

GREAT LAKES AND MISSISSIPPI RIVER INTERBASIN STUDY
PUBLIC MEETING

Alton, Illinois
January 30th, 2014
4:00 p.m.

MS. LAUREN FLEER, Moderator

PANELISTS:

MR. JOHN GOSS

COLONEL FREDERIC DRUMMOND, JR.

DAVE WETHINGTON

National Great Rivers Museum
2 Locks and Dam Way
Alton, Illinois 62002

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

2 MS. LAUREN FLEER: Thanks to everyone
3 for joining us this afternoon for the meeting on the
4 Great Lakes and Mississippi River Interbasin Study,
5 also known as GLMRIS. My name is Lauren Fleer. I'm
6 with the Chicago District of the Army Corps of
7 Engineers and I'm going to moderate this afternoon's
8 meeting.

9 When you arrived here moments ago, you had
10 the opportunity to pick up a few different
11 materials. First, on a green sheet of paper we have
12 an agenda for this afternoon. Second, on a blue
13 sheet of paper we have some frequently asked
14 questions about the GLMRIS report and other aquatic
15 nuisance species efforts going on from the Corps of
16 Engineers and others.

17 And then, thirdly, there's a comment
18 registration form. If you did not have the
19 opportunity to sign-in on our website and would like
20 to make a comment or ask a question here today, I
21 encourage you to fill out a comment registration
22 form and return it to the table in the hallway.
23 That will help us out a lot and I appreciate it.

24 Now let me introduce to you this afternoon's
25 speakers. On your far right is John Goss from the

1 White House Council on Environmental Quality. In
2 the middle we have Dave Wethington who's the project
3 manager for the GLMRIS study from the Chicago
4 District Army Corps of Engineers. And on the left
5 we have Colonel Frederic Drummond who is the
6 commander of the Chicago District U.S. Army Corps of
7 Engineers.

8 Just a couple of things. I think this is our
9 seventh or eighth of eleven meetings total that
10 we're doing across the country in both the Great
11 Lakes and Mississippi River basins. There's really
12 two goals that we have for today's meeting. The
13 first is to brief you on the contents of the GLMRIS
14 report that was released on January 6th.

15 You'll see a summary report was available at
16 the table coming in as well. This is basically an
17 abbreviated version of the longer report that is
18 available at our website. The website is
19 glmris.anl.gov and it's the first one listed on the
20 back of the packet. So that's our first goal here
21 today.

22 The second one and possibly more important
23 one, is to hear your questions and your input on the
24 contents of the report. So after a brief
25 presentation from our panel -- so we'll have plenty

1 of time for questions and discussion, we will be
2 collecting -- the Corps of Engineers is going to be
3 collecting public comments through March 31st of
4 this year and all the comments will be compiled and
5 be available -- made available on the GLMRIS
6 website.

7 So if -- your comments will be formerly
8 included if you make an oral comment in a meeting
9 like this one or if you submit a comment on the
10 GLMRIS website or one by mail. So, like I said,
11 we'll have plenty of time for discussion after a
12 brief presentation from our speakers.

13 So without further adieu, I'll hand it over
14 to Mr. Goss.

15 MR. JOHN GOSS: Thanks, Lauren.
16 Appreciate everyone taking a little time today to
17 help us think here in the middle of this process
18 what is the next best step. What direction should
19 this go to create a permanent ecological separation
20 in Chicago? And this is a two-way challenge for
21 invasive species. Certainly Asian carp are the big
22 worry in the Great Lakes but the Great Lakes have
23 sent a lot of invasive species in your direction
24 over the last hundred years or so and this is an
25 opportunity to come up with a stopper.

1 And I think today, if you can particularly
2 pay attention, there's a list of target species that
3 Dave will talk about that are not necessarily on the
4 verge of moving immediately but over the next 10 to
5 20 years could be moving into the Mississippi Basin
6 and certainly you have a big stake in helping us
7 come up with a solution that's going to stop them.

8 I report to the White House because this got
9 to be such a significant point of contention in the
10 Great Lake states that we had need of a coordinating
11 group, so we put together with federal agencies and
12 all the state agencies in the Great Lake states an
13 Asian carp coordination group and that group
14 continues to do the day-to-day activities that Dave
15 will describe a little bit in Alternative 1.

16 We do have funding to go ahead with those for
17 this year and it is recommended in the budget for
18 2015 also. So just -- we plan to stay after the
19 Asian carp challenge in the Chicago area. For your
20 part of the country we have Asian carp already in
21 your waters in this part of the Mississippi,
22 Missouri, Ohio River and that's going to take a
23 totally different strategy. There is a national
24 carp control plan that was developed by the Fish and
25 Wildlife Service over six years ago but it hasn't

1 been funded.

2 So, you know, if you're interested in the
3 fish challenge you could look into that through our
4 website, which is asiancarp.us and I think we
5 need help discussing that with elected officials in
6 all of our states, both the Great Lakes and outside
7 the Great Lakes.

8 We are looking for a consensus to move
9 forward, so if you can give us some comments on one
10 or two of the alternatives that you think would be
11 most valuable, we'd appreciate it. And, with that,
12 I think I'll turn it over to Colonel Drummond and
13 appreciate your help on this discussion.

14 COLONEL FREDERIC DRUMMOND: Thank you,
15 John. Welcome, everybody. I'm glad you're here
16 this morning. When we left Chicago it was just
17 slightly a little bit colder, not a whole lot, so we
18 can see the polar vortex is actually making its way
19 down here to St. Louis but it was cold this morning
20 in Chicago.

21 Certainly my pleasure to be here at the
22 National Great Rivers Museum. What a beautiful
23 museum. Doesn't take long for, at least for me, to
24 look out the window and understand the significance
25 of this confluence and the rivers true meaning to

1 the entire watershed all the way up into the Great
2 Lakes.

3 I'm also joined by two fellow commanders.
4 Colonel Chris Hall from the St. Louis District.
5 Chris has been a long-time friend and Mark Deschenes
6 from the Rock Island District. Both have a key role
7 in what we're going to talk about today as far as
8 dealing with GLMRIS.

9 I think if you haven't heard, you know,
10 GLMRIS is a complex study that examines
11 opportunities to prevent aquatic transfer between
12 both basins, the Mississippi River basin and the
13 Great Lakes. This report that you're going to hear,
14 we're going to have about 20 slides, is going to
15 outline a variety of prevention methods and it's
16 going to prevent -- present an evaluation criteria
17 to help you sort of distinguish between the options
18 that we're going to present tonight. You can see a
19 lot of them options along the wall over here.

20 So, you know, our purpose here is really --
21 the Corps' purpose is to present an objective
22 picture of all these different alternatives to
23 stakeholders, federal entities, and to the public.
24 So you can sort of help us as we move through this,
25 as I call it one of the most complex reports I've

1 seen in my time in the military.

2 This report is unique. In most Corps of
3 Engineer reports, if you've been involved in our
4 study process, in that what we're going to do is
5 present a range of options and adaptable -- that can
6 be adaptable for the incorporation of various types
7 of technologies.

8 As you just heard from John, the Asian Carp
9 Regional Coordinating Committee were intimately
10 involved in that. Also, I tell, you know, most of
11 the public when I'm out in forums, it's probably the
12 flattest organization that I have seen. Dave has
13 direct lines to the Assistant Secretary of the Army
14 and his team. I have a direct line as well as
15 through my higher headquarters and working with
16 John. And I might add that a very good partner was
17 also the former commander of the Chicago District,
18 Jack Drolet who is also the program manager for
19 this.

20 So this, in the last two and a half years,
21 has been very flat. We have direct lines into each
22 agency that will be covered here in a few minutes.

23 You'll also hear tonight quite a bit about
24 shared responsibility. We believe that this whole
25 thing is a shared responsibility among various

1 state, federal, and nongovernmental stakeholders
2 that are out there. So your opinion counts. You'll
3 hear a little bit -- there's a couple websites you
4 can go to, to provide your opinion, as well as in
5 open testimony.

6 So, I always end by saying, you know, you
7 heard we're on our eighth tour here. It has been
8 quite exciting. A lot of good opinions have come
9 out. This information went out to about 7,000 news
10 media sites, so it's all over the country right now.

11 As John said, the dialogue is open. Right
12 now is the time to continue this discussion. I
13 would encourage -- when you come in there's a
14 25-page executive summary that gives some pretty
15 good snapshots of all these. Dave will walk through
16 this tonight, so you can understand it better but
17 this is just a primer.

18 On our website is the full report, 232 pages.
19 And then if you are the Tom Clancy, you know, novel
20 reader, there's 10,000 pages of appendices that go
21 into everything from, you know, what type of
22 invasive species we're dealing with and that type of
23 stuff.

24 You're going to hear a few -- 13 aquatic
25 nuisance species are medium and high risk. So we

1 got have three moving up the Mississippi and we've
2 got ten that we're really worried about coming from
3 the Great Lakes down the Mississippi. Ninety
4 different technologies that we have looked at and
5 we've analyzed.

6 I always like to end by saying it's not just
7 the Chicago Corps of Engineers, both of these
8 gentlemen and their districts have been involved in
9 this. Nineteen different districts, a hundred
10 different employees have looked at this ranging
11 from, you know, Jacksonville, Florida, Center of
12 Invasive Expertise, all the way up to Seattle who
13 has resident expertise in hydro dams and dealing
14 with sea entry and that kind of stuff. So a whole
15 host of individuals involved.

16 But what's more important is we also
17 established an executive steering group and many of
18 your organizations were involved in that steering
19 group for the last two and a half years to include
20 the head of the ACRCC, John Goss.

21 So I'm going to turn it over at this point to
22 Dave Wethington. I'm going to move up front and
23 Dave is going to go through about, I hope, 18
24 slides.

25 MR. DAVE WETHINGTON: Yes, sir.

1 COLONEL FREDERIC DRUMMOND: Unless he
2 has added to it. Eighteen slides and that will give
3 you sort of a snapshot of the range of options that
4 we have been looking at.

5 MR. DAVE WETHINGTON: Thank you, sir.
6 And thank you to everyone who took the opportunity
7 to come out this evening. I'm really glad to see
8 everyone here tonight. It's also nice, as Colonel
9 said, to be in a place that actually has a
10 temperature above 32 degrees or freezing, as we call
11 it. It has been a long, long January for those of
12 us on the road. I just was in Minneapolis earlier
13 this week and it was way too cold.

14 My name, again, is Dave Wethington. I am the
15 project manager for the Great Lakes and Mississippi
16 River Interbasin Study. I have been with the study
17 since its inception, since mid-year 2009 when we
18 first received funding to begin GLMRIS.

19 I have been with the Chicago District for
20 about eleven years. My training is formerly as an
21 engineer. I'm a chemical engineer by training with
22 a master's degree in environmental engineering but
23 I've learned a whole lot about planning, about
24 invasive species, about biology. And it's really a
25 testament to the fantastic team that Colonel

1 Drummond spoke to, you know, the talented engineers,
2 scientists, biologists, that I have the privilege of
3 working with on a daily basis to help bring this
4 kind of compilation of information to you today.

5 I'll spend a little time talking this evening
6 about how we put together the different alternatives
7 that are in the GLMRIS report and then I'll outline
8 each one of the eight. Everybody hopefully has one
9 of these, the 25-page summary book that they picked
10 up on the way in. And when I get to the
11 alternatives I'll outline, you can kind of follow
12 along page by page with me and it'll give you a
13 little bit more information.

14 I would really encourage you, however, to go
15 to the website. It's listed on the back of this
16 document. To look at that long -- that 232-page
17 document if you really have some specific questions
18 with regard to any of these alternatives.

19 I'll do what I can and Colonel Drummond and
20 Mr. Goss will do what we can tonight to help answer
21 your questions but I'm sure you'll get home just
22 like I do, sometimes in the middle of shaving my
23 head or at 30,000 feet I'll be thinking about oh, I
24 have a question about something. You can send us an
25 email and let us know what's going on.

1 So GLMRIS, itself, the authority for it asks
2 us to look at a range of options and technologies
3 that are available to prevent the transfer of
4 aquatic species, so aquatic invasive species, if you
5 will, between the Great Lakes and the Mississippi
6 River basins. That divide, that watershed boundary
7 is identified on the map on the right-hand side, by
8 that kind of brown-colored line. That's the ground
9 zero, if you will, with regard to our study.

10 Before I get into specifically what's in the
11 GLMRIS report, I want to talk a little bit about
12 that interbasin divide because there are other
13 pathways outside the Chicago Area Waterway System,
14 which is our focus, that may exist or may exist at
15 least on a temporary basis that could provide an
16 aquatic pathway between the two basins.

17 The Corps of Engineers, in partnership with
18 other state/federal agencies, put together a listing
19 of 18 different other potential aquatic pathways
20 that are outside Chicago. Each one of those
21 pathways has a characterization report. We
22 identified how the pathway forms, what kind of
23 species may be transferring at that pathway. And
24 all that information is on our website, each of
25 those 18 characterization reports.

1 Now, about those other pathways, they are
2 very low risk when you compare them to the Chicago
3 Area Waterway System. Well, why is that? It's
4 because the majority of them are what we call
5 "episodic." So they form when you have significant
6 precipitation events in that area and you have the
7 headwater of two streams kind of come together to
8 form a temporary aquatic pathway that species could
9 use to transfer between the basins.

10 There are a couple of them that are more
11 perennial, if you will, they're more on the order of
12 like a farmer's ditch. And so it's something that
13 could be easily addressed and doesn't have all these
14 complex uses and users that you find in the Chicago
15 Area Waterway System.

16 The goals of GLMRIS are twofold. Number one,
17 they are to try and identify ways to prevent aquatic
18 nuisance species and then look at those ways, those
19 options or technologies when implemented may have an
20 impact on the existing uses and users of the Chicago
21 Area Waterway System. And if those impacts are
22 adverse in fact, they have negative impact, we try
23 to provide mitigation or, you know, kind of bring
24 things back to the way they were, the way they will
25 be, try and compensate for those adverse impacts to

1 the existing uses of the system.

2 So those two goals: prevent transfer and then
3 look at those mitigation measures on how to mitigate
4 for adverse impacts.

5 As Colonel Drummond mentioned, stakeholder
6 engagement has really been a very key part of the
7 study since its beginning. We did form that
8 executive steering committee that included
9 representation from a wide range of federal, state
10 and other governmental stakeholders.

11 In July of 2012, we received legislation that
12 modified a little bit the scope of what we're doing
13 with regard to GLMRIS. The legislation asked us to
14 do a number of things. First, it asked us to
15 complete a report within 18 months. We received
16 this legislation on July 6th of 2012 and 18 months
17 later on January 6th of 2014, we turned in a
18 completed report.

19 It also asked us to look at the Chicago Area
20 Waterway System in particular. That's one of the
21 reasons why the report, itself, focuses on the
22 Chicago Area Waterways, in addition to the fact that
23 the CAWS, as we call it, really does prevent that
24 primary aquatic pathway between the basins.

25 The report does have an appendix that talks

1 about Focus Area 2, those other 18 aquatic pathways
2 and kind of brings the reader up to date and then
3 refers the reader to the website that has those
4 characterization reports and then associated
5 information which, again, is a really good resource.

6 The legislation in 2012 also asked us to
7 evaluate, among our range of options and
8 technologies, hydrologic separation or the physical
9 separation of the basins as at least one of the
10 options.

11 If you're not familiar with it, the Chicago
12 Area Waterway System really is a complex multiuse
13 waterway. It has several different kind of very
14 important uses. Number one is navigation. There
15 are significant cargo movements that happen through
16 the system, as well as it provides a significant
17 conduit for recreational traffic especially within
18 the Chicago area.

19 The Chicago Area Waterway System also serves
20 as a very important route for water supply and water
21 conveyance within the Chicagoland area. Something I
22 was not familiar with until I really came to Chicago
23 was that on average anywhere between 65 to
24 85 percent of the total volume of the Chicago Area
25 Waterway System is treated municipal wastewater. So

1 it serves as a very important conveyance stream of
2 that treated municipal wastewater from the City of
3 Chicago and surrounding suburbs.

4 It also serves as a very important tool for
5 the management of flood risk. Ordinarily water
6 comes from Lake Michigan, flows through the Chicago
7 Area Waterway System and downstream. This general
8 way of flowing applies to any of these five points.
9 During significant precipitation events Chicago has
10 the ability to reverse the flow of the river and
11 thus alleviate significant pressure that may be
12 added to the system based on significant
13 precipitation events.

14 So if you had a big rainfall event anywhere
15 in here, Chicago has the ability to open up the
16 floodgates, if you will, and allow water to go in
17 both directions such that you don't have adverse
18 impacts by flooding within the Chicago area or
19 throughout the suburbs, which are all interconnected
20 through a combined sewer network.

21 So these multiple uses make the
22 implementation of technologies and the
23 implementation of ultimate solutions certainly
24 complex within the Chicago Area Waterway System. It
25 does provide that primary connection between the

1 basins, which is why it is the focus of these
2 current efforts.

3 The report itself provides a range of options
4 and technology developed to a conceptual level. We
5 also look again at those mitigation requirements or
6 those adverse impacts caused by the implementation
7 of any one of these potential alternatives and has a
8 similar level of design with regard to what it would
9 take to adequately compensate or mitigate for any
10 adverse impacts.

11 We present cost estimates for each
12 alternative and those cost estimates are really
13 commensurate or developed to the same level that the
14 report itself is, the level of design. And so while
15 you may be tempted to immediately compare them to
16 other studies or say well, this may be the ultimate
17 total cost, really the best use of these numbers,
18 while we use kind of a Corps of Engineers standard,
19 risk-based, cost-estimating procedure, the numbers
20 are best used for comparison among different
21 alternatives within the report.

22 The report itself really is a great tool for
23 decision-makers, decision-makers such as yourselves
24 or decision-makers such as members of federal
25 agencies or members of Congress. And the reason for

1 that is because it provides evaluation criteria or
2 information about each one of those alternatives
3 that you can use to compare among different
4 alternatives. How effective is it? How much does
5 it cost? How long will it take to implement? What
6 are the ancillary economic or environmental impacts
7 for each alternative? There are going to be
8 tradeoffs among different alternatives in those
9 elements and so this is an important tool in order
10 to help you establish that kind of baseline between
11 the alternatives.

