaged and involved and understand how
14 you play a role in aquatic nuisance species control.
15 For this reason, we're taking this message to a
16 number of different cities throughout the Great
17 Lakes and Mississippi River basins. We've spent a
18 lot of time in the Great Lakes and now we're headed
19 over to kind of the other side of the house. We're
20 starting up here in the Twin Cities, heading down to
21 St. Louis a little bit later this week, and ending
22 the week at New Orleans.

23 I do encourage everyone and anyone to
24 please visit our website. We have an open comment
25 period through the end of March -- or I'm sorry --

1 through the 3rd of March where you can go onto the
2 website and basically make a comment. If you don't
3 get a chance to comment today, it doesn't matter.
4 The comments aren't weighted more here today than
5 they are anywhere else, than on the website. Again,
6 your input is very important.

7 And with that, please do stay in touch with
8 GLMRIS. You can find information that I spoke about
9 today on the web. It's glmris.anl.gov. You can
10 find us on Facebook, follow us on Twitter, send us
11 an e-mail at any time, and with that, I'll turn the
12 show back to Lauren and we'll look forward to a
13 discussion. Thank you.

14 MS. FLEER: Thanks very much to Dave
15 and to Colonel Drummond and John Goss, all our
16 panelists, and to all of you for being here. Let's
17 now open it up to your comments and your questions.
18 I think what we'll do is we'll start with the folks
19 who have had the chance to register, either on our
20 website or here today. When I recognize your name,
21 please approach the mic, and I'd like to let
22 everybody know that we have a court stenographer
23 here today who is taking, basically, a record of all
24 the comments and questions and presentations today
25 to be included in our website as part of the public

1 record of this meeting, so please, if you could,
2 when you begin your comments, if you could start
3 with your name, any organization you might be here
4 to represent, and as well as your ZIP code, your
5 five-digit ZIP code, so we can get an accurate
6 documentation of the meeting here today. I want to
7 apologize ahead of time if I mispronounce anybody's
8 name, and otherwise, let's get started.

9 I have first Jared Teutsch followed by
10 Peter Sorensen. If you could, just approach the mic
11 when you're ready.

12 MR. TEUTSCH: Jared Teutsch, Alliance
13 for the Great Lakes, 60602. I'm starting to feel
14 like a groupie of you guys because I've been to so
15 many of these public meetings. First off, thank you
16 again for hosting a public meeting across the
17 region, which I think is so critically important for
18 people to have an opportunity to see, really, the
19 first of its kind, of this kind of report, the great
20 work that the Corps has done into this report,
21 recognizing that this isn't even a full feasibility
22 study so there's more pieces of the puzzle to add
23 after this process. Certainly, the Alliance for the
24 Great Lakes is in full support of separation, so we
25 certainly like, let's say -- I think option six

1 probably comes the closest to what we've tried to
2 put forward in our communications in terms of what
3 we support, what we believe is the best option for
4 not only the Mississippi, but also the Great Lakes.
5 As you stated when you were talking about -- we're
6 talking about high risk species, there's more high
7 risk species actually going into the Mississippi
8 basin, certainly would move up the upper Mississippi
9 basin into Minnesota, into the Land of 10,000 Lakes,
10 so, you know, Minnesota probably more than any other
11 area has a lot more to lose from an ecological
12 standpoint, but also from an economic standpoint
13 that they have and the quality of their environment.
14 So we recognize that, we urge that that separation
15 move forward as quickly as possible.

16 Also, as you noted, 25 years is an
17 unacceptable timeline for many of us. I think we
18 also recognize the history that the Corps has done
19 things in a much shorter timeline. You guys have a
20 great history of accomplishing great feats,
21 including reversing the Chicago River, and we're
22 hoping that you're going to re-reverse the Chicago
23 River in your process of looking at this.

24 I guess I would just -- I would close with
25 a question, and I don't know if you can answer it

1 for us today, but I'm just curious, as this process
2 moves forward and we move forward from the public
3 comment period, hearing from stakeholders, how do
4 you see -- and maybe you've done this already --
5 responding to the senate's letter that was sent
6 around from all eight Great Lakes states, 16
7 senators -- all 16 senators, which is unheard of,
8 really, in this time -- and asking, really, that
9 question of what do you propose to do for next
10 steps? So I'll leave it at that.

11 MR. WETHINGTON: Sure. Thanks, Jared.
12 Yeah. I believe that the Assistant Secretary of the
13 Army responded to that letter from the 16 senators
14 and said something probably very close to the kind
15 of concept that aquatic nuisance species control is
16 a shared responsibility and that it really does
17 require, while the Corps of Engineers, you know,
18 kind of, in our opinion, has served the leadership
19 role in putting together the information within this
20 report, the future implementation of any one or more
21 of these alternatives will require that shared
22 responsibility, will require, you know, folks to
23 kind of sign up and be responsible and help with
24 that future implementation, so while we are
25 certainly happy to provide support within our

1 specific mission areas, we do anticipate that there
2 will be others who will need to kind of come forward
3 to the table and help us make that decision. We're
4 looking for that kind of collaborative consensus on
5 a path forward. Looking forward to working with
6 folks like John Goss, the Asian Carp Regional
7 Coordinating Committee, other potential groups that
8 may help build consensus, like Council of Great
9 Lakes Governors, toward that collaborative path
10 forward.