12 If we look at how we implemented GLMRIS, it
13 really was three steps. Number one, we identified
14 what are the potential aquatic pathways between the
15 basins. Number two, looked at the species that
16 could potentially transfer between them. We started
17 out with a list of over 200 species and refined
18 those down to about 35 which were of particular
19 concern.

20 Of those 35 we did a specific risk
21 assessment, a baseline risk assessment, if you will,
22 looking at what is the probability of one of those
23 species transferring and establishing in the
24 opposite basin and then having some sort of adverse
25 impact. Now, as much as we would love to be able to

1 give you a quantitative number, it's a 20 percent
2 chance that there's going to be a 50 percent impact,
3 it's nearly impossible to do that.

4 So what we did is we looked at really a
5 ranking of high, medium or low and identified those
6 species of those 35, which are the high and medium
7 species. So of those 35 we identified 13 that have
8 either a medium or a high potential ranking with
9 regard to the probability of establishment in the
10 opposite basin and having some adverse impact. So
11 those are the species we really focused in on, in
12 the study.

13 We also looked at a wide range of available
14 controls. Colonel Drummond mentioned over 95
15 different controls were identified straight out of
16 the box. Things like aquatic herbicides, applying
17 fish poisons, putting in physical barriers. We even
18 heard comments from the public like we could boil
19 the channel or freeze the channel. And so we took
20 all this information and really refined it based on
21 what was potentially implementable and what was
22 available to be implemented immediately.

23 You know, there's some questions about well,
24 did you look at, you know, these in-development fish
25 poisons or did you look at carbon dioxide? And the

1 answer is no. And the reason is because we wanted
2 to ensure that we could have something that was
3 implementable and so we looked at different
4 alternatives that you could go out and implement
5 today if you wanted to.

6 Now, Colonel also mentioned the adaptability
7 of the range of these alternatives. There are
8 certain opportunities, as I go through these
9 alternatives, to identify where if technology
10 matures and you get different types of activities
11 that are more suited, more better suited I guess,
12 more effective, that they could be traded-in for
13 other types of technologies that are included in
14 these alternatives.

15 So we took these three pieces of information,
16 the channels, the connections, the species, and the
17 controls and put them all together and used
18 information about did we -- that we put together
19 about baseline, so baseline cargo navigation,
20 baseline fisheries and compiled all that information
21 into the GLMRIS report that's on the website in
22 those thousands of pages in the appendices.

23 Before I get into the alternatives
24 themselves, I want to spend just a moment talking
25 about the different controls that you'll see within

1 the GLMRIS report. Let's start over on the far
2 right-hand side. Something easy, physical barrier.
3 It's pretty simple. The concept is to build
4 something and we don't get into details. We're,
5 again, we're at a conceptual level of design but
6 putting a physical structure within the waterway
7 that will prevent the surface waters of two bodies
8 of water from mixing. Seems pretty simple.

9 Let's go down to something in the lower
10 left-hand corner, this electric barrier. I think
11 that there's probably a good number of folks who
12 understand, who've heard of an electric barrier.
13 And what we've done is taken this concept, which is
14 currently being applied, just outside of Chicago
15 there's an array that's placed in the water and
16 there's voltage at a certain frequency that's run
17 through the water, which has been demonstrated in a
18 laboratory that will repel fish.

19 And so we take that same concept, which is
20 currently being implemented today but modify it and
21 improve it. We use something what we call an
22 engineer channel associated with that electric
23 barrier so that we can gain knowledge from lessons
24 learned, optimize the frequency, the positioning of
25 the electrodes and optimize the construction of the

1 actual channel itself to really try and address
2 those species of concern that have been identified
3 in the report.

4 We also developed newer technologies or newer
5 applications of existing technologies, something
6 like the GLMRIS lock on the upper left-hand side
7 here. This very simply is a lock structure that has
8 been modified with active pumps to exchange the
9 water or flush the water out of that lock chamber.

10 The purpose of this would be to remove
11 floating aquatic nuisance species from that lock
12 chamber. So if you take a GLMRIS lock and you take
13 the electric barrier and pair them together, they
14 will help buy down risk and help control several
15 species of concern from moving through that
16 checkpoint.

17 So we look at those possible modes of
18 movement that you see in the upper right-hand corner
19 and it really is a very simple way to breakdown how
20 aquatic nuisance species can move through the water
21 column. They can swim. They can float or they can
22 hitchhike. And by "hitchhiking" I mean like
23 attaching to the hull of a barge or the hull of a
24 recreational boat as it moves through the system.
25 And we look at how to take each one of these

1 technologies, either individually or in parallel
2 with each other and try and address those different
3 modes of aquatic nuisance species movement.

4 I'm going to start now and spend a couple
5 minutes talking about each one of the alternatives
6 and then I'll wrap things up and turn the
7 conversation over to you. If you want to follow
8 along with me, we're on Alternative Plan 1. I
9 believe it's around page 7 of your book. It
10 actually starts on page 11 -- 10. I'm sorry. Page
11 10. I should know this by now.

12 We're going to start with Alternative Plan 1
13 and I'll go through each one of them and spend a
14 couple of minutes on them. Slide 11. So the
15 baseline alternative is what we call our "no new
16 federal action" or the "sustained activities
17 alternative" is what I prefer to call it.

18 And really what it helps us do is looking at
19 these baseline activities, these ongoing activities,
20 helps us form a measuring stick on what additional
21 risk reduction can be achieved by each of these
22 subsequent alternatives. I prefer to call it the
23 sustained activities alternative because it's not
24 that we're doing nothing right now. There's not a
25 do-nothing option. There's actually a lot of

1 excellent work that's currently being accomplished
2 by not only the Corps of Engineers but other federal
3 resource agencies, state DNRs, that are really
4 combating a wide variety of different potential
5 aquatic nuisance species.

6 Specifically here at the Corps of Engineers
7 we operate and maintain that electric barrier system
8 that you see on those maps on the picture there and
9 as well as we are in the process of constructing a
10 new permanent barrier within the Chicago Area
11 Waterway System. Existing activities are also very
12 important to kind of put together and realize what
13 is currently being implemented as that measuring
14 stake for future comparison.

15 Alternative Plan No. 2 is our nonstructural
16 control technologies and very simply these are
17 options of technologies that can be implemented that
18 do not involve the construction of a physical
19 structure. For example, things like active
20 management, which include fishing down of Asian carp
21 populations or perhaps the application of an aquatic
22 herbicide on an existing stand of aquatic invasive
23 plants such that you control it where it is, thus
24 achieving the prevention of a transfer between the
25 basins.

1 It includes things like education and
2 outreach. Why is it a good idea to clean your boat
3 when you move it from one waterway to the other? Or
4 why is it a bad idea to just take that bait bucket
5 and dump it over the side after a day of fishing?
6 Things like laws and regulations. Ballast water and
7 bilge water management are important things that
8 can be implemented that are nonstructural
9 activities.

10 Now, as you can imagine, the successful
11 implementation of any one of these, as well as
12 most -- any of the other alternatives that are
13 presented in this report, are really a shared
14 responsibility. It's members of the public, such as
15 you and I, who have part of that responsibility to
16 understand how we can impact the movement of aquatic
17 nuisance species.

18 Now, I'm not going to stand here and tell you
19 that active management and education and new laws
20 are going to necessarily prevent the transfer of
21 species but what I will tell you is that they are
22 best management practices. And so we include the
23 implementation of these nonstructural measures with
24 each one of these subsequent alternatives that we
25 put forth as best management practices.

1 What's unique about these nonstructural
2 activities is that they can be implemented very
3 quickly. With appropriate authorities and resources
4 they could be implemented tomorrow. Speaking of
5 resources, we anticipate or we estimate a cost of
6 about \$68 million a year could be spent in addition
7 to what is currently being spent on these kinds of
8 activities.

9 Now, this cost estimate was really
10 attributable only to those states that border the
11 Great Lakes and Mississippi River basins. So it was
12 very much an estimate that was achieved by
13 identifying existing ANS management plan activities
14 and trying to find an average spread across those
15 states.

16 Alternative Plan 3 is the first of our two
17 technology-based alternatives. Very simply this
18 creates a bypass of flow through an aquatic nuisance
19 species treatment plan, which helps eliminate or
20 control those aquatic nuisance species within the
21 waterway.

22 Now, an aquatic nuisance species treatment
23 plant is pretty simple. It's a series of screens,
24 filters and UV light that is used to inactivate any
25 type of aquatic nuisance species that may be in the

1 system.

2 UV light is used in other treatment
3 technologies for drinking water. It's used by --
4 the City of New York just built a large UV-based
5 drinking water plant, so this is something that is
6 used commonly in industry and in practice but has
7 not necessarily been implemented specifically for
8 aquatic nuisance species. Again, it's a conceptual
9 design.

10 So, very simply, water in one of these
11 channels at each of these two single points, would
12 be routed through an aquatic nuisance species
13 treatment plant out to the other side. What this
14 does is create two kind of bidirectional or two
15 two-way control points within the system. Water
16 would continue to flow from the Great Lakes down
17 through the system and out and we would also provide
18 a channel for navigation by the implementation of a
19 GLMRIS lock book-ended on either side with an
20 electric barrier, which help control the fish
21 populations, the fish transfer.

22 Now, as you can imagine, the implementation
23 of this would be certainly a significant engineering
24 effort and especially when you consider what the dry
25 weather flow is in the river. That would be the

1 most appropriate size to build this ANS treatment
2 plant.

3 I mentioned earlier that the Chicago Area
4 Waterway System is a very important tool for
5 flood-risk management. And so when you have
6 significant precipitation in the Chicagoland area,
7 you have very episodic or very large flows that
8 would form. And so as opposed to building a plant
9 that may be 20 or 50 or more times larger than it
10 needs to be, instead the report includes conveyance
11 and storage of those significant rainwaters for
12 later treatment.

13 So that infrastructure, those tunnels and
14 those reservoirs which would be necessary to store
15 storms that we anticipated within this report, are
16 significant and they contribute to the significant
17 time and cost for this particular alternative.

18 Alternative Plan 4 is a second of our two
19 technology-based alternatives. What this does is
20 takes the previous idea, instead of having two
21 bidirectional or two kind of two-way control points,
22 instead we spread the system and place one-way
23 control points at or along the shores of Lake
24 Michigan, as well as a control point downstream,
25 thus kind of applying a buffer zone in between.

1 That buffer zone gives us the opportunity to do a
2 couple of things.

3 Number one, we understand at this point in
4 time, the information that we have at this point in
5 time tells us that there are not any of the aquatic
6 nuisance species of concern within this zone. So if
7 we continue to manage those species through these
8 one-way control points, we can then operate and
9 monitor the system as that aquatic nuisance species
10 controlled zone. It would give us early warning if
11 there's any potential transfer between the basins.
12 It also allows us to continue to operate the system
13 for navigation for water conveyance and for
14 flood-risk management in a very similar way that we
15 manage for it today, that we operate the system
16 today.

17 Imagine if you had a significant
18 precipitation event in the Chicago area and you
19 needed to backflow water out into Lake Michigan as
20 well as downstream. Since that addition of water to
21 the managed buffer zone is only precipitation water,
22 then in combination with these screen gates that
23 wouldn't let fish swim up against the screen, you
24 can continue to let that water fall out because any
25 aquatic nuisance species that may be floating would

1 be pushed away from this managed buffer zone.

2 Now, we do include a couple of physical
3 barriers within this buffer zone alternative and
4 those are identified down at the lower part around
5 northwest Indiana. And the reason we do that is
6 because those two waterways, Grand Calumet River and
7 the Little Calumet River are primarily
8 non-navigable. You could probably get a canoe or a
9 Jon boat through there during high water, if you
10 will, but you don't have any significant usage for
11 cargo or other recreational navigation.

12 If you place physical barriers in that
13 waterway you do still impact the ability for water
14 to flow and that kind of resulting flood risk. And
15 so there would be the construction, necessary
16 construction to mitigate for that impact of a couple
17 smaller reservoirs and the associated conveyance,
18 that tunnel infrastructure.

19 Because it's much smaller, in terms of the
20 mitigation necessary, the estimated time of
21 completion is -- while it's longer, is significantly
22 less than that 25 years, as is the cost at about
23 half of the previous technology alternative looking
24 at about \$7.8 billion.

25 Alternative Plan No. 5 is the first of our two

1 hydrologic separation, or physical separation
2 scenarios. As the title of this particular
3 alternative suggests, this places physical barriers
4 at or near the lakefront to create a blockage of
5 surface water flow between the basins. Again, as
6 you can imagine, as soon as you stop the way water
7 flows as it does today, you impede the flow of water
8 because you would not want to have overtopping of
9 these barriers during significant water events
10 because then you've undone the whole purpose of not
11 transferring water between the basins. There's
12 significant mitigation necessary for adverse impact
13 to flood-risk management.

14 And so this scenario does take a significant
15 amount of time to construct or is predicted to take
16 a significant amount of time to construct at a
17 significant cost, looking at a time of about 25
18 years and a cost of about \$18.4 billion.

19 Now, so the team looked at all these
20 scenarios. There's three structural scenarios that
21 we've seen up to now. You have significant cost
22 that's introduced by trying to mitigate or
23 compensate for adverse impacts to flooding within
24 the Chicago area. So we thought what can we do to
25 try and take that flood risk out of the equation.

1 And so, in this particular scenario, the team
2 placed barriers at or about where that kind of
3 natural hydrologic divide would be between the
4 basins. Now, if you're familiar with Chicago,
5 historically it was a very swampy and marshy area,
6 so to call this a divide is maybe a bit of a stretch
7 but it really is the high point in a system that may
8 only vary a few dozen feet or so.

9 By placing physical barriers at these two
10 points we were successful in really mitigating for
11 those flood-risk management impacts. There was not
12 a whole lot of additional flood risk that was added
13 to this system by placing the physical barriers
14 there. The way the water flows was maybe a little
15 bit more like it used to flow back a hundred or more
16 years ago.

17 However -- doesn't there always seem to be a
18 but. However, when you place physical barriers at
19 this point in the system and at this point in the
20 system, everything lake-ward becomes part of the
21 waters of Lake Michigan. Water is a very
22 significant natural resource. There are, as you can
23 see on the map on the right-hand side, two
24 significant water reclamation plants. That's what
25 these little brown squares are, which individually

1 contribute about 300 to 400 million gallons per day
2 of treated wastewater.

3 Now, Chicago has a very storied history with
4 regards to notoriously bad water quality but Chicago
5 has also done a good job in trying to ratchet down
6 those controls. There has been a lot of improvement
7 in recent days with regard to the disinfection of
8 the water and the nutrient removal.

9 So let's for a moment, let's imagine that the
10 water coming out of these water reclamation plants
11 are the same as any other Great Lake city that
12 potentially continues to this day to discharge
13 waters in the Great Lakes. Even in that case, if
14 this was quote unquote clean water, you would still
15 have a significant volume of pollutants, of
16 nutrients, of persistent organic pollutants, PCBs,
17 mercury, things that wastewater treatment plants
18 don't even treat for like pharmaceuticals, that
19 would now be introduced into Lake Michigan.

20 Remember that the water currently flows
21 downstream away from the lake. The Clean Water Act
22 has a certain stipulation with regard to the
23 reduction of new contaminants. Now, by all means
24 it's certainly a good idea to try to clean up this
25 water to whatever extent possible but when speaking

1 with federal and state regulatory agencies it was
2 determined that it would be regulatory problematic
3 to provide a new introduction, a new -- a loading of
4 pollutants into the Great Lakes resource.

5 So what was done in this particular
6 alternative was to reroute the flow to a point
7 downstream of the two barriers. That's what those
8 green lines depict, are the pipes that flow that
9 water to the points downstream. Now, this has a
10 secondary benefit as well, which is very kind of
11 a -- it's near and dear to the Corps of Engineers
12 organization.

13 I mentioned at the outset that a significant
14 volume of water is water reclamation plant discharge
15 that flows down the river and that significant
16 portion of water goes to maintaining the navigation
17 in Illinois waterway and feeds the Mississippi
18 River.

19 I know that folks around here are very aware
20 of low water levels that we had a year ago back in
21 December and the potential adverse impacts to
22 navigation that could be reached by those. So we
23 wanted to ensure that that flow of water was not
24 diverted from the existing uses.

25 There's also some water reclamation plant or

1 water quality infrastructure that was constructed as
2 part of this, capturing, combining sewer outfalls,
3 as well as remediating contaminated sediments that
4 are now open to Lake Michigan. Because of these
5 significant environmental quality, water quality
6 mitigation needs, the completed time -- the
7 estimated time of completion is about 25 years with
8 an estimated cost of about \$15.5 billion.

9 Alternative Plan 7 and 8 are the last two and
10 they are primarily what we call hybrids, so they mix
11 the idea of putting a physical barrier and
12 technology solutions together in one alternative.
13 The Chicago Area Waterway System can be split into
14 an upper part and a lower part. The upper part is
15 up here fed primarily by this channel, which is the
16 Chicago Sanitary and Ship Canal and this lower part
17 down here is primarily fed by the Cal-Sag Channel.

18 So as this particular title suggests, this
19 particular scenario will leave this Cal-Sag Channel
20 open by implementing a range of different
21 technologies, the GLMRIS locks, the ANS treatment
22 plants, sluice gates, et cetera, as well as a
23 physical barrier on the upper part of the system.
24 Because of the associated mitigation necessary, it
25 still has a significant time of completion for full

1 risk reduction, as well as a significant estimated
2 cost of about 15.1 billion.

3 Before I switch to the next slide I wanted
4 you to focus on that cost a little bit and look at
5 the other hybrid scenario. The costs are
6 significantly less for this particular hybrid. This
7 one leaves the Chicago Sanitary and Ship Canal open
8 while placing a physical barrier on the Cal-Sag
9 Channel. And the primary reason is because the
10 mitigation, the associated mitigation for flood risk
11 or water quality is significantly less.

12 I mentioned in the kind of synopsis of the
13 report we provided were evaluation criteria because
14 the very important use of the GLMRIS report is as a
15 tool for decision-makers. And so this, again, just
16 kind of highlights that and really speaks to the
17 different types of evaluation criteria that are
18 found within the report. Things like the
19 effectiveness of the controls, the costs, the time
20 of implementation. You can see, after going through
21 each of these alternatives, how the different
22 criteria may be very important in evaluating
23 trade-offs among the different alternatives.

24 Before I conclude today I want to make sure
25 that I covered just a couple of kind of last

1 thoughts. First, mitigation is a significant player
2 with regard to the time it takes to construct and
3 the cost it takes to construct any one of these
4 potential alternatives. I'm not going to stand here
5 today and tell you that it's going to take the Corps
6 of Engineers or anyone else 25 years to build a
7 physical barrier in the waterway.

8 What I will tell you is it will take
9 approximately that amount of time to ensure that
10 that physical barrier that is placed in the waterway
11 does not have adverse impacts to the flood risk of
12 an area of 9.2 million residents of the City of
13 Chicago, as well as or adverse environmental impacts
14 to significant natural resources. No matter what
15 there still will be residual risks in any of these
16 scenarios. It's part of why this is a shared
17 responsibility.

18 You know, it's really important for us to
19 understand that, you know, millions, tens of
20 millions or billions of dollars worth of
21 infrastructure could potentially be undone by the
22 careless, unintentional or perhaps intentional
23 doings of someone like you or I.

24 There's also significant risk of the
25 potential of these -- I'm sorry -- there's

1 significant risk of the ability for these species to
2 potentially pass between the basins before some of
3 these alternatives can be completed, which is why
4 it's really important to speak about this to groups
5 such as yourselves and to other decision-making
6 bodies to understand what can be done to help buy
7 down that risk as we decide to move collaboratively
8 towards some ultimate solution.

9 To that end, adaptive management is very
10 important. Which of these alternatives can be
11 adaptively managed? How can you get advanced risk
12 reduction? There are a number of ways that we can
13 discuss more if you have specific questions.

14 And I go back to, you know, if I leave you
15 with nothing else today, really that aquatic
16 nuisance species control is a shared responsibility
17 among you and I, as well as among the range of
18 federal, state, local, and congressional
19 stakeholders who have a stake in this issue.

20 Any kind of long-term solution, any kind of
21 infrastructure solution will take a collaborative
22 consensus toward a strategic kind of path forward
23 with regard to aquatic nuisance species control.

24 To this end, to this end of stakeholder
25 engagement, we're going to a number of different

1 cities. This was mentioned at the outset. This is
2 number eight of now eleven. There are only nine
3 cities identified here. We're going to St. Louis --
4 I'm sorry -- we're going to New Orleans tomorrow and
5 we've also added two more cities. It came out on
6 our email list today, as well as I know it was on
7 Twitter, probably on Facebook as well but we're
8 adding another site around the Chicago area since
9 there was a lot of call for an additional meeting in
10 Chicago. It would be up in northwest Indiana, as
11 well as another site out near Buffalo, New York.

12 We've also extended the overall comment
13 period. I know that was a request that we had heard
14 from some of our stakeholders because I know that
15 we're all very busy. And so we extended it by about
16 four weeks to March 1st, 2014, which is about 90
17 days after the report was given out.

18 We'd like to have even more time but we're
19 also trying to build this kind of consensus, this
20 collaborative path forward and want to be able to
21 summarize what everyone's initial reactions are to
22 this report and provide that information to
23 decision-makers, like members of Congress, who may
24 help shape that path forward.

25 With that, I really do appreciate all your

1 time and attention. I appreciate everyone coming
2 out today. Please do -- if you have any questions
3 for us that you don't come up with while we're
4 speaking tonight, feel free to email us, follow us
5 on Twitter, friend us on Facebook. And, with that,
6 I'll turn the control of the meeting back over to
7 Lauren. Thank you so much for your time.

8 MS. LAUREN FLEER: All right. Well,
9 thanks to all of our speakers tonight and thanks
10 also to the district commanders who are able to join
11 us tonight.

12 Now is the time to turn the discussion over
13 to you and hear your questions and comments. I will
14 ask that those of you participating in the
15 discussion could aim to limit your comments to about
16 three minutes so we can maximize participation and
17 give everybody a chance. If after everyone has had
18 a chance to speak and folks would like another
19 opportunity we can go into second and third rounds,
20 you know, as time permits.

21 I want folks to know that we have a
22 stenographer here this evening who is taking a
23 record of tonight's proceedings that will all be
24 compiled on the GLMRIS website. So when you begin
25 to speak I'll acknowledge you by your name and I

1 will apologize ahead of time if I mispronounce your
2 name but if you could just spell your name if it's a
3 difficult spelling and please also identify any
4 group that you might be here to represent tonight,
5 as well as your five-digit zip code and that will
6 help us understand, you know, where people's
7 concerns are coming from, you know, as pertains to
8 geography.

9 So, without further adieu, I will recognize
10 the speakers that have registered to speak tonight
11 starting with Marty Hettel and followed by Tim
12 Robinson.

13 MR. MARTY HETTEL: Well, right off the
14 bat, thank you -- Marty Hettel, H-E-T-T-E-L. Area
15 zip code 63376. Of course representing the Illinois
16 waterways navigation industry. Let me first start
17 by offering congratulations to the Corps of
18 Engineers on completing this report within the time
19 line imposed by Congress, huge undertaking by the
20 Corps and rightfully so you should be commended on
21 your due diligence in completing the GLMRIS report
22 that we're here to comment on today, so fine job.

23 Let me start with the Illinois Waterways
24 Navigation Industry does not want to see the
25 progression of Asian carp or any other aquatic

1 nuisance species into the Great Lakes, nor do we
2 want to see aquatic nuisance species be introduced
3 into the inland waterways from the Great Lakes
4 similar to what we experienced similar to the
5 progression of the zebra mussel, which we
6 experienced many years ago.

7 And I'm going to have a little bit of
8 questions during my comments. Looking back, I
9 believe the original fish barrier was operable in
10 2002 and correct me if I'm wrong on these dates.

11 MR. DAVE WETHINGTON: It's right.

12 MR. MARTY HETTEL: Then in 2009 barrier
13 2A and 2011 on barrier 2B --

14 MR. DAVE WETHINGTON: Correct.

15 MR. MARTY HETTEL: And, Dave, I didn't
16 understand until today, you're building another
17 barrier and when is that going to be operational?

18 COLONEL FREDERIC DRUMMOND: We'll
19 clarify that. You want us to do it now?

20 MR. MARTY HETTEL: No, I was just
21 curious when -- a time frame that it would be
22 operational. And I guess my point I want to make is
23 it sounds like from the original Barrier 2A to 2B to
24 now this fourth barrier, you're learning and
25 progressing and improving the stopping of Asian carp

1 from progressing up river, so congratulations on
2 that.

3 Reportedly the Asian carp is 55 miles from
4 Lake Michigan that has got to be in the Dresden
5 Island Pool, I believe.

6 MR. DAVE WETHINGTON: Correct.

7 COLONEL FREDERIC DRUMMOND: Very good.

8 MR. MARTY HETTEL: I've looked around
9 and I've only found one instance since 2002, when
10 the first barrier came into operation, of one Asian
11 carp that was found above the fish barriers. So
12 that's 12 years and one fish found above. I don't
13 know if anyone can tell me on the panel whether that
14 Asian carp originated from below the fish barriers
15 or not, if we know where that fish came from.

16 COLONEL FREDERIC DRUMMOND: Yeah. I
17 mean, I can give you a quick synopsis. That was up
18 in the Calumet region and they pulled it out and
19 biologists took a look at the fish. They can tell
20 just by looking at the scales on the fish, some
21 other technology, that that fish was resident there
22 from the beginning. So, in other words, it could
23 have been put in by a bait truck or it could have
24 been put in by, as Dave talked about, human transfer
25 at some point but it was there.

1 MR. MARTY HETTEL: So it grew up there?

2 COLONEL FREDERIC DRUMMOND: It grew up
3 there.

4 MR. MARTY HETTEL: So if that Asian carp
5 that was found in Lake Calumet was transplanted
6 accidentally or purposely by humans, then physical
7 separation is not a guarantee that Asian carp would
8 stay out of Lake Michigan.

9 I'm going to end with congratulating the
10 Corps of Engineers, the Illinois Department of
11 Natural Resources and all the other agencies, again,
12 for the past 12 years of keeping the Asian carp out
13 of the Great Lakes. Because of the successes we
14 have experienced in keeping Asian carp at bay, we
15 believe, the navigation industry, that all
16 scientific-based solutions should be exercised to
17 prevent the spread of aquatic nuisance species prior
18 to any physical separation of the waterways should
19 even be considered.

20 Also, our concerns are the costs associated
21 with the physical barriers, as we have heard
22 tonight, the potential loss of jobs should the
23 physical barriers be put in place and the additional
24 risks to the public by putting physical barriers in
25 place.

1 And let me explain that a little bit. The
2 last ten years an average of 7 million tons have
3 transited through the T.J. O'Brien Lock. When you
4 calculate that into trucks, semi-truck loads, that's
5 950 truck loads a day, seven days a week, 365 days a
6 year. That's a truck loading every 1.5 minutes if
7 they work around the clock. If they don't work
8 around the clock, that's a truck loading every 30
9 seconds. Think what that would do to the congestion
10 on the highways, let alone the carbon dioxide from
11 trucking, let alone the injuries that could happen
12 from that.

13 So, again, great job on the report and thank
14 you for having the opportunity to speak.

15 MR. DAVE WETHINGTON: Thank you.

16 COLONEL FREDERIC DRUMMOND: Thank you,
17 Marty. Let me just go ahead and hit on the
18 barriers. Great job. You laid out everything from
19 the demonstration barrier all the way to where we're
20 up now. Each one of them barriers, as you can
21 imagine, is very complex. We learned, as Dave had
22 mentioned early on, it's not a preengineered
23 chamber.

24 You know, this engineer chamber was developed
25 back in late the 1800s called the -- you know, the

1 Chicago Area Waterway System 37 miles long. But it
2 was sort of ideally suited to put in, as you saw in
3 the picture, an array to start what we call the
4 electromagnetic forces and the pulsating activities
5 to keep the Asian carp from coming up into the Great
6 Lakes.

7 So where we're at now in fourth quarter FY16,
8 the final barrier will be complete as authorized by
9 Congress. I often tell members of the public it's
10 an absolute electrical marvel. There's nothing like
11 this anywhere else on the place on the planet.
12 There's nothing like it. One of a kind.

13 So as you can imagine with one of a kind, if
14 there's any folks in the room that have a scientific
15 background, it also comes with some very unique
16 electromagnetic forces, ground magnetic forces and a
17 whole host of other things that we learn on a daily
18 basis out there.

19 I will tell you that 236 tagged non-Asian
20 carp fish but tagged surgeonfish that act and seem
21 like Asian carp, that are not Asian carp, have been
22 put in downstream. We have a little bit over
23 6 million detections and growing with no passage
24 through the barrier.

25 So it gives us a better -- a great deal of

1 confidence that the barrier is working. As I said
2 before, every day we're learning something new and
3 we work with ERDC to refine our operating parameters
4 out there so we can deal with a wide range of fish,
5 everything from minnows all the way up to large
6 fish.

7 Dave hit on a very key point and that is the
8 preengineered chamber that he had talked about in
9 this design, which is a little bit different than
10 what we have. Remember we have limestone rock in
11 the Sanitary and Ship Canal. What he's talking
12 about is a chamber that is designed and built to
13 prevent any escaping of the electromagnetic pulses.

14 So it's very chambered. It's designed just
15 to do that. And, in my eyes, you know, as we
16 further this process, that is a very good way of
17 being able to optimize where you want to go with
18 these, you know, electrical pulses. I don't know,
19 Dave, if you want to hit anything else.

20 MR. DAVE WETHINGTON: I think you hit
21 the nail on the head, sir. Really, in GLMRIS, what
22 we try to do is identify ways to optimize existing
23 designs for electric barrier that would certainly
24 improve upon -- based on -- improve upon the design
25 based on lessons learned. So I think we'll go onto

1 the next comment.

2 COLONEL FREDERIC DRUMMOND: Let me just
3 finish one other comment you brought up. Marty,
4 first of all, we got a great partnership with the
5 Carriers Association. My time, as well as the
6 previous two commanders -- anyhow, the previous two
7 commanders, great relationship.

8 And I might add, you know, because of the
9 openness and the ongoing cooperation with the
10 Carriers Association, we have done this safely. And
11 I applaud you and your entire team for working with
12 us and the Coast Guard to continue that effort so,
13 you know, that is a good thing.

14 MR. MARTY HETTEL: We appreciate the
15 collaboration too.

16 MS. LAUREN FLEER: So next we'll hear
17 from Tim Robinson followed by Bob Larson.

18 MR. TIM ROBINSON: So Tim Robinson,
19 R-O-B-I-N-S-O-N.

20 MS. LAUREN FLEER: Your zip code as
21 well, please.

22 MR. TIM ROBINSON: My zip code?

23 MS. LAUREN FLEER: Your zip code as
24 well, please.

25 MR. TIM ROBINSON: Zip code is 63129 but

1 that's St. Louis but then we're in Chicago, we're in
2 New Orleans, we're all over the place.

3 I work for SCF Marine. They're a
4 SEACOR-related company. SCF Marine is a company,
5 one of the companies that tows petroleum products
6 and exports from New Orleans to the Chicago
7 waterways canal.

8 We understand that one of the things that was
9 mentioned earlier, that Congress has cut the time
10 line for completing the GLMRIS report. Even so, we
11 believe that the GLMRIS report provides a solid
12 foundation to build a solution that will prevent the
13 transfer of invasive species and also preserve the
14 free flow of water-based commerce.

15 I have reviewed the eight alternatives -- I
16 didn't particularly like that one right there, so
17 that's good -- the Corps has developed so far and I
18 was impressed with the depth and detail. Of course
19 you kind of get a feel for it right here.

20 Now, I haven't read the thousand pages yet
21 and probably won't but that executive summary was
22 very good but it also made clear to me when I went
23 through some of the alternatives that the ones that
24 involve the separation seem to be unrealistic and, I
25 don't know, too uncertain for consideration.

1 I would like to ask that the GLMRIS comment
2 period be extended, of course now you mentioned it
3 has been. So this is a request from some AWO
4 members who we're affiliated with, so that may be a
5 moot issue but we did want additional time because
6 it is a lot of information to cover and address.

7 And as an AWO member company, SCF Marine
8 looks forward to working with the Corps, Congress
9 and other stakeholders to find a solution that will
10 prevent invasive species movement and preserve the
11 integrity of the waterways and transportation
12 system. I think that was within two minutes.

13 MR. DAVE WETHINGTON: Thanks. And just
14 to clarify, that's sierra echo foxtrot Marine?

15 MR. TIM ROBINSON: SCF, Yes.

16 COLONEL FREDERIC DRUMMOND: SCF.

17 MR. DAVE WETHINGTON: Oh, SCF, sierra
18 Charlie foxtrot?

19 MR. TIM ROBINSON: Yes.

20 MS. LAUREN FLEER: Thank you. We have
21 Bob Larson next followed by Richard Sparks.

22 MR. BOB LARSON: My name is Bob Larson.
23 I'm a resident of Alton, Illinois. It's
24 L-A-R-S-O-N. My zip code is 62002. I'm a
25 recreational boater and I love the river and I love

1 the Great Lakes. And I know that there's some
2 economic interests that have spoken, there will be
3 some more, I'm sure.

4 In my three minutes I will point out I have a
5 sailboat at the Alton Marina, so I spend, oh, 12
6 months a year in it and hopefully that helps. I am
7 a nut about sailboats. Every summer I go to the
8 Great Lakes and I charter a sailboat again. A
9 different sailboat, a big sailboat and I spend a
10 week or two enjoying the Great Lakes.

11 I'm in favor of literal physical separation
12 to try to prevent this. I have seen plenty of the
13 carp and so forth on my years but my point is this:
14 those resources, those treasures, are valuable
15 enough that the physical separation is probably the
16 most effective way to protect them. Thank you, sir.

17 MR. DAVE WETHINGTON: Thank you.

18 MS. LAUREN FLEER: I have Richard Sparks
19 followed by Christine Favilla.

20 DR. RICHARD SPARKS: I'm Dr. Richard
21 Sparks and my zip code is 62028. And I have
22 conducted research on the Illinois and Mississippi
23 River for about four years. And from 2002 to about
24 2006, I worked with colleagues investigating the
25 effectiveness of the electric barriers up in the

1 Chicago waterways.

2 My main concern is that media reports have
3 really focused on the threat to the Great Lakes by
4 the two carps that are now in the Mississippi River
5 and comparatively little attention has been paid to
6 the ten species that threaten the Mississippi. And
7 I want to emphasize that the -- in terms of threats
8 to our native freshwater diversity, there's actually
9 more to lose in the Mississippi than in the Great
10 Lakes.

11 Just a few facts. The Mississippi basin has
12 the highest number of freshwater fish species of any
13 place at similar latitudes on Earth. The European
14 gobies and other small invasive fishes that are
15 already in the Great Lakes can move downstream and
16 then upstream into the smallest tributaries in the
17 Mississippi basin.

18 And, just for instance, the round goby
19 already moved through the CAWS system and the
20 tubenose goby appears to be next on the list. And
21 these goby seek the same habitats and food sources
22 as many of our native species, some of which are
23 threatened.

24 North America is also the world center for
25 freshwater mussel diversity. No other place on

1 Earth has as many mussels as we do here. The
2 introduction and the spread of invasive mollusks,
3 like the zebra mussel that you've heard about I'm
4 sure, and the quagga mussel came through the Chicago
5 waterways and have contributed to the decline of our
6 native mussels.