11 MR. TEUTSCH: Great. Look forward to
12 it.

13 MR. WETHINGTON: Thank you.

14 MR. TEUTSCH: Thank you.

15 MS. FLEER: Thanks very much. I have
16 Peter Sorensen followed by Jill Crafton.

17 MR. SORENSEN: Peter Sorensen. I'm
18 really here as a private citizen who thought I was
19 just registering and not speaking, but I'm happy to
20 speak anyway and I had some questions.

21 COLONEL DRUMMOND: Go ahead.

22 MR. SORENSEN: My ZIP code is 55108.
23 That's where I live. And I had a couple questions.
24 There is a concept of aquatic nuisance species
25 treatment plant addressed in this, which I really

1 haven't heard of before.

2 MR. WETHINGTON: Sure.

3 MR. SORENSEN: Maybe you could sort of
4 fill us in on what that might be and how it would be
5 developed and how efficient you think that might be.

6 MR. WETHINGTON: Sure. We use the
7 concept of aquatic nuisance species treatment plant
8 based on existing drinking water purification
9 technologies. Very simply, using a treatment train
10 of screens, filters, and UV light to inactivate
11 aquatic nuisance species down to a virus size. So
12 those species that are fish would get screened out
13 by screens, things like plants and other larger
14 floating species may be pulled out by those filters,
15 and anything that passes through, like -- in the
16 water, like an algae or like a virus, would be
17 inactivated very similar to the way our drinking
18 water is cleaned. The City of New York just opened
19 up a huge drinking water plant that uses UV light to
20 clean and disinfect that drinking water process, so
21 the aquatic nuisance species treatment plant would
22 be utilized to specifically address species of
23 concern within the water.

24 MR. SORENSEN: So there would be some
25 risks? That's a new technology that --

1 MR. WETHINGTON: It is.

2 MR. SORENSEN: Some of it's new; some
3 of it isn't?

4 MR. WETHINGTON: The technology is
5 implemented for drinking water.

6 MR. SORENSEN: Right. Right. I'm
7 sorry. I guess I'll take my three minutes for
8 questions, maybe, but another question I had, and
9 I'm sure it's in the larger report, but surely some
10 of these, like the separation scenarios, can be
11 phased in so the risk would be reduced in stages and
12 not all or nothing?

13 MR. WETHINGTON: Well, the concern
14 with that is the mitigation. And with regard to
15 physical separation, both of those have significant
16 components for mitigation for either flood risk or
17 for environmental quality. And so in order to, for
18 example, maybe even get a permit to build a physical
19 barrier and a channel, you would likely need to have
20 that mitigation complete so that mitigation -- you
21 know, so that when you place a physical barrier in
22 the channel, you're not flooding out, you know, some
23 of the nearly 9.2 million residents in the
24 Chicagoland area or you're not contributing
25 significant new environmental impacts to a natural

1 resource. And so all those components, you likely
2 have to have those mitigation measures in place
3 prior to achieving that final risk reduction --

4 MR. SORENSEN: Sure.

5 MR. WETHINGTON: -- step.

6 MR. SORENSEN: But still, there would
7 be a phasing-in process; it's just hard to quantify
8 it?

9 MR. WETHINGTON: There may be ways to
10 phase in incremental risk reduction.

11 MR. SORENSEN: Right. Right.

12 MR. WETHINGTON: You could do other
13 things in advance of construction of a physical
14 barrier, such as non-structural technologies and the
15 implementation of other types of technologies.

16 MR. SORENSEN: And then maybe my last
17 question would be is it conceivable that deterrent
18 technologies could be developed simultaneously as
19 something like an alternative --

20 MR. WETHINGTON: Absolutely.

21 MR. SORENSEN: -- separation was in
22 place so it's not a --

23 MR. WETHINGTON: Your --

24 MR. SORENSEN: The hybrid, basically?

25 MR. WETHINGTON: Absolutely. The

1 current technologies are currently being evaluated
2 by the Asian Carp Regional Coordinating Committee
3 and other potential research organizations, which
4 once they have been established and determined to be
5 suitable for large-scale environmental physical use,
6 they could be implemented.

7 MR. SORENSEN: And sorry, I have one
8 more, but, you know, looking at climate change, the
9 levels of water in the Great Lakes are surely going
10 to fluctuate, and I was wondering if that was also
11 addressed.

12 MR. WETHINGTON: Yes.

13 MR. SORENSEN: How that will --

14 MR. WETHINGTON: Fluctuating water
15 levels have been addressed within the technology
16 alternatives and the conceptual alternatives for the
17 implementation of each one of these within the
18 report, as much as we know about climate change and
19 what we can expect, given that there are
20 significant --

21 MR. SORENSEN: So I guess my last
22 would be just to comment, and that is given all the
23 uncertainty and even there may be invasion arising
24 from other places that we haven't even thought of,
25 just would seem in my opinion that to go for the

1 gold standard, the separation.