7 The existing programs, including the electric
8 barriers, are focused on preventing the upstream
9 movement of the bighead carp into the Great Lakes.
10 They will not prevent downstream movement of species
11 that are likely to harm the Mississippi basin. And,
12 for me, physical separation is the only option that
13 really closes the manmade aquatic connection between
14 the two basins and also does not require continuous
15 operation and maintenance of various technologies
16 that have some risk of failure.

17 Alternatives 4 through 8 in the GLMRIS Report
18 include physical separation and I think should
19 receive further consideration. I also think the
20 Corps of Engineers has done a good job of developing
21 and analyzing options to close the Chicago gateway
22 and now it's up to us, our regional leaders, the
23 stakeholders down here in the Mississippi basin, to
24 press for selection and implementation of an
25 effective solution. And although the costs are high

1 as you've seen, so too are the costs of not
2 separating the basins.

3 And, finally, I'd like to note that
4 separation requires actions on other fronts that
5 will also have long-term benefits. For example, it
6 could be part of a plan to modernize the
7 transportation infrastructure in that region. There
8 could be improvements in water quality. And,
9 finally, there could be an increase water supply in
10 northeastern Illinois where groundwater resources
11 and withdrawals from Lake Michigan are limited.

12 Thank you.

13 MR. DAVE WETHINGTON: Thank you.

14 MS. LAUREN FLEER: Next we have
15 Christine Favilla followed by Carl Raab.

16 MS. CHRISTINE FAVILLA: Good afternoon.
17 My name is Christine Favilla. It's F as in Frank,
18 A-V, as in Victor, I-L-L-A. And my zip code is
19 62035.

20 I'm actually speaking on behalf of the
21 Illinois chapter of the Sierra Club today. I am a
22 Three Rivers Project co-coordinator and the Sierra
23 Club, if you're not familiar with whom they are,
24 they're a large environmental organization and they
25 are inspired by nature to work together to protect

1 our communities and the planet.

2 We want to thank the Colonels, the White
3 House staff, project managers and other staff for
4 the Army Corps of Engineers for an incredible job
5 they have done on this report, especially in the
6 18-month time frame. That was great. And we really
7 appreciate all the different alternatives that have
8 come out. Seems like they've been vetted really
9 well and that now these hybrids are kind of coming
10 to light as maybe the possibility.

11 The Sierra Club believes that the physical
12 separation of the waterways provides the most
13 effective permanent solution to invasive species
14 transfers and that interim steps must immediately
15 start to be taken to start this undertaking. We all
16 understand that the CAWS system is an artificial
17 connection between the Great Lakes and the
18 Mississippi River that serves as a super highway for
19 these invasive species to transfer between bodies of
20 water.

21 While we do a lot of different events on the
22 river including a couple different river clean-ups
23 in the spring and then a couple more in the fall,
24 we're very well aware of the Asian carp and, of
25 course, do not want to see them go up into our

1 partnering states and into the waterways up there.

2 We really are also very concerned about the
3 ten species coming down into the Mississippi River
4 basin. Specifically we're looking at the blueback
5 herring, the crustaceans like the spiny water flea,
6 the mollusk like the European stream valvata and the
7 swamp sedge plant. So it's -- you know, it's a wide
8 variety. There's algae. There's diatoms. It's not
9 just the fish that we're concerned about because
10 combined, all these invasive species threaten a
11 \$7 billion fishing industry up in the Great Lakes, a
12 \$16 billion boating industry, 1.5 million jobs and
13 \$62 billion in wages. So these are viable economies
14 outside the inland waterway usage by some
15 corporations.

16 So, therefore, we urge the Army Corps of
17 Engineers to prevent an ecological catastrophe that
18 could inflict huge damages upon the Great Lake
19 region and the Mississippi River basin. We believe
20 physical separation is the best way to protect both
21 of these waters.

22 And, about the electric barriers, from what
23 we understand the current ones have experienced
24 power outages and different efficiency faults and I
25 wondered if later you might be able to address

1 those. Furthermore, we also understand that the
2 electric barriers costs taxpayers \$20,000 a day to
3 operate and they're really only a temporary solution
4 that can be applied with other methods.

5 The price of the separation, of course, as
6 you pointed out, is high. However, the majority of
7 this cost comes from flood mitigation and water
8 quality efforts, those mitigations that you speak of
9 -- spoke of -- pardon me. The report wrongly
10 assumes, in our opinion, that these issues only need
11 to be addressed as a result of the permanent
12 separation but we don't think it's okay to continue
13 to pollute our rivers and hold Lake Michigan to a
14 higher standard. We need to commit to improving
15 water quality for everyone both north and south of
16 that barrier.

17 And the interim measures that can be
18 implemented in a way that they will provide
19 immediate enhanced protection for the Great Lakes
20 and the Mississippi River basins and support the
21 long-term achievement of the physical separation.

22 So, once again, we applaud the Army Corps of
23 Engineers for taking great strides in this
24 comprehensive effort to reduce the risks.

25 MS. LAUREN FLEER: Thank you so much.

1 MR. DAVE WETHINGTON: Thank you.

2 COLONEL FREDERIC DRUMMOND: Thank you
3 very much. I'll go ahead and touch on the barrier.

4 It was about a year and a half ago, I think
5 you recall, we had an outage. I can't remember, it
6 was like 12 minutes total and what that was a result
7 of, is like in many of our communities, you know, we
8 rely on our power, just like the Corps of Engineers
9 did, relied on ComEd power.

10 There was an electrical storm, took out one
11 of the transformers which resulted in it going down
12 and shutting off the barriers. Two transformers
13 were hooked up to -- or one transformer was hooked
14 up to two barriers. So at one time all of our
15 generators kicked on. The problem was two of them
16 kicked back off.

17 So we brought in -- you know, it's a
18 significant emotional event when that happens, so we
19 brought in 249 Prime Power, which is a team that's
20 ran by -- most people don't know about -- it's ran
21 by the Corps of Engineers that are experts in
22 electrical systems. We brought them in, they looked
23 at it and, in fact, we had some -- what I would call
24 system and procedural errors.

25 So, immediately following that, what we found

1 out is in the generators, you know, all generators
2 have little -- like your car, they got a little fuel
3 filter. Well, that fuel filter wasn't being
4 operated enough and it ended up dissolving and
5 that's what clogged the system on one of the
6 generators. So to make a long story short, we've
7 resolved that. We have had many storms and so the
8 current -- you know, by changing just how we operate
9 the barrier, for instance, if there's a cloud in the
10 sky, we turn the generators on. So we don't have to
11 worry if the ComEd power goes out, we've already got
12 our generators on and operational.

13 That, along with we're changing how out
14 harmonics work. We're changing how the electrical
15 grid is hooked up. So, for instance, with the new
16 final barrier, it's on its own power source, its own
17 transformer. So when this system is completely done
18 in fourth quarter FY16, there's going to be multiple
19 redundancies in order to address that problem.

20 You know, so I think, you know, in the last
21 year and a half we have learned and we have not had
22 any issues, knock on wood, I want to keep it that
23 way because our job, the Corps' job is to prevent
24 the movement. I think somebody had said it, Doctor,
25 you had said it quite well, prevent the movement of

1 Asian carp from the Mississippi up into the Great
2 Lakes.

3 MR. DAVE WETHINGTON: I want to add a
4 little bit to what the Colonel said with regard
5 to the -- in GLMRIS, why we've chosen to look at
6 that Brandon Road Lock and Dam as the potential
7 downstream control point in this study. The reason
8 for that is because it provides that lock and dam as
9 a downstream control point. It is really the only
10 way that species can make their way back up the
11 system.

12 So if you look at, for example, like this
13 buffer zone -- that slide is good -- so this point
14 down here, that No. 10, is where we would propose in
15 GLMRIS to place that downstream control point, that
16 electric barrier within that constructed navigation
17 channel along the GLMRIS lock.

18 And what's unique about that is knowing that
19 sometimes power goes out and sometimes you may have
20 all the things possibly go wrong with regard to your
21 generators or other backup systems, here there's
22 almost a failsafe backup, which is the actual
23 navigation chamber itself.

24 At Brandon Road, you remember, everything
25 comes downstream, comes to a confluence and keeps

1 flowing down. So there's a high-head dam, about a
2 25-foot dam and even during high tailwater
3 situations you still have at least about 20 feet,
4 not 18 feet, which is tall enough to keep fish from
5 swimming up or jumping up that dam. So the only way
6 for water to move up is through that lock chamber.
7 The only way for fish or floating species to move up
8 would be through that lock chamber.

9 So if you had a significant event where you
10 lost power, all you would need to do is cease
11 operation of that chamber while you got that power
12 restored and you could bring everything back online.
13 It provides that kind of failsafe at least for that
14 one-way transfer of species up in that direction,
15 which is kind of an example of why we chose Brandon
16 Road Lock and Dam as that downstream control point
17 for GLMRIS.

18 COLONEL FREDERIC DRUMMOND: Another
19 point I want to bring up on the outage, within hours
20 we had teams out there completely saturating the
21 area with nets and didn't find anything. You know,
22 and we continue to work closely with the ACRC, the
23 state DNR, thousands and thousands of hours I've
24 been out there with these fishermen, watching them.
25 They understand how to net with no return. Just

1 good fish. No bad fish in the area.

2 So that gives us a little bit better
3 confidence, not perfect, but it gives us confidence
4 that, you know, in fact, the barrier is working as
5 we expect, as well as, you know, as Dave had
6 mentioned that particular area within the Chicago
7 Area Waterways is relatively free of, you know,
8 silver carp.

9 MS. LAUREN FLEER: Next I have Carl Raab
10 followed by John Reed.

11 MR. CARL RAAB: Name is Carl Raab,
12 R-A-A-B. I live in Grafton and I don't expect the
13 Colonel to answer these questions because I didn't
14 understand what this meeting was about but the
15 questions I have is what damage to the local fishing
16 industry is known by these carp?

17 And the only -- I have been on this river 20
18 years up there and I, of course, have witnessed the
19 explosion of the carp jumping in the air and maybe
20 hitting your mouth and putting you in the hospital.
21 And then sometimes it's kind of funny, we take the
22 people out there and run up and down to watch them
23 jump.

24 But I wanted to know if there's any real
25 damage to the catfish and the usual sailboat fish.

1 The only thing I've noticed, other than watching
2 them jump all over the place, is it seems like a
3 reduction in the small fry shad. In February and
4 March they come up in the backwaters of the creek
5 and there used to be swarms of them in pools of
6 water. I didn't see that last year.

7 And, I don't know, I seen somebody came in
8 late here. I was going to ask you how the Grafton
9 processing unit was coming along but you probably
10 couldn't talk about that, somebody else here might
11 be able to. I know we kind of make the joke about
12 the fact that if those were fish were edible and
13 somebody could make money on those things, they'd be
14 out there scooping them up day and night.

15 In fact, we've seen some of that already
16 where they can load up a whole pick-up truck where
17 fish are falling over the edges of it and if we can
18 just process them and somehow make them edible to
19 where you could make a living off them, I think
20 you'd have something there.

21 And also, by the way, I know this is kind of
22 wild but let's think outside the box. I've noticed
23 when the fish jump into your pontoon boat and mess
24 up the carpeting and all day Sunday morning you're
25 scrubbing that off and soap doesn't cut that oil and

1 it is really hard to clean up to the point where
2 guys are putting nets around there, so the fish
3 can't fall in. And if that fish has been out there
4 in that river ever since he was hatched and he still
5 has that oil on his body, it must be pretty good oil
6 and maybe we can find it useful at someplace. And,
7 if we could find that, I think somebody would take
8 your fish off your hands.

9 COLONEL FREDERIC DRUMMOND: John, I
10 don't think we've ever heard of that. I'm marking
11 that down as a first.

12 MR. CARL RAAB: I have actually got a
13 pair of gloves there because you can't grab that
14 fish by the tail. He'll get away from you. He's so
15 slimy and yet he has been in the river ever since
16 four or five years, I guess. Must be doggone good
17 oil. Anyway, I don't expect any real answers from
18 the Corps.

19 MR. DAVE WETHINGTON: Let me try and
20 actually answer a couple of your questions. I think
21 I can probably help you out with a couple of things.

22 Again, like I said, I'm an engineer by
23 training, chemical engineer, environmental engineer.
24 I am not a biologist but I can tell you a little bit
25 about what we know as an organization and then I can

1 also let some others speak to these answers. But
2 let me at least try to keep it at a very general
3 level.

4 With regard to what damage is known by the
5 carp, the Asian carp, specifically bighead and
6 silver carp are the two species that are of
7 particular interest, of particular concern with
8 regard to the study and regard to the efforts that
9 are being pursued by the Asian Carp Reporting
10 Committee, what we've experienced in central parts
11 of the Illinois River is an out-and-out kind of
12 domination, if you will, by some of these -- by
13 these two species.

14 They are planktivores. They eat kind of the
15 floating food that's in the water column, which
16 often serves as the base of the food chain. So
17 essentially as being filter feeders they're eating
18 that plankton out of the water column and they're
19 very efficient at doing that. They can eat about
20 20 percent of their total body weight on a daily
21 basis. That's an average number.

22 They will outcompete other potential species
23 within the river, so they are very efficient at what
24 they do and they basically pull out the base of the
25 food chain from everyone else. So those other small

1 little benthic -- those sediment-dwelling organisms
2 that may eat that plankton and the bigger ones that
3 may eat those and the fish that may eat those are
4 all kind of taken out of that loop.

5 And so there's some parts of the river --
6 now, this is certainly not the standard
7 everywhere but where you see the Asian carp having a
8 significant percentage of the biomass up to maybe
9 90 percent or more. So in certain parts of the
10 river you do see a significant impact.

11 Now, what will happen in the Great Lakes? We
12 can't answer that. I think scientists, excellent
13 renowned scientists on either side on the basin will
14 say that there are many unknowns because we've
15 studied these Asian carp for many years, we still
16 don't know what the actual answer would be but I
17 think what it goes back to is: Do we want to find
18 out? And I think that's where we can have a more --
19 a more substantive answer, the answer is no, we
20 don't want to take the risk, which is why we have
21 the coordinated efforts by the ACRCC, why we have
22 efforts such as GLMRIS to try and get to that goal
23 of prevention of transfer of aquatic nuisance
24 species like the Asian carp, among others, between
25 the basins.

1 With regard to their marketability,
2 edibility, like the Colonel said, I have not heard
3 anything about the oils before. This is a first.
4 But I have eaten the Asian carp on several
5 occasions. I'm not a connoisseur of carp by any
6 means but they are tasty.

7 The problem with carp is that they -- the
8 Asian carp specifically, the bighead and silver,
9 they're very bony and so we, as a -- I guess an
10 American society, prefer our fillets of fish without
11 bones, whereas other cultures may choose to eat
12 whole fish and pick off the bones as they eat
13 through them.

14 So in terms of developing a market in that
15 sense, perhaps they're not the most marketable.
16 They are a very good source of protein, Omega-3s,
17 all those things that the doctors tell you are good
18 for you. So they do have some sort of nutritional
19 value. They could also have value as fertilizers or
20 other products.

21 You want to be careful though. If you create
22 a market, the market won't sustain itself. If it
23 becomes profitable to do something, you're going to
24 want to continue it. And really the goal with
25 regard to fishing Asian carp and getting rid of

1 them, is to get rid of them permanently.

2 And so while it is certainly a good idea to
3 try and market them, to try and create a demand,
4 which us, humans, we're very good at making things
5 extinct if we really set our minds to it, the end
6 goal is to truly try and make these species extinct
7 at least in this non-native range.

8 MR. JOHN SPERNOGA: Can I give a
9 30-second note from today's Wall Street Journal
10 which is germane?

11 MS. LAUREN FLEER: Sir, could you
12 actually -- I can take your name and add you to the
13 speakers list but I do have several ahead of you,
14 but we'll get to everybody.

15 COLONEL FREDERIC DRUMMOND: We'll get to
16 you, sir.

17 Yes, Doctor?

18 DR. RICHARD SPARKS: Two quick
19 responses. There have been demonstrated effects of
20 these carps on our native species in the sense of a
21 decline in the condition factor as a result of the
22 competition for food. In fact, some of the Asian
23 carps are showing a decline in condition as well, so
24 it looks like they are eating down the food supply.

25 Your second question was about harvesting

1 them. Keep in mind that these species are a favored
2 food fish in China and they have been over talking
3 to the folks in Grafton and up and down the Illinois
4 River about schemes to produce fish here and ship
5 them over to China.

6 The other point is that these things eat low
7 down on the food chain. They're eating plankton
8 basically, so they don't accumulate mercury and
9 other contaminants at high levels like many of the
10 top predators do that eat fish. So they are
11 actually a good food source, as the Colonel
12 mentioned, it's just not our preference. But it's
13 definitely a maybe we can learn to like them or
14 process them in a way that removes a little bone.

15 COLONEL FREDERIC DRUMMOND: I think, you
16 know, after this we can probably have more of a
17 conversation but Illinois' DNR is doing a whole lot.
18 I mean, the governor had a slogan for a while, it
19 said, "If you can't beat them, eat them." There's a
20 whole bunch of stuff that's going on out there with
21 the state DNRs, as well as the ACRCC we can cover
22 later on if you'd like.

23 And then, sir, we'll get to you in a little
24 bit.

25 MS. LAUREN FLEER: So next we'll have

1 John Reed followed by Richard Worthen. And if I
2 could remind people to say their name, any
3 organization you might be representing and your zip
4 code, please.

5 MR. JOHN REED: My name is John Reed,
6 R-E-E-D. I live in Elsay, Illinois. I'm a union
7 steel worker. I have worked for U.S. Steel for 25
8 years. We have a dock that's right above the
9 Granite City lots, Lot 27. And separating the
10 inland waterways from Lake Michigan, it's going to
11 affect my job. I mean, we have a couple plants that
12 are closed up. One is in Canada and they can very
13 well easily shutdown that Granite plant, open the
14 Canadian plant just because of something this
15 simple.

16 You know, but I also -- I'm a recreational
17 boater. I love the river. That's why I live in
18 Elsay. I can see the river from my kitchen window.
19 I canoe. I got power boats. I got a personal
20 watercraft.