2 MR. WETHINGTON: Thank you.

3 MR. SORENSEN: The separation basins.

4 MR. WETHINGTON: Thank you.

5 MS. FLEER: Thanks very much. Jill

6 Crafton followed by Andrea Kiepe. Just your name

7 and ZIP code. Thank you.

8 MS. CRAFTON: My name is Jill Crafton,

9 and I'm with the Isaac Walton League. I'm also on a

10 watershed district board here. My life is here --

11 MS. FLEER: ZIP code, please?

12 MS. CRAFTON: 55438. But I also was

13 raised in the lower peninsula of Michigan and have a

14 stake in property in the Pentwater area south of --

15 that's my 444 -- 499 -- oh, shoot. Whatever that

16 is.

17 (Reporter interruption.)

18 MS. CRAFTON: I'll try to speak up. I

19 have a Michigan address and a Bloomington address

20 and have been involved in Asian carp group here

21 that's been working on trying to keep that from

22 coming up the Mississippi, but I digress.

23 I represent the Isaac Walton League, I

24 chair a Great Lakes committee within the Isaac

25 Walton League, and we have members from across the

1 basin from New York to Minnesota and all states in
2 between, and we support a permanent physical
3 separation between Lake Michigan and the Mississippi
4 River, and while we do not reject any of the other
5 options as possible strategies, none of them have
6 proven effective yet.

7 I remember last time I was with you guys,
8 in 2009, I was concerned about funding for the
9 electric barrier and it was like iffy, and we were
10 really concerned about that. All deterrents,
11 electric and acoustical barriers, lock and dam
12 modifications are simply not yet adequately verified
13 as able to meet the goal of stopping Asian carp
14 100 percent. Our committee represents members from
15 across the Great Lakes basin and we've been strong
16 advocates for the need and development of emergency
17 ballast water treatment capacity for ballast water
18 treatment that fails compliance with existing and
19 future standards as well as closing the pathway
20 between Lake Michigan and the Mississippi River to
21 prevent the aquatic invasive species.

22 Additionally, we underscore the urgency
23 noted in the letter from the 16 Great Lakes senators
24 from November 6, 2013, making it clear they are
25 requesting that the Corps act very quickly as well

1 as bring all relevant stakeholders -- local, state,
2 regional, and federal -- to work together
3 cooperatively. The frustration with the lack of
4 urgency reflected in their letter echoes the
5 exasperation of citizens within the Great Lakes
6 basin. We deserve better from an agency that
7 receives billions of dollars in taxpayer dollars
8 annually. The Great Lakes and the Mississippi River
9 are not naturally connected. Moreover, the
10 occurrence of more rainstorm events increases the
11 likelihood of flooding in this area and potential
12 conditions for Asian carp to gain access to Lake
13 Michigan.

14 Asian carp are an immediate threat and
15 require immediate action to stop their spread.
16 Therefore, the Isaac Walton League of America urges
17 the Corps to work urgently with relevant
18 stakeholders to reach an effective permanent
19 physical hydraulic separation. And I thank you for
20 the opportunity to comment.

21 I work with Peter Sorensen. He's been
22 getting common carp out of our watershed district
23 and I just feel discouraged after your report that
24 we'd have to wait 25 years. I guess at this point,
25 I'd like to bid it out and see who else could maybe

1 come up with something quicker. It just -- I mean,
2 we're paying -- what? 25 million annually for sea
3 lamprey containment? It just -- 25 years just seems
4 totally ir -- you know, just out of bounds. I would
5 also just encourage you, with the -- you know, that
6 any local or any relevant stakeholder that might
7 have a piece of this action have important
8 information. I know within my watershed district,
9 I've learned to reach out to cities, counties, water
10 resources specialists within any of those areas.
11 They know the lay of the land and they can sometimes
12 come and really cut down on the time it takes, and
13 then you can form partnerships and get more done, so
14 I would really, you know, underscore that. That's
15 all. I guess that's basically it. Basically, the
16 three -- quickly, you know, the physical separation
17 and good relevant stakeholders that can make this a
18 good process.

19 MR. WETHINGTON: Thank you.

20 MS. FLEER: Thank you. Andrea Kiepe
21 will be followed by Steve Chaplin.

22 MS. CRAFTON: Can I submit my letter
23 now, or --

24 MS. FLEER: Yeah. Sure.

25 MS. KIEPE: Hello. My name is Andrea

1 Kiepe. I'm a private citizen.

2 MS. FLEER: Name and ZIP code?

3 MS. KIEPE: And I'm from ZIP code

4 55408. Thank you so much for your time and

5 consideration.

6 I actually grew up on the Mississippi
7 River. I was born in Missouri, south of St. Louis,
8 and so I know what bad water quality is like and
9 it's one of the reasons I moved to Minnesota
10 20 years ago. I just grew up on a family farm where
11 the importance of water cannot be overstated and the
12 importance of taking a really pragmatic approach to
13 environmental protection was how I was raised, and
14 to my mind, that's I think why we have to go with
15 Alternative 6. I think that when you look at some
16 of these other approaches, you get into the whole
17 penny wise/pound foolish thing and it's worth it to
18 spend the money for the full separation and to
19 really address all 13 of the ANS of concern. I
20 think you should just do it right the first time and
21 really safeguard and steward the investments that
22 we've already made and that we continue to make in
23 restoring the Great Lakes and the uses, you know,
24 that approach directly from the Clean Water Act and
25 maintaining, you know, the uses of bodies of water.

1 To me, that's really the bedrock of how we should be
2 approaching this decision. And, I mean, I would
3 love to see fisheries restored on the Great Lakes
4 and I would love to see the existing tourism,
5 recreation, fishing, and all of the, you know,
6 frankly, metropolitan water uses in Minnesota be
7 preserved as much as possible. So I really urge you
8 to go with Alternative 6. I think that it's also
9 nice that there are going to be some local benefits
10 for flood control there and since, you know, one of
11 the ways I celebrated my engagement was to go
12 swimming at midnight in a full moon in Lake
13 Michigan, you know, the fact that it's going to
14 avoid 700 million gallons of wastewater discharge
15 into Lake Michigan is kind of a benefit, too. So
16 thank you so much and please consider Alternative 6.

17 MR. WETHINGTON: Thank you.

18 MS. FLEER: Thank you. I have Steve
19 Chaplin followed by Darrell Gerber.

20 MR. CHAPLIN: My name is Steve
21 Chaplin. I'm a senior conservation scientist with
22 the Nature Conservancy. We'll be providing written
23 comments later, but I wanted to talk about more
24 specifically some of the concerns that we have here
25 in Minnesota. Now, we realize the driving force in

1 all of this is the Asian carp moving into the Great
2 Lakes system and its impact potentially on the
3 \$7 billion, you know, Great Lakes fisheries there.
4 But I'd also -- but I'd like to speak about the
5 ecological impacts here in Minnesota that movement
6 of aquatic invasive species can have from the Great
7 Lakes into Mississippi River systems. The Corps
8 themselves have identified 29 species that threaten
9 to move from the Great Lakes, and that's just
10 imminently. And I suspect over time that number
11 will only rise and perhaps dramatically rise, and
12 they include such things as your Asian roughy that's
13 a concern of the biologists and conservationists
14 here in Minnesota. We don't want to see that get
15 into Minnesota. If past history is any guide, there
16 are things to be concerned about.

17 The zebra mussel, which was a Great Lakes
18 species that moved into them and then on up into the
19 Minnesota lakes is something that is causing a great
20 deal of problems here in Minnesota. I spend a
21 little bit of time every summer on Lake Le Homme
22 Dieu up in Alexandria, and that lake has gone from a
23 great lake to swim into one now that's hard to swim
24 because you end up cutting your feet as you swim out
25 from the beaches out there.

1 So what I'd like to recommend is that any
2 solution that comes out of this should provide
3 ecological separation. We're not insisting on
4 hydrological barrier, but it has to be ecologically
5 separated so that species aren't moving between the
6 two basins. It must cover all aquatic invasive
7 species, not just the carp or a few of the most
8 spectacular ones, but we don't have any idea what a
9 lot of these other species' impacts are going to be
10 in the future. It must stop species moving in both
11 directions and it must begin to reduce the impact as
12 soon as possible. We agree that it needs to happen
13 in the short term. In the next two to four years,
14 we need to start seeing some reductions of threat,
15 certainly not in a 25-year timeline. And we do need
16 to have interim solutions so that perhaps, you know,
17 we might have an ideal long-term solution, but we
18 also need to think about things we can do right now
19 to stop that.

20 And then the final thing is that I think
21 these need to be cost effective and socially
22 acceptable. That's going to be important because
23 this is a long-term effort to keep aquatic invasive
24 species from moving between one basin and the other,
25 and without the political support and the social

1 support that you're going to have to have, both in
2 the Chicago area and in the entire basins, I don't
3 see that this is going to be successful, so thank
4 you for the opportunity to speak.

5 MR. WETHINGTON: Thank you.

6 MS. FLEER: Would you provide us your
7 ZIP code as well?

8 MR. CHAPLIN: 55113.

9 MS. FLEER: Thank you so much. I have
10 Darrell Gerber next. And your ZIP code and your
11 name?

12 MR. GERBER: Okay. Thank you. My
13 name is Darrell Gerber, and I'm a water program
14 coordinator at Clean Water Action Minnesota, and my
15 ZIP code is 55409. And thank you for coming to
16 Minnesota today to give us an opportunity to see the
17 presentation firsthand as well as, you know, be able
18 to make our comments in person. And thanks for
19 coming on such a cold day and still doing this.

20 The study provides an important look at the
21 methods for preventing the movement of the aquatic
22 invasive species between the two basins, the Great
23 Lakes and the Mississippi River, and, you know, I
24 think it's important to recognize that that
25 threshold, that for the first time, there is

1 actually a serious federal recognition and
2 consideration of separation of those two basins and
3 wanted to thank both the members of congress who
4 made the request for this focus and also the Corps
5 of Engineers for actually delivering on it and, you
6 know, providing this report and the information.