21 You know, I like the barge industry. You
22 know, I like looking at them. They have been parked
23 right in front of Elsay busting the ice up. I have
24 seen more eagles this year than I have ever seen in
25 my whole life. You know, if we didn't have barges

1 out there busting ice up, I wouldn't see them.

2 You know, but yeah, like I said, I like carp
3 too. I like the Chinese carp. You don't even have
4 to have a fishing pole. You can just run your boat
5 in a certain area, boom, boom, boom, you got 20.
6 And, also, this meeting wouldn't even be going on if
7 it wasn't for this carp because, you know, most
8 people don't know anything about the other invasive
9 species coming into the Mississippi River. We all
10 know about the sewage, you know, I'm concerned about
11 that.

12 But, like I said, the carp are doing good
13 things. I think that's the reason we got so many
14 pelicans migrating through now too. They're eating
15 the carp. So they're not that bad of a thing. I
16 mean, at least we're getting everybody together to
17 think of all this other plans and that.

18 And my one question is: Why don't they have
19 a bounty on them? You know, the most I've ever
20 heard them pay is 13 cents a pound. You know how
21 hard you got work to make a hundred bucks with 13
22 cents a pound fishing them? I mean, I know a lot of
23 commercial fishermen and it's major work to make any
24 kind of money at all. I mean, if it was a dollar a
25 pound there wouldn't be any carp in that river.

1 It's that simple.

2 MR. DAVE WETHINGTON: Yeah, John, that's
3 actually kind of the point I was making to this
4 gentleman earlier. If we created a market, if
5 someone were to subsidize it at a dollar a head or
6 five bucks a head or whatever, I'm sure that they
7 would go away really quickly. The problem is that
8 then if you kind of kept that bounty around people
9 would want to keep introducing, reintroducing the
10 species so they could keep making their five dollars
11 or a dollar a head or whatever. So the goal is to
12 try and kind of find that balance. It's definitely
13 a good idea but try to find the best way to
14 subsidize that so it doesn't create a whole other
15 market in itself.

16 MS. LAUREN FLEER: Next I have Richard
17 Worthen followed by Vanette McConahey.

18 MR. RICHARD WORTHEN: My name is Richard
19 Worthen, that's W-O-R-T-H-E-N. I live here in
20 Alton, 62002. And I speak as an individual but I am
21 one of six members, citizen members, of the Illinois
22 River Coordinating Council, which is a council made
23 up of employees of the federal government, state
24 government and various other people and we meet
25 quarterly and consider impacts upon the Illinois

1 River system.

2 And I would like to emphasize to all of us,
3 including our Corps brethren, that the river is
4 sick. Rivers are a blood of the economy. They are
5 a blood of the very ability to sustain life and when
6 the rivers are sick, the body is sick. And that we
7 seldom ever go back to those basic questions when
8 we're exploiting the resource or we're polluting it
9 or we're dumping our waste on it or we're floating
10 our barges on it or we're doing whatever we're doing
11 with it, whether it's little boats or big boats.
12 And that we need to be consistently reminding
13 ourselves of the fact that it is sick and it's sick
14 because we screw it up. And there are simple
15 solutions to that and there are complex ones.

16 In this particular case, without having --
17 going into the discussion of alternatives, if we
18 have a major problem like a carp that's moving one
19 way and we don't want it to go any further, there's
20 only one solution and that is to stop it. And that
21 is a physical barrier that just plain won't let it
22 go through no matter what, no regulation, no
23 nothing, except you shut it off and if that has to
24 have some impact upon an existing usage, then let
25 it. You have to determine which is more important.

1 And I would like to add a second thought. It
2 really irritates me as a taxpayer that I have to pay
3 for other people to exploit the river and to make it
4 worse off than it is. And I know that's not a
5 consideration here and that's not under the
6 consideration of the Corps because it's the
7 politicians that have to decide that but it is
8 something as a citizen I think I ought to speak to.

9 So I speak as a person interested in
10 protecting the taxpayer, as well as protecting the
11 resource, as well as the very sustenance of life and
12 what sustains us all in the long-term.

13 MS. LAUREN FLEER: Thank you, sir. Next
14 on the list I have Vanette McConahey followed by
15 Michael Garvey.

16 MS. VANETTE McCONAHEY: I had no
17 particular agenda when I came in, I just thought I
18 might want to say something. Couple different
19 things. One, regarding the fish, as we speak
20 they're installing -- manufacturing and installing a
21 self-contained fish processing plant in Grafton just
22 up the hill from downtown. And that fish processing
23 plant will take a fish and, you know, out comes fish
24 meal and nothing else. It completely gets rid of
25 all the biproduct. There's no stuff to get rid of

1 later on, you know, there's nothing to put in the
2 garbage. There's nothing to do anything with it.
3 It's a very unique thing.

4 It's used down -- it was developed by a
5 university in Georgia and it's used down there in
6 Georgia and the plan is to eventually have more of
7 these plants up and down the Illinois River and they
8 should be able to get rid of a whole lot of those
9 rascals.

10 And fish meal can be used in a lot of
11 different things as a food source and can be shipped
12 -- it's more valuable around the world and it has
13 that oil in it. The oil -- they also get the oil
14 out of it separate, I believe, as well as the fish
15 meal because the oil is so valuable.

16 And, secondly, just common sense, seat of the
17 pants kind of thinking, so we stop it at the
18 Illinois but what happens if these guys get in the
19 Ohio, you know, and start creeping their way over --
20 you know, there's more than one way into the Great
21 Lakes, is what -- I guess is what I'm saying. You
22 know, if we spend this fortune to stop them going in
23 and out of Chicago, you know, there's lots of
24 gateways eventually if we don't figure out a way to
25 halt this sooner.

1 MS. LAUREN FLEER: Could you provide
2 your zip code as well, please?

3 MS. VANETTE McCONAHEY: My what?

4 MS. LAUREN FLEER: You zip code, please.

5 MS. VANETTE McCONAHEY: 62035.

6 MS. LAUREN FLEER: Thank you so much.

7 Next I have Michael Garvey.

8 DR. MICHAEL GARVEY: Hi, I'm Dr. Michael
9 Garvey. I'm with a citizen group in St. Charles.
10 We're all volunteers and it's our 20th year, which
11 is pretty unusual for a conservation group. We look
12 at the river resource and try to imagine it in a way
13 that's acceptable to the health of the rivers.

14 Although, I'm with this group, I'm not
15 representing them. I need to kind of get consensus
16 of opinion before we make a comment. My zip is
17 63304.

18 One of the things Stream Team we do is we're
19 a stream team. So Stream Team is a wonderful thing
20 that happens in Missouri. What we do is we get
21 these kids out in these rivers and we look at the
22 invertebrates. We look at the little things. This
23 carp is a big thing. It's like the canary and it's
24 really making us aware of things.

25 But, I don't know, it just seems to me like

1 there's the simple and there's the complex. You
2 know, these rivers have these little invertebrates,
3 they have these plankton, they have these eggs and
4 these eggs can sneak by and even birds carry them.

5 And there's this thing called a watershed.
6 Now, a watershed should be invalid. I just don't
7 accept Chicago's poop. I'm sorry. I have a problem
8 with that. You know, and so does the Gulf of
9 Mexico, to be honest with you.

10 A water gap separation is simple. Engineers
11 design things that are complex. Electric pulse,
12 even a fancy one can go wrong. You know, we have
13 these resources in these rivers and we have the
14 ability to make navigation for these rivers. It's
15 simple. It's complex. It seems like navigation
16 seems to be number one always, every time.

17 You know, we have things moving up and down
18 the river. We have to look at both. We're not.
19 Realistically we're only looking at the carp. We're
20 looking at them moving up. It's true that the Great
21 Lakes are the largest, you know, freshwater basins
22 in the North America and we should be concerned
23 about them and I think that's why we're all dealing
24 with it or at least that's why we should be here but
25 some of us are here because it hurts our back

1 pocket. Some of us are here because we're not
2 volunteers and that's kind of where I'm coming from.
3 You know, I'm a volunteer. I'm worried about the
4 health of our rivers.

5 This thing called biomass, I mean, you said
6 it, 90 percent of the biomass is Asian carp. Asian
7 carp used to be in Asia. You know, we put them here
8 in our lakes so that they would eat the algae.
9 That's exactly what they're doing. And if they get
10 into the Great Lakes it will just be -- it's just
11 going to be a really bad thing and it's going to
12 cost a whole lot. Thank you.

13 MR. DAVE WETHINGTON: Thank you.

14 MS. LAUREN FLEER: Thank you. This
15 concludes the list of people who have registered to
16 speak but I would now like to open up the floor to
17 those who have not registered or those who have
18 already spoken. So you can show me your hand and I
19 will recognize you in the approximate order that you
20 do so. I know we have one volunteer already. If
21 you could just state your name and zip code, please.

22 MR. JOHN SPERNOGA: John Spernoga from
23 zip code 63122. I'm just an outdoorsmen but in an
24 amusing 30-second note on the front page of the Wall
25 Street Journal is an article from Kentucky Angie Yu.

1 She's a Chinese-American from today. She's a
2 58-year old businesswoman. She has two various
3 fisheries on the confluence on the Mississippi and
4 Ohio and she ships over a half million pounds of
5 frozen Asian carp to China each year.

6 Anyway, she calls her product "Kentucky white
7 fish" and she touts the fish's origins in the
8 "beautiful and bountiful Mississippi...the
9 nourishing mother river of America."

10 MS. LAUREN FLEER: Thank you so much.
11 At this point are there any others in the room who
12 would like to make a comment or ask a question of
13 the panel?

14 MR. KARL BERTHELOT: I would like to
15 make a comment. I don't have anything prepared. My
16 name is Karl Berthelot. I work for Brennan Marine,
17 fellow rivermen like a lot of the other people here
18 and I want to thank all you guys for the study that
19 you did. It's real impressive. I kind of got
20 thrown into it last minute, so I didn't get a chance
21 to absorb all 10,000 pages.

22 But as Marty and Tim had said and a lot of
23 people had their pros and cons against the towing
24 and the river industry or even the steel industry
25 because it's all interconnected. From Chicago down

1 to the Gulf of Mexico there is thousands and
2 thousands of jobs directly and indirectly connected
3 through the river system, starting from Chicago or
4 Minneapolis, all the way down. And, although we all
5 have a concern with the ecological effects of these
6 invasive species and everything else, we all want to
7 stop it.

8 Commerce, if it gets shutoff and, as Marty
9 said, you start loading hundreds and hundreds of
10 semi-trucks a day to get the product from where it
11 has to stop to where it's going in the Chicago area
12 or anywhere around that area, it's going to make
13 more and more pollution and accidents and clutter on
14 the highways, and, you know, on top of that all the
15 flooding and anything else that you could have if
16 you have that physical barrier permanently put
17 there.

18 But, you know, as a riverman, outdoorsman,
19 everything else, I'm all for stopping the invasion
20 of the fish or I don't even know about the other ten
21 wanting to come back down the river but, you know,
22 there has to be a happy medium somewhere, where the
23 economy can continue to grow and then be sustained
24 by the river and the river sustains always.

25 MS. LAUREN FLEER: Sir, could you give

1 us your zip code as well, please?

2 MR. KARL BERTHELOT: 63627.

3 MS. LAUREN FLEER: Thank you. I would
4 like to take a last -- sure.

5 MR. CARL RAAB: I got one quick
6 question.

7 MS. LAUREN FLEER: Could you identify
8 yourself again and your zip code?

9 MR. CARL RAAB: Carl Raab, 63033. Got
10 one quick question. About 20 years ago fishermen
11 used to fish for the -- what you called in the
12 shells, a shell in water they'd dive down with a
13 pump that was pumping air down there. They'd bring
14 up these shells and then I guess they used them in
15 the button industry or whatever. And I think that
16 has been outlawed maybe the last 20 years or so and
17 I just wondered if that's coming back or anything.
18 I forget the exact name of the shellfish that they
19 got.

20 MR. DAVE WETHINGTON: Sorry. I don't
21 think either of us know.

22 DR. RICHARD SPARKS: There was a big
23 commercial clamming industry on the Illinois and
24 Mississippi Rivers. The problem is that the pearl
25 oysters that do the final layer -- it's not a button

1 industry anymore. It's a cultured pearl industry
2 and our shells are used as starters all around the
3 Pacific Rim for the cultured pearls. The problem is
4 that some of the big producers have had a virus that
5 has knocked off the whole species. So there's
6 little demand now for our --

7 MR. CARL RAAB: But it's still legal?

8 DR. RICHARD SPARKS: Oh, yeah.

9 MS. LAUREN FLEER: For the benefit --

10 DR. MICHAEL GARVEY: If I could answer
11 to that specific thing --

12 MS. LAUREN FLEER: Everyone, I have to
13 ask you for the benefit of our stenographer, who's
14 trying to capture this meeting, I'm going to need
15 everyone to speak in order and identify themselves
16 ahead of time.

17 DR. MICHAEL GARVEY: This is Michael
18 Garvey.

19 MS. LAUREN FLEER: I will recognize you
20 when it's your turn. Dr. Sparks, are you -- would
21 you like to continue or are you finished?

22 DR. RICHARD SPARKS: No, I'm done.

23 MS. LAUREN FLEER: Okay. Then I have
24 Mr. Garvey followed by the gentleman in the second
25 to last row.

1 DR. MICHAEL GARVEY: I was looking at
2 the Bridgeton site which is an archeological site on
3 the bluffs of the -- I guess it's the Missouri
4 River. And I found large shells and I thought wow,
5 this is amazing because Native Americans used these
6 rivers to transport goods and I thought this must
7 have come from the Gulf. But after doing more
8 research, those were native shells and the reason
9 that those shells aren't there is because of what
10 we've done to the rivers. It's a sad situation and
11 they won't ever come back.

12 MS. LAUREN FLEER: Thank you, Mr.
13 Garvey. Second to last row, would you please state
14 your name and zip code?

15 MR. BEN ALLEN: Thank you. I'm Ben
16 Allen. I live in Grafton and my zip code is 62037.
17 I'm one of the principals of American Heartland Fish
18 Products that's going to be -- that we're building
19 in Grafton right now.

20 One of the -- first of all, the Corps has
21 done an excellent job and all the experts. The
22 studies are very interesting and I think that you'll
23 ultimately save the Great Lakes. I think that's
24 pretty clear that you're on the right path for that.

25 A lot of things that we're not thinking about

1 is how do we save the rivers? Because we do have 85
2 to 90 percent and 60 percent of the various
3 locations of Asian carp within all of the rivers. I
4 was talking to Senator Landrieu about a week ago.
5 They are now in the brackish waters of the coast.
6 So they have adapted. Freshwater fish, this carp is
7 now in there and that's going to threaten a whole
8 other series of shellfish down there.

9 I've also talked to the senator -- I can't
10 remember her name right now in Minnesota. And
11 they're absolutely -- you know, they have an \$8
12 million industry in the Great Lakes but they have a
13 billion dollar fly fishing business in Minnesota
14 that are absolutely, you know, scared of this fish.

15 What we intend to do, what we're intending to
16 do and speaking to what John said, is that we're
17 going pay to 10 cents a pound and we send fishermen
18 out and we've seen, at least in February,
19 7,000 pounds. That's \$700 a day for two people.
20 That's not bad, if you happen to have a boat. We've
21 also seen in February the same two fishermen, feast
22 or famine, bring in 22,000 pounds, that's \$2200 a
23 day for two people.

24 So there's ways to do this and you're right,
25 this particular -- all of our product that we can

1 make will be sold. It's already sold because the
2 commodities, they're all commodities that are being
3 produced in this situation. The meal, itself, is
4 probably, if you take enough of the bone out of it
5 and the ashes out of it, then you get to a point
6 where you can send -- they'll feed trout. They'll
7 feed salmon.

8 As long as people are eating protein, as long
9 as people are alive, there's going to be a huge
10 demand for protein. So, you know, there's a huge
11 markup out here and we just got to develop it and we
12 maybe have to develop new ways to fish to get that
13 biomass out and we have to be working on that as
14 well. Anyway, I'm around if anybody has any
15 questions.

16 MS. LAUREN FLEER: Thank you. If there
17 are other questions or comments please signify by
18 putting your hand in the air. If that does it, then
19 I would like to --

20 COLONEL FREDERIC DRUMMOND: I always
21 open up at this point -- I mean, so there's a lot of
22 information we threw at you tonight. I would
23 encourage you, if you have thoughts, if you have
24 comments, if you want to mention it in the open
25 forum, we encourage you to ask it while we're here

1 because it could be a wide range of things and I
2 appreciate the wide range of topics that we have
3 heard from everybody tonight.

4 So I'll let Lauren continue in a little bit
5 but if you have anything that's on the tip of your
6 tongue, let us know. Doctor?

7 DR. RICHARD SPARKS: Sparks again. I
8 had one question about the treatment plants. It
9 wasn't clear to me from just reading the summary
10 whether these are all new plants or are you going to
11 use treated water from the Metropolitan Water
12 District?

13 MR. DAVE WETHINGTON: So these are all
14 in the report. They speak to new aquatic nuisance
15 species treatment plants. Specifically, again, the
16 train is to treat not for wastewater or traditional
17 pollutants, it is to treat specifically for aquatic
18 nuisance species. So the idea is that you can use
19 kind of a train of screens, filters, get the big
20 stuff out, smaller stuff and then UV light to
21 inactivate whatever comes through, like algae, like
22 a virus, et cetera.

23 And they're used for two different things.
24 In some scenarios they're used actually to remove
25 aquatic nuisance species from the main flow of the

1 system. Other times aquatic nuisance species
2 treatment plants are used for the composition of the
3 ANS treated water for concepts like the GLMRIS lock.
4 So they're used in a couple of different ways.

5 MS. LAUREN FLEER: Other questions or
6 comments?

7 MR. KARL BERTHELOT: I got another quick
8 question.

9 MS. LAUREN FLEER: Tell us your name
10 again.

11 MR. KARL BERTHELOT: Karl Berthelot
12 again. On the subject of the other 10 species that
13 are trying to be invasive coming back down, where do
14 they come from? The Asian carp everybody is
15 familiar with. Where do the other 10 come from?

16 MR. DAVE WETHINGTON: A lot of the
17 species are maybe non-native to the Great Lakes
18 themselves. Some of them may be actually native to
19 the Great Lakes but would then be invasive to the
20 Mississippi River basin. So it's kind of a -- it's
21 a mixture. Whether they are non-native to the lakes
22 themselves and then could potentially transfer and
23 be non-native to the Mississippi River system as
24 well or if they are perhaps native or indigenous,
25 they started in the lakes but would not be native to

1 the Mississippi River system.

2 MR. MARTY HETTEL: My name is Marty
3 Hettel. The non-native species to the Great Lakes,
4 where do they come from?

5 MR. DAVE WETHINGTON: Primarily from
6 commerce. They were introduced via --

7 MR. MARTY HETTEL: And just a comment,
8 interesting we're not talking about physical
9 separation from the Atlantic Ocean and the Great
10 Lakes either.

11 MR. DAVE WETHINGTON: That is -- that's
12 an interesting comment. The authorities,
13 specifically that the Corps of Engineers is
14 following, was given to us by Congress, asked us to
15 look specifically at that watershed divide between
16 the Great Lakes and the Mississippi River basins.

17 MR. MARTY HETTEL: I understand your
18 position. I just had to comment.

19 MR. CARL RAAB: Do you have a cost for
20 this separation?

21 MS. LAUREN FLEER: Sir, could you tell
22 us your name, again?

23 MR. CARL RAAB: Raab, R-A-A-B.

24 COLONEL FREDERIC DRUMMOND: Before long
25 we'll get it memorized.

1 MR. DAVE WETHINGTON: The cost for the
2 physical separation --

3 MR. CARL RAAB: I noticed a couple costs
4 on here. One was 8 billion and the other was
5 15-something billion, so but neither one of those
6 was complete separation.

7 MR. DAVE WETHINGTON: Alternative Plan
8 No. 5 and Alternative Plan No. 6 are complete
9 separation alternatives. Alternative Plan No. 5, I
10 believe, is about 15.4 million and Alternative 6 is
11 about \$18.4 million. So those are the costs of
12 total separation. Sorry. Billion.

13 COLONEL FREDERIC DRUMMOND: And a good
14 portion of that is attributed to what?

15 MR. DAVE WETHINGTON: And a good portion
16 of those costs are attributed to the mitigation
17 necessary to ensure that when you place physical
18 barriers in the waterways there's not adverse
19 impacts created by those barriers. So it's not to
20 create benefits to the Chicago area. They're
21 specifically to mitigate for, provide compensation
22 for adverse impacts created by the placement of
23 those physical barriers.

24 COLONEL FREDERIC DRUMMOND: You know,
25 just as a side note, in Chicago right now you have

1 McCook Reservoir, which is being built to 10 billion
2 gallons and then you have Thornton Reservoir, which
3 is being built to roughly 7 billion gallons. So our
4 engineers, to include the Metropolitan Water
5 Reclamation District, have a very, very good idea on
6 how long it takes to construct a certain reservoir.
7 Now, that's all pending on appropriations.

8 You know, this report, there's a lot of
9 little caveats in there that says appropriations is
10 consistent. You know, we can do it at this time and
11 this length and that kind of stuff. And so we got
12 pretty good data on how long it's going to take to
13 make reservoirs in the Chicago area based on the
14 current amount of appropriations that we're
15 receiving.

16 MS. LAUREN FLEER: Sir, name and zip
17 code, please?

18 MR. TIM ROBINSON: Yeah, it's Tim
19 Robinson and it's 63129. Of course the more we
20 talk, the more we're going to be here. We're going
21 to be here until eight o'clock, I think this is how
22 this is going to roll.

23 When they did this study -- I know the study
24 was cutoff initially. I mean, you were getting as
25 much detail as you possibly could so that you would

1 leave no stone unturned and then Congress stopped
2 that and so we put something together really quick,
3 which is really amazing, all the research you did in
4 such a short period of time. But when we look at
5 the options that sever transportation, sever towboat
6 towing transportation, riverborne transportation,
7 you cut it completely off, have we looked at the
8 consequences of that as far as the alternatives of
9 public transportation, as far as costs and pollution
10 to the environment, is that part of your study?

11 MR. DAVE WETHINGTON: Sure. Yes. So we
12 have had the ability to look at what the baseline
13 was for commercial cargo, for non-cargo. We also
14 did a little bit of analysis on the rate savings
15 associated with that. We do have some analysis
16 within our economic appendices that speak to those
17 kind of dollar costs with regard to the change in
18 rate savings if you switch modes.

19 Now, we didn't get down into a lot of detail
20 on those because, again, we are at a conceptual
21 level of design but we wanted to provide enough
22 information for decision-makers. This is not a
23 cost-benefit analysis by any means but we wanted to
24 provide that information to decision-makers that
25 would help inform the decisions so at least everyone

1 would be educated.

2 So I encourage you to spend a little bit of
3 time, if you're really interested on this, with our
4 ecosystem appendices and they have a lot of really,
5 really good information about commerce, about
6 non-cargo navigation, about even fisheries,
7 commercial fisheries, recreational fisheries in both
8 basins.

9 MR. TIM ROBINSON: Of course the reason
10 I say this, we pride ourselves on the fact that
11 we're so environmentally-friendly and so
12 cost-effective. If you can move something on the
13 river -- of course it's bulk products, it's not
14 iPhone 5s or anything like that but if you can move
15 bulk product there's no more cost-effective
16 environmental-friendly way of doing it than
17 waterborne navigation.

18 The only other comment I was going to make is
19 the vessel general permit, I don't how much
20 everybody is all aware of it and I'm aware of it
21 because I have to work with it within my company but
22 it's something that people ought to take a look at
23 especially for the marine environment. It has been
24 around for a while. It just recently was revised in
25 2013. It lasts for five-year terms. People would

1 be amazed at the degree of cleanliness and standards
2 that we have to meet on towboats. It's just
3 unbelievable.

4 But I would encourage anybody that's not
5 familiar with it to take a look at that. It's
6 really interesting. It's a good way to go. It's
7 not easy. It's extremely difficult but I can tell
8 you the last 20 years -- and I've been here longer
9 than that but in the last 20 years it has been
10 unbelievable the changes that we've made and the
11 improvements that we've made in a short period of
12 time.

13 MS. LAUREN FLEER: Mr. Garvey?

14 DR. MICHAEL GARVEY: I'm Mike Garvey
15 again. I think we should all look at this picture
16 up here and look at this red line. It's a pretty
17 significant thing. It's called -- it's a barrier.
18 It was a barrier that was there before we changed
19 the barrier. And I think the Army Corps hasn't done
20 really well with costs. And I think that's probably
21 why the White House kind of got involved here.

22 And it was said that there's an increased
23 cost to place a barrier. The reason we're here --
24 and then I constantly hear about the low cost to
25 transport goods with barges but you have to look at

1 the total costs. That's why we're here. And I
2 think we really need to look at the costs of the
3 degradation of not only the Great Lakes but the
4 whole Mississippi River basin and really incorporate
5 that into our cost assessment.

6 MR. DAVE WETHINGTON: Let me speak to
7 your assessment a little bit. I want to talk about
8 this interbasin divide. And what's really important
9 to recognize this is a subcontinental divide. This
10 is not what you see in the Rockies. It's not what
11 you see somewhere else where you have a huge kind of
12 a point.

13 Before Chicago was developed in the late
14 1800s, mid- to late 1800s, the connection that we
15 call now, what was the connection, the previous
16 nonconnection, was actually a swamp. And if it
17 rained enough you would have that interbasin
18 connection. Now, it didn't happen all the time. It
19 didn't happen 24 hours a day, seven days a week,
20 like it does currently but to say that there was
21 previously a barrier there, is a little bit
22 misleading.

23 Just like along the rest of this potential
24 subcontinental divide, the reason why we found 18
25 potential other pathways is not because they were

1 made that way necessarily. Now, some of them were.
2 Some of them are ditches that some unknowing farmer
3 plowed through his land and created as an interbasin
4 divide but the majority of them are actually
5 naturally-occurring headwaters that do create a
6 potential pathway once a year, once every five
7 years, once every hundred years, who knows.

8 Now, historically it wasn't an issue because
9 there was not the human-mediated transport of
10 species into either one of these basins. So if
11 there was some interbasin transfer, it was as nature
12 intended.

13 So I just wanted to clarify that there is
14 not -- Chicago is unique. The Chicagoland area is
15 unique because a 34-mile channel was created to make
16 that connection permanent between the basins. That
17 connection did occasionally occur prior to human
18 intervention.

19 MS. LAUREN FLEER: Are there any other
20 questions or comments?

21 MR. JOHN SPERNOGA: Spernoga,
22 S-P-E-R-N-O-G-A. I just have one question. Is
23 there not prescindent as far as these Asian carp
24 taking over big lakes, you know, in Europe or Asia,
25 big freshwater lakes? I mean, do they basically do

1 that, that we absolutely know or not? Probably so,
2 I would think.

3 COLONEL FREDERIC DRUMMOND: It's very
4 broad, you know, a little bit -- you know, the
5 governor of Illinois went to China. And, you know,
6 obviously they don't have a problem. They eat them.
7 I'm not too sure on Europe, honestly. I do know
8 that our Canadian partners to the north have been
9 intimately involved in this entire plan. So they're
10 very aware of it and they got certain control
11 mechanisms but that's about it. John?

12 MR. JOHN GOSS: Just that I have read a
13 little bit of the native habitat. They certainly
14 have fished them down to a very low number in their
15 natural rivers and they're farm-raised now in China.
16 So I guess -- they are river fish for spawning and
17 for moving around but they also move back into
18 backwaters. Not necessarily big, deep freshwater
19 lakes but they like backwaters. If there's anybody
20 here that goes up and down the Mississippi, you can
21 find them in the backwaters, is where they prefer to
22 hang out but they'll come out to spawn into the
23 streams.

24 MR. DAVE WETHINGTON: Thanks, John.

25 COLONEL FREDERIC DRUMMOND: Anybody

1 else?

2 MS. LAUREN FLEER: If there's no one
3 else, I would like to ask for some concluding
4 remarks from our panel.

5 COLONEL FREDERIC DRUMMOND: I think you
6 heard it earlier tonight, your voice counts. It
7 definitely counts. There was a couple of you in
8 here that had mentioned that -- you know, take the
9 time and absorb this information. Eight different
10 options, a lot of information, I would encourage
11 you. Many of you have a deep passion for this
12 topic, go in and read the 232 pages and if you need
13 to dip into the appendices for economic data or even
14 for more data on the ANS transfer rates and that
15 type of thing, it's in there.

16 And I often say absorb it because your voice
17 does count and there are people all the way up my
18 chain of command clear to the White House that are
19 very interested. That's the reason we're out here
20 doing what we're doing. We want public comment.

21 You can contact your DNR. You can contact
22 your state representatives. You can contact Dave
23 through the website. If you come up, you know, it's
24 the middle of the night and you're reading this and
25 you got a question, send it to him. He's always

1 glad when I say that.

2 So, you know, I end by saying, you know --
3 and I heard the common theme and both the Great
4 Lakes and the rivers, I would just say they're both
5 national treasures. They're both important to this
6 country. They both are national assets and we got
7 to take care of it. And so this is what GLMRIS is
8 all about, to continue that discussion and with your
9 help, you know, we'll come up and we'll act.

10 The Corps of Engineers, as most of you in
11 this room know, operates off of two things. We have
12 to have an authorization and we have to have an
13 appropriation. We are the nation's engineers and we
14 can build these things with them two items and your
15 help. So thank you very much. Dave, you got
16 anything else?

17 MR. DAVE WETHINGTON: No. Thank you all
18 for your time.

19 COLONEL FREDERIC DRUMMOND: I would turn
20 to my two fellow commanders, anything for the group?
21 Thank you very much for attending.

22 (Whereupon, at 6:05 p.m., the public meeting
23 was concluded.)

24

25

1 CERTIFICATE OF REPORTER

2 I, Suzanne Zes, within and for the State
3 of Missouri, do hereby certify that the witness
4 whose testimony appears in the foregoing deposition
5 was duly sworn by me; the testimony of said witness
6 was taken by me to the best of my ability and
7 thereafter reduced to typewriting under my
8 direction; that I am neither counsel for, related
9 to, nor employed by any of the parties to the action
10 in which this deposition was taken, and further that
11 I am not a relative or employee of any attorney or
12 counsel employed by the parties thereto, nor
13 financially or otherwise interested in the outcome
14 of the action.

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Suzanne Zes
Court Reporter

<p style="text-align: center;"><u> </u> \$</p> <p>\$15.5 36:8</p> <p>\$16 57:12</p> <p>\$18.4 32:18 90:11</p> <p>\$20,000 58:2</p> <p>\$2200 85:22</p> <p>\$62 57:13</p> <p>\$68 27:6</p> <p>\$7 57:11</p> <p>\$7.8 31:24</p> <p>\$700 85:19</p> <p>\$8 85:11</p> <p style="text-align: center;"><u> </u> 1</p> <p>1 5:15 24:8,12</p> <p>1.5 46:6 57:12</p> <p>10 5:4 24:10,11 61:14 85:17 88:12,15 91:1</p> <p>10,000 9:20 80:21</p> <p>11 24:10,14</p> <p>12 44:12 45:12 52:5 59:6</p> <p>13 9:24 20:7 72:20,21</p> <p>15.1 37:2</p> <p>15.4 90:10</p> <p>15-something 90:5</p> <p>18 10:23 13:19,25 15:15,16 16:1 62:4 95:24</p> <p>1800s 46:25 95:14</p> <p>18-month 56:6</p> <p>1st 40:16</p> <p style="text-align: center;"><u> </u> 2</p> <p>2 1:19 16:1 25:15</p> <p>20 5:5 7:14 20:1 29:9 62:3 63:17 66:20 72:5 82:10,16 94:8,9</p>	<p>200 19:17</p> <p>2002 43:10 44:9 52:23</p> <p>2006 52:24</p> <p>2009 11:17 43:12</p> <p>2011 43:13</p> <p>2012 15:11,16 16:6</p> <p>2013 93:25</p> <p>2014 1:7 15:17 40:16</p> <p>2015 5:18</p> <p>20th 77:10</p> <p>22,000 85:22</p> <p>232 9:18 98:12</p> <p>232-page 12:16</p> <p>236 47:19</p> <p>24 95:19</p> <p>249 59:19</p> <p>25 31:22 32:17 36:7 38:6 71:7</p> <p>25-foot 62:2</p> <p>25-page 9:14 12:9</p> <p>27 71:9</p> <p>2A 43:13,23</p> <p>2B 43:13,23</p> <p style="text-align: center;"><u> </u> 3</p> <p>3 27:16</p> <p>30 46:8</p> <p>30,000 12:23</p> <p>300 34:1</p> <p>30-second 69:9 79:24</p> <p>30th 1:7</p> <p>31st 4:3</p> <p>32 11:10</p> <p>34-mile 96:15</p> <p>35 19:18,20 20:6,7</p>	<p>365 46:5</p> <p>37 47:1</p> <p style="text-align: center;"><u> </u> 4</p> <p>4 29:18 54:17</p> <p>4:00 1:7</p> <p>400 34:1</p> <p style="text-align: center;"><u> </u> 5</p> <p>5 31:25 90:8,9</p> <p>50 20:2 29:9</p> <p>55 44:3</p> <p>58-year 80:2</p> <p>5s 93:14</p> <p style="text-align: center;"><u> </u> 6</p> <p>6 47:23 90:8,10</p> <p>6:05 99:22</p> <p>60 85:2</p> <p>62002 1:20 51:24 73:20</p> <p>62028 52:21</p> <p>62035 55:19 77:5</p> <p>62037 84:16</p> <p>63033 82:9</p> <p>63122 79:23</p> <p>63129 49:25 91:19</p> <p>63304 77:17</p> <p>63376 42:15</p> <p>63627 82:2</p> <p>65 16:23</p> <p>6th 3:14 15:16,17</p> <p style="text-align: center;"><u> </u> 7</p> <p>7 24:9 36:9 46:2 91:3</p> <p>7,000 9:9 85:19</p> <p style="text-align: center;"><u> </u> 8</p> <p>8 36:9 54:17 90:4</p>	<p>85 16:24 85:1</p> <p style="text-align: center;"><u> </u> 9</p> <p>9.2 38:12</p> <p>90 40:16 67:9 79:6 85:2</p> <p>95 20:14</p> <p>950 46:5</p> <p style="text-align: center;"><u> </u> A</p> <p>abbreviated 3:17</p> <p>ability 17:10,15 31:13 39:1 74:5 78:14 92:12 100:6</p> <p>able 19:25 40:20 41:10 48:17 57:25 64:11 76:8</p> <p>absolute 47:10</p> <p>absolutely 85:11,14 97:1</p> <p>absorb 80:21 98:9,16</p> <p>accept 78:7</p> <p>acceptable 77:13</p> <p>accidentally 45:6</p> <p>accidents 81:13</p> <p>accomplished 25:1</p> <p>accumulate 70:8</p> <p>achieved 24:21 27:12</p> <p>achievement 58:21</p> <p>achieving 25:24</p> <p>acknowledge 41:25</p> <p>ACRCC 10:20 62:22 67:21 70:21</p> <p>across 3:10 27:14</p> <p>act 34:21 47:20 99:9</p>
--	---	---	---