7 So as mentioned before, Asian carp has
8 definitely captured most of the attention around
9 this report. You know, I think that's what
10 everybody always talks about, but this is also
11 important for the other 11 species that you really
12 looked at and, you know, like a lot of people have
13 mentioned, the only separation is the one that will
14 be able to handle all 13 of those species. The
15 Chicago area is certainly a long ways away from
16 Minnesota, but, you know, there's certainly a lot
17 that we have at stake here for this. First of all,
18 the Great Lakes are a regional, national, and
19 international resource. They support an economy
20 that is actually larger than most countries. And
21 more personally, as an example, I actually learned
22 to paddle-board this summer in Milwaukee, and it was
23 actually at the Great Lakes conference which I think
24 both of you were at and it was in one of the
25 backwaters there of Lake Michigan, and,

1 incidentally, one of the places that the Asian carp
2 would really, really like if they were to get in
3 there, and certainly paddle-boarding is not
4 something that you would be doing if you had Asian
5 silver carp in particular in that water.

6 And Minnesota, also being at the headwaters
7 of the Great Lakes, an example is the St. Louis
8 River is something that's at stake, another place
9 that provides one of those really nice habitats that
10 the Asian carp would look for. We've been spending
11 numerous millions of dollars to restore that. It's
12 one of the biggest and largest areas of concern
13 around the entire Great Lakes. We're actually on a
14 pathway to finish that in 25 years, and this would
15 be a direct threat to that success. Also, a large
16 portion of Minnesota, as you recognize, lies in the
17 Mississippi River basin with direct connections to
18 the Illinois River and its tributaries near Chicago.
19 And the zebra mussel is a really good cautionary
20 tale of what is at stake if we don't stop the
21 movement of those other invasive species the other
22 direction. As they moved around the state here,
23 they've caused innumerable damage to both the
24 ecosystem and the property values around all of the
25 lakes and streams that they go.

1 And separation, again, is the only option
2 that really deals with that. And separation
3 certainly comes with a price tag, but what is at
4 stake is actually more valuable. In Minnesota, the
5 fish -- the \$4 billion fishing and boating industry
6 is at risk directly from the introduction of these
7 invasive species, but it also, as you recognize, has
8 additional benefits, too, with the reduction of the
9 sewage going into the lakes and other pollution and
10 flooding. So we look to congress, both -- congress
11 today to take these steps necessary to begin work on
12 the separation process, but then also look to the
13 Corps of Engineers, the local, state, and federal
14 partners, to really begin any of the work that you
15 possibly can now and don't wait for congress and
16 start working together to bring separation into
17 reality.

18 I think I was realizing when we were
19 thinking about 25 years that you think 25 years ago,
20 the bands that were then popular then are now doing
21 reunion tours. We don't want to have that today for
22 Lordes or somebody else.

23 MR. WETHINGTON: Thank you.

24 MS. FLEER: Thanks very much. So at
25 this point, we've heard from anyone who was

1 registered to speak, but we have plenty of time and
2 so I'd really like to invite anyone who's already
3 spoken or who hadn't registered to participate in
4 the discussion. Maybe while you're collecting your
5 thoughts, I'll also remind you that through
6 March 3rd, the comment period will be open, so
7 please feel free to leave a comment on our website.
8 Also, this comment registration form available at
9 the front table will give you instructions about how
10 to submit a comment by mail if you wish to do so
11 that way.

12 Sir?

13 MR. NELSON: Can I?

14 MS. FLEER: Please.

15 MR. NELSON: Thank you. Just in case
16 I decided to open my big mouth.

17 MS. FLEER: Thank you.

18 MR. NELSON: Thank you. My name is
19 Lee Nelson. I'm with Upper River Services. We are
20 barge operators here in the Twin Cities. I'm also a
21 member of AWO, American Waterways Operators, and
22 thank you very much for having these meetings and
23 for coming here to the Twin Cities.

24 As you have indicated and as others have
25 indicated, this is one big system, and it is exactly

1 that: A system. And that's what we're talking
2 about and we're talking about will it continue to be
3 a system or will it be separated. The official
4 document, as has been indicated, is quite long and
5 quite extensive. As such, I would ask and I think
6 fellow members of AWO would ask that we be given an
7 extra 60 days or so to get through this.
8 Everybody's busy and we do want to give it proper
9 consideration. We have been working with all of you
10 for the last many years on the topic, and we aren't
11 trying to minimize it at all. It's very, very
12 important. We know that the work the Corps did was
13 fast-tracked to say the least, and as such, we want
14 to give this due consideration, so an extra 60 days
15 would be greatly appreciated. You know, you had
16 18 months to produce this. Give us four months to
17 go through all that you produced, and we'll get
18 things in.

19 You have a number of very interesting
20 alternatives and we want to go through them. As has
21 been spoken to today, but what gets moved
22 commercially through that system is vital, certainly
23 to the Chicagoland area if not the rest of the
24 nation, because it is all related due to it being a
25 system. That can't be minimized, nor can the

1 importance of finding a way to make certain that we
2 don't create environmental devastation, and so our
3 goal is to work with everybody to reach a conclusion
4 where we support a thriving environment and a
5 thriving economy. Thank you very much.

6 Oh. By the way, my zip code, 55107.

7 MR. WETHINGTON: Thank you.

8 MR. NELSON: Sorry about that.

9 MS. FLEER: Appreciate it. Thank you.

10 MR. NELSON: Thank you.

11 MS. FLEER: So I'd like to invite
12 anyone else who may have a question or comment to
13 come forward.

14 (No response.)