<p>action 24:16 100:9,14</p> <p>actions 55:4</p> <p>active 23:8 25:19 26:19</p> <p>activities 5:14 21:10 24:16,19,23 25:11 26:9 27:2,8,13 47:4</p> <p>actual 23:1 61:22 67:16</p> <p>actually 6:18 11:9 24:10,25 53:8 55:20 65:12,20 69:12 70:11 73:3 87:24 88:18 95:16 96:4</p> <p>adaptability 21:6</p> <p>adaptable 8:5,6</p> <p>adapted 85:6</p> <p>adaptive 39:9</p> <p>adaptively 39:11</p> <p>add 8:16 49:8 61:3 69:12 75:1</p> <p>added 11:2 17:12 33:12 40:5</p> <p>adding 40:8</p> <p>addition 15:22 27:6 30:20</p> <p>additional 24:20 33:12 40:9 45:23 51:5</p> <p>address 23:1 24:2 51:6 57:25 60:19</p> <p>addressed 14:13 58:11</p> <p>adequately 18:9</p> <p>adieu 4:13 42:9</p> <p>advanced 39:11</p> <p>adverse 14:22,25 15:4 17:17</p>	<p>18:6,10 19:24 20:10 32:12,23 35:21 38:11,13 90:18,22</p> <p>affect 71:11</p> <p>affiliated 51:4</p> <p>afternoon 2:3,12 55:16</p> <p>afternoon's 2:7,24</p> <p>against 30:23 80:23</p> <p>agencies 5:11,12 13:18 18:25 25:3 35:1 45:11</p> <p>agency 8:22</p> <p>agenda 2:12 75:17</p> <p>ago 2:9 5:25 33:16 35:20 43:6 59:4 82:10 85:4</p> <p>ahead 5:16 42:1 46:17 59:3 69:13 83:16</p> <p>aim 41:15</p> <p>air 63:19 82:13 86:18</p> <p>algae 57:8 79:8 87:21</p> <p>alive 86:9</p> <p>Allen 84:15,16</p> <p>alleviate 17:11</p> <p>allow 17:16</p> <p>allows 30:12</p> <p>alone 46:10,11</p> <p>already 5:20 53:15,19 60:11 64:15 79:18,20 86:1</p> <p>alternative 5:15 18:12 19:7 24:8,12,15,17,23 25:15 27:16 29:17,18</p>	<p>31:3,23,25 32:3 35:6 36:9,12 90:7,8,9,10</p> <p>alternatives 6:10 7:22 12:6,11,18 18:7,21 19:2,4,8,11 21:4,7,9,14,23 24:5,22 26:12,24 27:17 29:19 37:21,23 38:4 39:3,10 50:15,23 54:17 56:7 74:17 90:9 92:8</p> <p>Alton 1:6,20 51:23 52:5 73:20</p> <p>am 11:14 52:6 55:21 65:24 73:20 100:8,11</p> <p>amazed 94:1</p> <p>amazing 84:5 92:3</p> <p>America 53:24 78:22 80:9</p> <p>American 68:10 84:17</p> <p>Americans 84:5</p> <p>among 8:25 16:7 18:20 19:3,8 37:23 39:17 67:24</p> <p>amount 32:15,16 38:9 91:14</p> <p>amusing 79:24</p> <p>analysis 92:14,15,23</p> <p>analyzed 10:5</p> <p>analyzing 54:21</p> <p>ancillary 19:6</p> <p>Angie 79:25</p> <p>ANS 27:13 29:1 36:21 88:3 98:14</p> <p>answer 12:20 21:1 63:13 65:20</p>	<p>67:12,16,19 83:10</p> <p>answers 65:17 66:1</p> <p>anticipate 27:5</p> <p>anticipated 29:15</p> <p>anybody 86:14 94:4 97:19,25</p> <p>anyhow 49:6</p> <p>anymore 83:1</p> <p>anyone 38:6 44:13</p> <p>anything 48:19 62:21 68:3 72:8 76:2 80:15 81:15 82:17 87:5 93:14 99:16,20</p> <p>Anyway 65:17 80:6 86:14</p> <p>anywhere 16:23 17:14 47:11 81:12</p> <p>apologize 42:1</p> <p>appears 53:20 100:4</p> <p>appendices 9:20 21:22 92:16 93:4 98:13</p> <p>appendix 15:25</p> <p>applaud 49:11 58:22</p> <p>application 25:21</p> <p>applications 23:5</p> <p>applied 22:14 58:4</p> <p>applies 17:8</p> <p>applying 20:16 29:25</p> <p>appreciate 2:23 4:16 6:11,13 40:25 41:1 49:14 56:7 87:2</p> <p>appropriate 27:3 29:1</p>
---	--	---	---

<p>appropriation 99:13</p> <p>appropriations 91:7,9,14</p> <p>approximate 79:19</p> <p>approximately 38:9</p> <p>aquatic 2:14 7:11 9:24 13:4,16,19 14:8,17 15:24 16:1 19:14 20:16 23:11,20 24:3 25:5,21,22 26:16 27:18,20,22,25 28:8,12 30:5,9,25 39:15,23 42:25 43:2 45:17 54:13 67:23 87:14,17,25 88:1</p> <p>archeological 84:2</p> <p>area 5:19 13:13 14:3,6,15,21 15:19,22 16:1,12,18,19,21 ,24 17:7,18,24 25:10 29:3,6 30:18 32:24 33:5 36:13 38:12 40:8 42:14 47:1 62:21 63:1,6,7 72:5 81:11,12 90:20 91:13 96:14</p> <p>aren't 84:9</p> <p>Army 2:6 3:4,6 8:13 56:4 57:16 58:22 94:19</p> <p>array 22:15 47:3</p> <p>arrived 2:9</p> <p>article 79:25</p> <p>artificial 56:16</p> <p>ashes 86:5</p> <p>Asia 79:7 96:24</p>	<p>Asian 4:21 5:13,19,20 8:8 25:20 42:25 43:25 44:3,10,14 45:4,7,12,14 47:5,21 56:24 61:1 66:5,9 67:7,15,24 68:4,8,25 69:22 79:6 80:5 85:3 88:14 96:23</p> <p>asiancarp.us 6:4</p> <p>assessment 19:21 95:5,7</p> <p>assets 99:6</p> <p>Assistant 8:13</p> <p>associated 16:4 22:22 31:17 36:24 37:10 45:20 92:15</p> <p>Association 49:5,10</p> <p>assumes 58:10</p> <p>Atlantic 89:9</p> <p>attaching 23:23</p> <p>attending 99:21</p> <p>attention 5:2 41:1 53:5</p> <p>attorney 100:11</p> <p>attributable 27:10</p> <p>attributed 90:14,16</p> <p>authorities 27:3 89:12</p> <p>authority 13:1</p> <p>authorization 99:12</p> <p>authorized 47:8</p> <p>A-V 55:18</p> <p>available 3:15,18 4:5 13:3 20:13,22</p>	<p>average 16:23 27:14 46:2 66:21</p> <p>aware 35:19 56:24 77:24 93:20 97:10</p> <p>away 31:1 34:21 65:14 73:7</p> <p>AWO 51:3,7</p> <hr/> <p style="text-align: center;">B</p> <hr/> <p>backflow 30:19</p> <p>background 47:15</p> <p>backup 61:21,22</p> <p>backwaters 64:4 97:18,19,21</p> <p>bad 26:4 34:4 63:1 72:15 79:11 85:20</p> <p>bait 26:4 44:23</p> <p>balance 73:12</p> <p>Ballast 26:6</p> <p>barge 23:23 71:21</p> <p>barges 71:25 74:10 94:25</p> <p>barrier 22:2,10,12,23 23:13 25:7,10 28:20 36:11,23 37:8 38:7,10 43:9,12,13,17,23 ,24 44:10 46:19 47:8,24 48:1,23 58:16 59:3 60:9,16 61:16 63:4 74:21 81:16 94:17,18,19,23 95:21</p> <p>barriers 20:17 31:3,12 32:3,9 33:2,9,13,18 35:7 44:11,14 45:21,23,24 46:18,20 52:25 54:8 57:22 58:2 59:12,14</p>	<p>90:18,19,23</p> <p>base 66:16,24</p> <p>based 17:12 20:20 48:24,25 91:13</p> <p>baseline 19:10,21 21:19,20 24:15,19 92:12</p> <p>basic 74:7</p> <p>basically 3:16 66:24 70:8 96:25</p> <p>basin 5:5 7:12 19:24 20:10 53:11,17 54:11,23 57:4,19 67:13 88:20 95:4</p> <p>basins 3:11 7:12 13:6,16 14:9 15:24 16:9 18:1 19:15 25:25 27:11 30:11 32:5,11 33:4 39:2 54:14 55:2 58:20 67:25 78:21 89:16 93:8 96:10,16</p> <p>basis 12:3 13:15 47:18 66:21</p> <p>bat 42:14</p> <p>bay 45:14</p> <p>beat 70:19</p> <p>beautiful 6:22 80:8</p> <p>becomes 33:20 68:23</p> <p>begin 11:18 41:24</p> <p>beginning 15:7 44:22</p> <p>behalf 55:20</p> <p>believe 8:24 24:9 43:9 44:5 45:15 50:11 57:19 76:14 90:10</p> <p>believes 56:11</p>
---	--	--	--

<p>Ben 84:15 benefit 35:10 83:9,13 benefits 55:5 90:20 benthic 67:1 Berthelot 80:14,16 82:2 88:7,11 best 4:18 18:17,20 26:22,25 57:20 73:13 100:6 better 9:16 21:11 47:25 63:2 bidirectional 28:14 29:21 bigger 67:2 bighead 54:9 66:5 68:8 bilge 26:7 billion 31:24 32:18 36:8 37:2 57:11,12,13 85:13 90:4,5,12 91:1,3 billions 38:20 biologist 65:24 biologists 12:2 44:19 biology 11:24 biomass 67:8 79:5,6 86:13 biproduct 75:25 birds 78:4 bit 5:15 6:17 8:23 9:3 12:13 13:11 15:12 33:6,15 37:4 43:7 46:1 47:22 48:9 61:4 63:2 65:24 70:24 87:4 92:14 93:2 95:7,21 97:4,13 blockage 32:4</p>	<p>blood 74:4,5 blue 2:12 blueback 57:4 bluffs 84:3 boat 23:24 26:2 31:9 64:23 72:4 85:20 boater 51:25 71:17 boating 57:12 boats 71:19 74:11 Bob 49:17 51:21,22 bodies 22:7 39:6 56:19 body 65:5 66:20 74:6 boil 20:18 bone 70:14 86:4 bones 68:11,12 bony 68:9 book 12:9 24:9 book-ended 28:19 boom 72:5 border 27:10 boundary 13:6 bountiful 80:8 bounty 72:19 73:8 box 20:16 64:22 brackish 85:5 Brandon 61:6,24 62:15 breakdown 23:19 Brennan 80:16 brethren 74:3 Bridgeton 84:2 brief 3:13,24 4:12 bring 12:3 14:23 62:12,19 82:13 85:22</p>	<p>brings 16:2 broad 97:4 brought 49:3 59:17,19,22 brown 33:25 brown-colored 13:8 bucket 26:4 bucks 72:21 73:6 budget 5:17 Buffalo 40:11 buffer 29:25 30:1,21 31:1,3 61:13 build 22:3 29:1 38:6 40:19 50:12 99:14 building 29:8 43:16 84:18 built 28:4 48:12 91:1,3 bulk 93:13,15 bunch 70:20 business 85:13 businesswoman 80:2 busting 71:23 72:1 busy 40:15 button 82:15,25 buy 23:14 39:6 bypass 27:18</p> <hr/> <p style="text-align: center;">C</p> <hr/> <p>calculate 46:4 Cal-Sag 36:17,19 37:8 Calumet 31:6,7 44:18 45:5 Canada 71:12 Canadian 71:14</p>	<p>97:8 canal 36:16 37:7 48:11 50:7 canary 77:23 canoe 31:8 71:19 capture 83:14 capturing 36:2 car 60:2 carbon 20:25 46:10 care 99:7 careful 68:21 careless 38:22 cargo 16:15 21:19 31:11 92:13 Carl 55:15 63:9,11 65:12 82:5,9 83:7 89:19,23 90:3 carp 4:21 5:13,19,20,24 8:8 25:20 42:25 43:25 44:3,11,14 45:4,7,12,14 47:5,20,21 52:13 54:9 56:24 61:1 63:8,16,19 66:5,6,9 67:7,15,24 68:4,5,7,8,25 72:2,3,7,12,15,2 5 74:18 77:23 78:19 79:6,7 80:5 85:3,6 88:14 96:23 carpeting 64:24 carps 53:4 69:20,23 Carriers 49:5,10 carry 78:4 case 34:13 74:16 catastrophe 57:17</p>
---	--	--	--

<p>catfish 63:25</p> <p>caused 18:6</p> <p>caveats 91:9</p> <p>CAWS 15:23 53:19 56:16</p> <p>cease 62:10</p> <p>center 10:11 53:24</p> <p>central 66:10</p> <p>cents 72:20,22 85:17</p> <p>certain 21:8 22:16 34:22 67:9 72:5 91:6 97:10</p> <p>certainly 4:21 5:6 6:21 17:23 28:23 34:24 48:23 67:6 69:2 97:13</p> <p>CERTIFICATE 100:1</p> <p>certify 100:3</p> <p>cetera 36:22 87:22</p> <p>chain 66:16,25 70:7 98:18</p> <p>challenge 4:20 5:19 6:3</p> <p>chamber 23:9,12 46:23,24 48:8,12 61:23 62:6,8,11</p> <p>chambered 48:14</p> <p>chance 20:2 41:17,18 80:20</p> <p>change 92:17</p> <p>changed 94:18</p> <p>changes 94:10</p> <p>changing 60:8,13,14</p> <p>channel 20:19 22:22 23:1 28:18 36:15,17,19 37:9 61:17 96:15</p> <p>channels 21:16</p>	<p>28:11</p> <p>chapter 55:21</p> <p>characterization 13:21,25 16:4</p> <p>Charles 77:9</p> <p>Charlie 51:18</p> <p>charter 52:8</p> <p>checkpoint 23:16</p> <p>chemical 11:21 65:23</p> <p>Chicago 2:6 3:3,6 4:20 5:19 6:16,20 8:17 10:7 11:19 13:13,20 14:2,14,20 15:19,22 16:11,18,19,22,2 4 17:3,6,9,15,18,2 4 22:14 25:10 29:3 30:18 32:24 33:4 34:3,4 36:13,16 37:7 38:13 40:8,10 47:1 50:1,6 53:1 54:4,21 63:6 76:23 80:25 81:3,11 90:20,25 91:13 95:13 96:14</p> <p>Chicagoland 16:21 29:6 96:14</p> <p>Chicago's 78:7</p> <p>China 70:2,5 80:5 97:5,15</p> <p>Chinese 72:3</p> <p>Chinese- American 80:1</p> <p>choose 68:11</p> <p>chose 62:15</p> <p>chosen 61:5</p> <p>Chris 7:4,5</p>	<p>Christine 52:19 55:15,16,17</p> <p>cities 40:1,3,5</p> <p>citizen 73:21 75:8 77:9</p> <p>city 17:2 28:4 34:11 38:12 71:9</p> <p>clamming 82:23</p> <p>Clancy 9:19</p> <p>clarify 43:19 51:14 96:13</p> <p>clean 26:2 34:14,21,24 65:1</p> <p>cleanliness 94:1</p> <p>clean-ups 56:22</p> <p>clear 50:22 84:24 87:9 98:18</p> <p>clock 46:7,8</p> <p>clogged 60:5</p> <p>close 54:21</p> <p>closed 71:12</p> <p>closely 62:22</p> <p>closes 54:13</p> <p>cloud 60:9</p> <p>Club 55:21,23 56:11</p> <p>clutter 81:13</p> <p>coast 49:12 85:5</p> <p>co-coordinator 55:22</p> <p>code 42:5,15 49:20,22,23,25 51:24 52:21 55:18 71:4 77:2,4 79:21,23 82:1,8 84:14,16 91:17</p> <p>cold 6:19 11:13</p> <p>colder 6:17</p> <p>collaboration 49:15</p>	<p>collaborative 39:21 40:20</p> <p>collaboratively 39:7</p> <p>colleagues 52:24</p> <p>collecting 4:2,3</p> <p>Colonel 1:15 3:5 6:12,14 7:4 11:1,8,25 12:19 15:5 20:14 21:6 43:18 44:7,16 45:2 46:16 49:2 51:16 59:2 61:4 62:18 63:13 65:9 68:2 69:15 70:11,15 86:20 89:24 90:13,24 97:3,25 98:5 99:19</p> <p>Colonels 56:2</p> <p>column 23:21 66:15,18</p> <p>combating 25:4</p> <p>combination 30:22</p> <p>combined 17:20 57:10</p> <p>combining 36:2</p> <p>ComEd 59:9 60:11</p> <p>comes 17:6 47:15 58:7 61:25 75:23 87:21</p> <p>coming 3:16 10:2 34:10 41:1 42:7 47:5 56:9 57:3 64:9 72:9 79:2 82:17 88:13</p> <p>command 98:18</p> <p>commander 3:6 8:17</p> <p>commanders 7:3 41:10 49:6,7 99:20</p> <p>commended 42:20</p>
--	--	--	--

commensurate 18:13	21:20 41:24	congratulating 45:9	34:23 70:9
comment 2:17,20,21 4:8,9 40:12 42:22 49:1,3 51:1 77:16 80:12,15 89:7,12,18 93:18 98:20	complete 15:15 47:8 90:6,8	congratulations 42:17 44:1	contaminated 36:3
comments 4:3,4,7 6:9 20:18 41:13,15 43:8 86:17,24 88:6 96:20	completed 15:18 36:6 39:3	Congress 18:25 40:23 42:19 47:9 50:9 51:8 89:14 92:1	contention 5:9
commerce 50:14 81:8 89:6 93:5	completely 60:17 62:20 75:24 92:7	congressional 39:18	contents 3:13,24
commercial 72:23 82:23 92:13 93:7	completing 42:18,21 50:10	connected 81:2	continue 9:12 28:16 30:7,12,24 49:12 58:12 62:22 68:24 81:23 83:21 87:4 99:8
commit 58:14	completion 31:21 36:7,25	connection 17:25 54:13 56:17 95:14,15,18 96:16,17	continues 5:14 34:12
committee 8:9 15:8 66:10	complex 7:10,25 14:14 16:12 17:24 46:21 74:15 78:1,11,15	connections 21:16	continuous 54:14
commodities 86:2	composition 88:2	connoisseur 68:5	contribute 29:16 34:1
common 76:16 99:3	comprehensive 58:24	cons 80:23	contributed 54:5
commonly 28:6	concept 22:3,13,19	consensus 6:8 39:22 40:19 77:15	control 5:24 23:14 25:16,23 27:20 28:15,20 29:21,23,24 30:8 39:16,23 41:6 61:7,9,15 62:16 97:10
communities 56:1 59:7	concepts 88:3	consequences 92:8	controlled 30:10
companies 50:5	conceptual 18:4 22:5 28:8 92:20	conservation 77:11	controls 20:14,15 21:17,25 34:6 37:19
company 50:4 51:7 93:21	concern 19:19 23:2,15 30:6 53:2 66:7 81:5	consider 28:24 73:25	conversation 24:7 70:17
comparatively 53:5	concerned 57:2,9 72:10 78:22	consideration 50:25 54:19 75:5,6	conveyance 16:21 17:1 29:10 30:13 31:17
compare 14:2 18:15 19:3	concerns 42:7 45:20	considered 45:19	cooperation 49:9
comparison 18:20 25:14	conclude 37:24	consistent 91:10	coordinated 67:21
compensate 14:25 18:9 32:23	concluded 99:23	consistently 74:12	coordinating 5:10 8:9 73:22
compensation 90:21	concludes 79:15	constantly 94:24	coordination 5:13
competition 69:22	concluding 98:3	construct 32:15,16 38:2,3 91:6	corner 22:10 23:18
compilation 12:4	condition 69:21,23	constructed 36:1 61:16	corporations 57:15
compiled 4:4	conducted 52:22	constructing 25:9	Corps 2:6,15 3:4,6 4:2 7:21 8:2 10:7
	conduit 16:17	construction 22:25 25:18 31:15,16	
	confidence 48:1 63:3	contact 98:21,22	
	confluence 6:25 61:25 80:3	contaminants	
	congestion 46:9		