15 COLONEL DRUMMOND: So at this point,
16 you know, normally when we have a little bit smaller
17 crowd, we try to ease and relax a little bit. I'm
18 certain there's a lot of questions out there that
19 folks want to be answered, so, you know, we do have
20 a little bit of time. If nobody comes up, then I
21 start asking Dave questions to sort of facilitate
22 discussion, and he doesn't really like that because
23 I put him on the spot.

24 But, you know, the first obvious one that I
25 heard tonight is time. I think Dave hit on it a

1 little bit. You know, the 25 years is predominantly
2 predicated on many of the things that we're seeing
3 in the Chicagoland area right now. For instance, we
4 got two large reservoirs, one being built in McCook
5 which is about 10 billion gallons, and then another
6 one that's called Thornton reservoir which is being
7 built and should be completed in about 2017 that's
8 7.5 billion gallons. So when Dave talks about
9 mitigation, our engineers, the cost estimate and the
10 cost data is very, very accurate because, you know,
11 we've been building the tunnels and, you know, we
12 have a relatively good idea of the timeline. Dave
13 may have mentioned it, I didn't hear it, but, you
14 know, the Corps of Engineers runs off two things:
15 Authorities and appropriations. So as you can
16 imagine, we may have the authority to do it, but if
17 we don't have the funding commensurate with the
18 level of work that we got to do, then it obviously
19 slows building reservoirs down over time. So, you
20 know, and this is -- this report I think, you know,
21 based on the data that we have out there, the
22 mitigations are very important.

23 And the other thing I'll throw out and a
24 gentleman had mentioned, you know, the environmental
25 concerns. In the last two and a half years since

1 I've been in Chicago, we've had two, maybe three
2 100-year flood events, torrential downpours. We
3 just had one last April. And it causes a
4 significant disruption to the city and the upper
5 Des Plaines area as well as the branch rivers and
6 the main canal, and I think Dave had explained the
7 reverse flow scenarios that present Chicago with a
8 whole host of very complex decision-making skills
9 that go on between Metropolitan Water Reclamation
10 District, who is the main owner of the canals,
11 myself, and Colonel Deschenes down here on trying to
12 help manage the system to the best we can. And I
13 perhaps didn't mention tonight but I know Dave did
14 in his second slide, it is a very, very complex
15 undertaking, and I've heard a lot of good opinions
16 tonight that could perhaps help us as well as key
17 stakeholders and government officials analyze the
18 best way to go about this.

19 Dave, do you want to talk any more about
20 mitigation or have we --

21 MR. WETHINGTON: I think you got it,
22 sir.

23 COLONEL DRUMMOND: I got it? You
24 know, so we provided in the back, as you get ready
25 to depart tonight, you can look at the eight options

1 up there and sort of see the range of options and
2 technologies.

3 Earlier today, we had very good discussion
4 with your DNR, who I might add is a very active
5 member in the ACRCC. In the time I've been here,
6 the Minnesota DNR is actively involved in all this.
7 In fact, they had great suggestions on risk
8 mitigation because they understand what's going on
9 as well as we know that they got various programs
10 that are going on in the state right now, and so I
11 would just add the comment that I made today is all
12 these different things that they're doing in the
13 State of Minnesota has a directed affect on
14 everything that we're talking about here, and that
15 is individuals, folks like yourself, coming up with
16 good ideas and various states trying these ideas out
17 and then, as you see in the back, these range of
18 options come with a caveat of technology, so as
19 technology is coming in, we throw them in through
20 ACRCC and we try to adapt our situation to, you
21 know, adaptive management principles to do the best
22 we can to deal with the threat that is being
23 discussed.

24 And I think there was a good point, a
25 couple gentlemen had mentioned, you know, there is

1 ten invasive species which we have analyzed as
2 either being medium or high coming down from the
3 Great Lakes through the Mississippi and then the
4 three going up. But honestly, you know, throughout
5 most sessions we've been into, the common thread is
6 the Asian carp. And so, you know, there is what I
7 would consider a very good suite of options up there
8 for you, the public, to advise your local
9 politicians as well as stakeholders on how we want
10 to address this. It does come with a hefty tag, and
11 I think several of you here -- ma'am, you up in
12 front -- Isaac Walton, we've run into them at
13 several different forums and their voice is well
14 heard, but this is how we let our administration
15 know, you know, what is important, not only to the
16 Great Lakes, but to the Mississippi River basin,
17 which is key, as this gentleman over here said, to a
18 whole host of different commerce activities that go
19 on in this country.

20 You know, this Chicago Area Waterway System
21 was built in the late -- started in the late 1888s.
22 Back then, I think -- Glen, you can correct me -- I
23 think we had roughly about 670 to 700,000 people in
24 Chicago. They reversed that river because there was
25 a dilemma, and it's called dysentery and there was

1 all kinds of problems going within the waterway, so
2 the folks back then made a decision to do that. So
3 here we are, flash forward plus a hundred years
4 later, and we're faced with another environmental
5 issue, and I'm not biased to any of them up there.
6 You know, my job is get out here and ensure the
7 public understands what my engineers are seeing, and
8 I think Dave hit it a little bit earlier and I think
9 it's an important point. You know, 19 different
10 districts were involved in this, a whole range of
11 engineering skills all the way from Jacksonville,
12 Florida, which is the center of an invasive species
13 expertise all the way up to Seattle through our
14 local districts in Rock Island and St. Paul who
15 provide information into this report. These
16 engineers, I go to work every day and I see them day
17 in and day out. They have the same passion and
18 respect for the Great Lakes and the Mississippi
19 River as anybody else in the room that I've been
20 touring, so, you know, each one of them in this room
21 that has a red lanyard, and we're also surrounded by
22 some distinguished folks out of St. Paul who are in
23 this room, has the same desire, and that is, you
24 know, exactly what our charter asked us to do is
25 present a range of options and technology to prevent

1 the interbasin transfer of ANS. So I'm done

2 talking. Anybody come up? Yes, sir. Come on.

3 MR. NELSON: Do you want me to come
4 down or I can ask from here?

5 COLONEL DRUMMOND: You probably need
6 to come down so she can --

7 MR. NELSON: I was just trying to keep
8 it going for you. I just have a couple questions.

9 COLONEL DRUMMOND: Yes. Go ahead.

10 MR. NELSON: And, John, maybe this
11 gets directed at you, but a couple years ago, we
12 were hearing more talk about a bio bullet, and I
13 know that's kind of species specific, but is there
14 an update on a bio bullet that -- because I know
15 there was work being done down in La Crosse, I think
16 Wisconsin DNR was involved. Is that a fair
17 question? And then I got another one that I'll ask.

18 MR. WETHINGTON: Okay.

19 MR. GOSS: Yeah. The U.S. Geological
20 Survey science team has identified what they think
21 could be very Asian carp specific, that would be
22 affecting only the digestive system and be lethal to
23 Asian carp, and so they have tested preliminarily.
24 They are still working on what the thickness of the
25 coating and exactly what material would work best on

1 the coating on the toxin would be, but certainly
2 we're working with them to move it forward,
3 hopefully to registration, and so that -- it has to
4 go through a pretty extensive review process with
5 the EPA.

6 MR. TEUTSCH: Your three minutes ran
7 out, John. I think your mic cut off.

8 COLONEL DRUMMOND: That's basically
9 it.

10 MR. NELSON: Okay. They are making
11 progress?

12 MR. GOSS: Still on?

13 MR. NELSON: All right. Alternative 2
14 talked about education and showed boat ramps and
15 such and we heard many people talk about -- they're
16 all off. Okay.

17 COLONEL DRUMMOND: We can hear you.

18 MR. NELSON: I don't care. We heard
19 many people talk about zebra mussels and zebra
20 mussels up at Alexandria. Unfortunately, a lot of
21 zebra mussels and Eurasian milfoil that spread in
22 Minnesota were spread via pleasure boats, and have
23 you figured out a better way to modify human
24 behavior? Because a number of us are very
25 frustrated about that, and the fear that everyone

1 has and I'm sure everybody in this room, we can cut
2 everything off we want physically, you can cut the
3 waterways, you can cut them in half, but people have
4 the fear that they may still move them, and has
5 anybody figured out how to modify behavior?

6 MR. WETHINGTON: So what you speak
7 to --

8 MR. NELSON: Are we going to close all
9 the boat ramps?

10 MR. WETHINGTON: What you speak to is
11 part of that shared responsibility. It certainly is
12 an issue and it will be. It's one of those residual
13 risks that remain. You make a very, you know,
14 elegant point where you can spend billions of
15 dollars on a physical solution toward preventing the
16 transfer of aquatic nuisance species via aquatic
17 pathways, but that could all be undone by the
18 carelessness of a few or many. And so that's
19 something that's part of why engagement sessions
20 like this are important, and continued education and
21 outreach, you know, by local resource agencies,
22 state resource agencies, will certainly continue to
23 be a very necessary part of this long-term strategy
24 on aquatic nuisance species control.

25 MS. CRAFTON: We need some

1 decontamination units is what we need.

2 MR. NELSON: Have to have people use
3 them, unfortunately.

4 MS. CRAFTON: It's a start.

5 MR. WETHINGTON: I'm going to
6 caution -- hold on.

7 MS. CRAFTON: Sorry.

8 MR. WETHINGTON: Because we have a
9 stenographer here and the microphones went out, if
10 we're going to speak, we need to try and still go
11 through the motions of one at a time, please.

12 MS. CRAFTON: Internal conversation.

13 MR. WETHINGTON: Okay.

14 MS. FLEER: Just to give a signal by a
15 show of hands if you'd like to make a comment or
16 question, please. Go ahead. If you'd identify
17 yourself again and your ZIP code as well?

18 COLONEL DRUMMOND: Could we have
19 another mic? We're dead.

20 MR. WETHINGTON: Can you check?

21 MR. GERBER: Darrell Gerber, 55409. I
22 was wondering, some of the technologies, like the
23 GLMRIS locks and the water treatment system, have
24 those been demonstrated, actually used anywhere to
25 actually address these species of invasive species

1 and kind of what is the, you know, percentage of
2 reduction that have been shown for both of those?

3 COLONEL DRUMMOND: Yeah. I knew my
4 discussion would spur some. There it is.

5 MR. WETHINGTON: So the GLMRIS lock
6 itself has been conceptualized at our Engineering
7 Research and Development Center down in
8 Jacksonville. We have a number of experts who did a
9 little bit of back-of-the-envelope modeling and said
10 this is certainly something that would work. The
11 idea of using a plug flow concept, which is what
12 this is, is very traditionally accepted in chemical
13 engineering fields, process engineering. I'm a
14 chemical engineer by training. So it is used in
15 scale and, for example, in process engineering for
16 cleaning chrome plating baths, getting chromate out
17 of a bath. This would be taking a similar idea,
18 scaling it up to a large size. Has it been
19 implemented to prevent aquatic nuisance species
20 transfer? The answer is no. Lock and dams or Corps
21 lock structures have been used for environmental
22 purposes to help combat saltwater intrusion, for
23 example, so we have modified navigation structures
24 for environmental purposes, so it's not completely
25 outside the realm of being -- yeah, being possible.

1 However, certainly additional work would need to be
2 completed and detail design to try and really get to
3 how you would scale it up: Size of pumps, flow
4 rates, lockage times, etc. All that, while we hope
5 it would be very similar to what exists today, would
6 need to be further developed.

7 MS. FLEER: Thank you.

8 COLONEL DRUMMOND: Any other comments?

9 MR. WETHINGTON: Any other questions?

10 COLONEL DRUMMOND: Thoughts?

11 MS. CRAFTON: Yes. Just need people
12 to want to get this done. I guess that's the
13 biggest thing is that anybody involved should be "we
14 can do this" kind of person as opposed to --

15 COLONEL DRUMMOND: Well, and I know, I
16 think, exactly, you know, what you were saying
17 earlier. It's about the discussion, and right now,
18 John hit on it. I mean, right now is the time to
19 continue this discussion so organizations like yours
20 and like yours, it's absolutely vital you get on the
21 website, you get us your opinion and we document it
22 as such in public meetings. John?

23 MR. GOSS: I think the message of
24 urgency has gotten through to all of us. We have to
25 look at what can be done two years, four years, as

1 well as the long term.

2 MS. FLEER: Any other?

3 COLONEL DRUMMOND: So I think they're
4 going to work on the mic a little bit. So we got a
5 little bit of time, and normally when we close out
6 like this, we will stay around for the entire
7 period, and feel free to engage each and every one
8 of us on certain topics, and perhaps you didn't want
9 to get up here and, you know, discuss it with us. I
10 will tell you it's my pleasure being here at the
11 Twin Cities. I think it's important to open up the
12 dialogue with the members of the public. You know,
13 this is just not our politicians' responsibility.
14 We owe it to them as the public also to have a
15 candid conversation, to help them work through
16 this -- what I would call probably the most complex
17 topic I've seen in my time in the military, because
18 it is. It's wide-ranging, the entire Great Lakes
19 all the way down to the bottom of the Mississippi,
20 and it affects a whole host of individuals that are
21 out there, so your voice absolutely counts, and I
22 would always end on the note that we threw a lot of
23 information at you tonight. We will certainly take
24 your points, sir, back on the 60 days, but take the
25 time, digest 25 pages, go to the 232 pages, and then

1 if you feel that you need to dive into the 10,000
2 pages, there's a whole lot of appendices, take a
3 little bit of time to download that stuff off our
4 website and, you know, just sort of sit back and
5 analyze what we, in concert with many other
6 organizations, came up with over the last 18 months.
7 This is -- as Dave said, it's shared responsibility,
8 and the Corps of Engineers had a lot of input
9 through state agencies, the ACRCC, as well as
10 members of the ESC as we went through this process.
11 So it was certainly not in a -- you know, the Corps
12 of Engineers back in their own cubicle. We had a
13 lot of input, very good input, that helped us to get
14 to where we needed.

15 Perfect timing. I will get ready to --
16 Dave, do you got anything else you'd like to add?

17 MR. WETHINGTON: Toss it to Lauren
18 to --

19 MS. FLEER: Okay. Would any of our
20 panelists like to make any final comments?

21 MR. GOSS: No.

22 MS. FLEER: No? In that case, I want
23 to thank everyone very much for coming out on such a
24 tremendously cold day. We will be around for, you
25 know, several more minutes, as long as people want

1 to engage and find out more. Please stop by our
2 table on the way out and help yourself to any of
3 the, you know, reading material that we brought for
4 you today and also please remember that the public
5 comment period does extend through March 3rd and so
6 please feel free to make a comment at the website or
7 by mail if you wish. And thanks from all of us
8 again.

9 (The meeting concluded at 5:40 p.m.)

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C E R T I F I C A T E

I, Karen J. Macaulay, hereby certify that I am
qualified as a verbatim shorthand reporter;

That I took in stenographic shorthand the
foregoing proceedings at the time and place
aforesaid;

That the foregoing transcript is a true and
correct transcription of the proceedings, to the
best of my ability;

Witness my hand and seal this 4th day of
February, 2014.

KAREN J. MACAULAY
Registered Diplomate Reporter
Notary Public
Carlton County, Minnesota

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