<p>13:17 18:18 25:2,6 35:11 38:5 42:17,20 45:10 50:17 51:8 54:20 56:4 57:16 58:22 59:8,21 60:23 65:18 74:3 75:6 84:20 89:13 94:19 99:10</p> <p>correct 43:10,14 44:6</p> <p>cost 18:11,12,17 19:5 27:5,9 29:17 31:22 32:17,18,21 36:8 37:2,4 38:3 58:7 79:12 89:19 90:1 94:23,24 95:5</p> <p>cost-benefit 92:23</p> <p>cost-effective 93:12,15</p> <p>cost-estimating 18:19</p> <p>costs 37:5,19 45:20 54:25 55:1 58:2 90:3,11,16 92:9,17 94:20 95:1,2</p> <p>council 3:1 73:22</p> <p>counsel 100:8,12</p> <p>count 98:17</p> <p>country 3:10 5:20 9:10 99:6</p> <p>counts 9:2 98:6,7</p> <p>couple 3:8 9:3 14:10 24:4,14 30:2 31:2,16 37:25 56:22,23 65:20,21 71:11 75:18 88:4 90:3 98:7</p> <p>course 42:15 50:18 51:2 56:25 58:5 63:18 91:19 93:9,13</p>	<p>Court 100:18</p> <p>cover 51:6 70:21</p> <p>covered 8:22 37:25</p> <p>create 4:19 28:14 32:4 68:21 69:3 73:14 90:20 96:5</p> <p>created 73:4 90:19,22 96:3,15</p> <p>creates 27:18</p> <p>creek 64:4</p> <p>creeping 76:19</p> <p>criteria 7:16 19:1 37:13,17,22</p> <p>crustaceans 57:5</p> <p>cultured 83:1,3</p> <p>cultures 68:11</p> <p>curious 43:21</p> <p>current 18:2 57:23 60:8 91:14</p> <p>currently 22:14,20 25:1,13 27:7 34:20 95:20</p> <p>cut 50:9 64:25 92:7</p> <p>cutoff 91:24</p> <hr/> <p style="text-align: center;">D</p> <hr/> <p>daily 12:3 47:17 66:20</p> <p>dam 1:19 61:6,8 62:1,2,5,16</p> <p>damage 63:15,25 66:4</p> <p>damages 57:18</p> <p>dams 10:13</p> <p>data 91:12 98:13,14</p> <p>date 16:2</p> <p>dates 43:10</p> <p>Dave 1:16 3:2</p>	<p>5:3,14 8:12 9:15 10:22,23,25 11:5,14 43:11,14,15 44:6,24 46:15,21 48:7,19,20 51:13,17 52:17 55:13 59:1 61:3 63:5 65:19 73:2 79:13 82:20 87:13 88:16 89:5,11 90:1,7,15 92:11 95:6 97:24 98:22 99:15,17</p> <p>day 26:5 34:1,12 46:5 48:2 58:2 64:14,24 81:10 85:19,23 95:19</p> <p>days 34:7 40:17 46:5 95:19</p> <p>day-to-day 5:14</p> <p>deal 47:25 48:4</p> <p>dealing 7:8 9:22 10:13 78:23</p> <p>dear 35:11</p> <p>December 35:21</p> <p>decide 39:7 75:7</p> <p>decision-makers 18:23,24 37:15 40:23 92:22,24</p> <p>decision-making 39:5</p> <p>decisions 92:25</p> <p>decline 54:5 69:21,23</p> <p>deep 97:18 98:11</p> <p>definitely 70:13 73:12 98:7</p> <p>degradation 95:3</p> <p>degree 11:22 94:1</p> <p>degrees 11:10</p> <p>demand 69:3 83:6</p>	<p>86:10</p> <p>demonstrated 22:17 69:19</p> <p>demonstration 46:19</p> <p>Department 45:10</p> <p>depict 35:8</p> <p>deposition 100:4,10</p> <p>depth 50:18</p> <p>Deschenes 7:5</p> <p>describe 5:15</p> <p>design 18:8,14 22:5 28:9 48:9,24 78:11 92:21</p> <p>designed 48:12,14</p> <p>designs 48:23</p> <p>detail 50:18 91:25 92:19</p> <p>details 22:4</p> <p>detections 47:23</p> <p>determine 74:25</p> <p>determined 35:2</p> <p>develop 86:11,12</p> <p>developed 5:24 18:4,13 23:4 46:24 50:17 76:4 95:13</p> <p>developing 54:20 68:14</p> <p>dialogue 9:11</p> <p>diatoms 57:8</p> <p>different 2:10 5:23 7:22 10:4,9,10 12:6 13:19 16:13 18:20 19:3,8 20:15 21:3,10,25 24:2 25:4 36:20 37:17,21,23 39:25 48:9 52:9 56:7,21,22 57:24</p>
---	---	---	---

<p>75:18 76:11 87:23 88:4 98:9 difficult 42:3 94:7 diligence 42:21 dioxide 20:25 46:10 dip 98:13 direct 8:13,14,21 direction 4:18,23 62:14 100:8 directions 17:17 directly 81:2 discharge 34:12 35:14 discuss 39:13 discussing 6:5 discussion 4:1,11 6:13 9:12 41:12,15 74:17 99:8 disinfection 34:7 dissolving 60:4 distinguish 7:17 district 2:6 3:4,6 7:4,6 8:17 11:19 41:10 87:12 91:5 districts 10:8,9 ditch 14:12 ditches 96:2 dive 82:12 diversity 53:8,25 diverted 35:24 divide 13:6,12 33:3,6 89:15 95:8,9,24 96:4 DNR 62:23 70:17 98:21 DNRs 25:3 70:21 dock 71:8 Doctor 60:24</p>	<p>69:17 87:6 doctors 68:17 document 12:16,17 doggone 65:16 doings 38:23 dollar 72:24 73:5,11 85:13 92:17 dollars 38:20 73:10 domination 66:12 done 22:13 34:5 35:5 39:6 49:10 54:20 56:5 60:17 83:22 84:10,21 94:19 do-nothing 24:25 downstream 17:7 29:24 30:20 34:21 35:7,9 47:22 53:15 54:10 61:7,9,15,25 62:16 downtown 75:22 dozen 33:8 Dr 52:20 69:18 77:8 82:22 83:8,10,17,20,22 84:1 87:7 94:14 Dresden 44:4 drinking 28:3,5 Drolet 8:18 Drummond 1:15 3:5 6:12,14 11:1 12:1,19 15:5 20:14 43:18 44:7,16 45:2 46:16 49:2 51:16 59:2 62:18 65:9 69:15 70:15 86:20 89:24 90:13,24 97:3,25</p>	<p>98:5 99:19 dry 28:24 due 42:21 duly 100:5 dump 26:5 dumping 74:9 during 17:9 31:9 32:9 43:8 62:2 <hr style="width: 20%; margin: 10px auto;"/> E <hr style="width: 20%; margin: 10px auto;"/> eagles 71:24 earlier 11:12 29:3 50:9 73:4 98:6 early 30:10 46:22 Earth 53:13 54:1 easily 14:13 71:13 easy 22:2 94:7 eat 66:14,19 67:2,3 68:11,12 70:6,10,19 79:8 97:6 eaten 68:4 eating 66:17 69:24 70:7 72:14 86:8 echo 51:14 ecological 4:19 57:17 81:5 economic 19:6 52:2 92:16 98:13 economies 57:13 economy 74:4 81:23 ecosystem 93:4 edges 64:17 edibility 68:2 edible 64:12,18 educated 93:1 education 26:1,19 effective 19:4 21:12 52:16</p>	<p>54:25 56:13 effectiveness 37:19 52:25 effects 69:19 81:5 efficiency 57:24 efficient 66:19,23 effort 28:24 49:12 58:24 efforts 2:15 18:2 58:8 66:8 67:21,22 eggs 78:3,4 eight 12:8 40:2 50:15 91:21 98:9 Eighteen 11:2 eighth 3:9 9:7 either 20:8 24:1 28:19 67:13 82:21 89:10 96:10 elected 6:5 electric 22:10,12,22 23:13 25:7 28:20 48:23 52:25 54:7 57:22 58:2 61:16 78:11 electrical 47:10 48:18 59:10,22 60:14 electrodes 22:25 electromagnetic 47:4,16 48:13 elements 19:9 eleven 3:9 11:20 40:2 eliminate 27:19 Elsah 71:6,18,23 else 38:6 39:15 47:11 48:19 64:10 66:25 75:24 81:6,15,19</p>
--	--	---	---

<p>95:11 98:1,3 99:16 email 12:25 40:6 41:4 emotional 59:18 emphasize 53:7 74:2 employed 100:9,12 employee 100:11 employees 10:10 73:23 encourage 2:21 9:13 12:14 86:23,25 93:2 94:4 98:10 engagement 15:6 39:25 engineer 8:3 11:21 22:22 46:24 65:22,23 engineering 11:22 28:23 engineers 2:7,16 3:4,7 4:2 10:7 12:1 13:17 18:18 25:2,6 35:11 38:6 42:18 45:10 54:20 56:4 57:17 58:23 59:8,21 78:10 89:13 91:4 99:10,13 enhanced 58:19 enjoying 52:10 ensure 21:2 35:23 38:9 90:17 entire 7:1 49:11 97:9 entities 7:23 entry 10:14 environment 92:10 93:23 environmental 3:1</p>	<p>11:22 19:6 36:5 38:13 55:24 65:23 environmental- friendly 93:16 environmentally- friendly 93:11 episodic 14:5 29:7 equation 32:25 ERDC 48:3 errors 59:24 escaping 48:13 especially 16:17 28:24 56:5 93:23 essentially 66:17 establish 19:10 established 10:17 establishing 19:23 establishment 20:9 estimate 27:5,9,12 estimated 31:20 36:7,8 37:1 estimates 18:11,12 et 36:22 87:22 Europe 96:24 97:7 European 53:13 57:6 evaluate 16:7 evaluating 37:22 evaluation 7:16 19:1 37:13,17 evening 11:7 12:5 41:22 event 17:14 30:18 59:18 62:9 events 14:6 17:9,13 32:9 56:21 eventually 76:6,24</p>	<p>everybody 6:15 12:8 41:17 69:14 72:16 87:3 88:14 93:20 everyone 2:2 4:16 11:6,8 41:1,17 58:15 66:25 83:12,15 92:25 everyone's 40:21 everything 9:21 33:20 46:18 48:5 61:24 62:12 81:6,19 everywhere 67:7 exact 82:18 exactly 79:9 examines 7:10 example 25:19 55:5 61:12 62:15 excellent 25:1 67:12 84:21 except 74:23 exchange 23:8 exciting 9:8 executive 9:14 10:17 15:8 50:21 exercised 45:16 exist 13:14 existing 14:20 15:1 23:5 25:11,22 27:13 35:24 48:22 54:7 74:24 expect 63:5,12 65:17 experienced 43:4,6 45:14 57:23 66:10 expertise 10:12,13 experts 59:21 84:21 explain 46:1 exploit 75:3</p>	<p>exploiting 74:8 explosion 63:19 exports 50:6 extended 40:12,15 51:2 extent 34:25 extinct 69:5,6 extremely 94:7 eyes 48:15</p> <hr/> <p style="text-align: center;">F</p> <hr/> <p>Facebook 40:7 41:5 fact 14:22 15:22 59:23 63:4 64:12,15 69:22 74:13 93:10 factor 69:21 facts 53:11 failsafe 61:22 62:13 failure 54:16 fall 30:24 56:23 65:3 falling 64:17 familiar 16:11,22 33:4 55:23 88:15 94:5 famine 85:22 fancy 78:12 fantastic 11:25 farmer 96:2 farmer's 14:12 farm-raised 97:15 faults 57:24 Favilla 52:19 55:15,16,17 favor 52:11 favored 70:1 feast 85:21</p>
--	---	---	--

<p>February 64:3 85:18,21</p> <p>fed 36:15,17</p> <p>federal 5:11 7:23 9:1 15:9 18:24 24:16 25:2 35:1 39:18 73:23</p> <p>feed 86:6,7</p> <p>feeders 66:17</p> <p>feeds 35:17</p> <p>feel 41:4 50:19</p> <p>feet 12:23 33:8 62:3,4</p> <p>fellow 7:3 80:17 99:20</p> <p>fertilizers 68:19</p> <p>figure 76:24</p> <p>fill 2:21</p> <p>fillets 68:10</p> <p>filter 60:3 66:17</p> <p>filters 27:24 87:19</p> <p>final 47:8 60:16 82:25</p> <p>finally 55:3,9</p> <p>financially 100:13</p> <p>fine 42:22</p> <p>finish 49:3</p> <p>finished 83:21</p> <p>first 2:11 3:13,19,20 11:18 15:14 27:16 31:25 38:1 42:16 44:10 49:4 65:11 68:3 84:20</p> <p>fish 5:24 6:3 20:17,24 22:18 28:20,21 30:23 43:9 44:11,12,14,15,1 9,20,21 47:20 48:4,6 53:12 57:9 62:4,7</p>	<p>63:1,25 64:12,17,23 65:2,3,8,14 67:3 68:10,12 70:2,4,10 75:19,21,22,23 76:10,14 80:7 81:20 82:11 84:17 85:6,14 86:12 97:16</p> <p>fished 97:14</p> <p>fisheries 21:20 80:3 93:6,7</p> <p>fishermen 62:24 72:23 82:10 85:17,21</p> <p>fishes 53:14</p> <p>fishing 25:20 26:5 57:11 63:15 68:25 72:4,22 85:13</p> <p>fish's 80:7</p> <p>five 17:8 65:16 73:6,10 96:6</p> <p>five-digit 42:5</p> <p>five-year 93:25</p> <p>flat 8:21</p> <p>flattest 8:12</p> <p>flea 57:5</p> <p>Fleer 1:10 2:2,5 41:8 49:16,20,23 51:20 52:18 55:14 58:25 63:9 69:11 70:25 73:16 75:13 77:1,4,6 79:14 80:10 81:25 82:3,7 83:9,12,19,23 84:12 86:16 88:5,9 89:21 91:16 94:13 96:19 98:2</p> <p>float 23:21</p> <p>floating 23:11</p>	<p>30:25 62:7 66:15 74:9</p> <p>flood 17:5 31:14 32:25 33:12 37:10 38:11 58:7</p> <p>floodgates 17:16</p> <p>flooding 17:18 32:23 81:15</p> <p>flood-risk 29:5 30:14 32:13 33:11</p> <p>floor 79:16</p> <p>Florida 10:11</p> <p>flow 17:10 27:18 28:16,25 31:14 32:5,7 33:15 35:6,8,23 50:14 87:25</p> <p>flowing 17:8 62:1</p> <p>flows 17:6 29:7 32:7 33:14 34:20 35:15</p> <p>flush 23:9</p> <p>fly 85:13</p> <p>focus 13:14 16:1 18:1 37:4</p> <p>focused 20:11 53:3 54:8</p> <p>focuses 15:21</p> <p>folks 22:11 35:19 41:18,21 47:14 70:3</p> <p>food 53:21 66:15,16,25 69:22,24 70:2,7,11 76:11</p> <p>forces 47:4,16</p> <p>foregoing 100:4</p> <p>forget 82:18</p> <p>form 2:18,22 14:5,8 15:7 24:20 29:8</p>	<p>former 8:17</p> <p>formerly 4:7 11:20</p> <p>forms 13:22</p> <p>forth 26:25 52:13</p> <p>fortune 76:22</p> <p>forum 86:25</p> <p>forums 8:11</p> <p>forward 6:9 39:22 40:20,24 51:8</p> <p>foundation 50:12</p> <p>fourth 43:24 47:7 60:18</p> <p>foxtrot 51:14,18</p> <p>frame 43:21 56:6</p> <p>Frank 55:17</p> <p>Frederic 1:15 3:5 6:14 11:1 43:18 44:7,16 45:2 46:16 49:2 51:16 59:2 62:18 65:9 69:15 70:15 86:20 89:24 90:13,24 97:3,25 98:5 99:19</p> <p>free 41:4 50:14 63:7</p> <p>freeze 20:19</p> <p>freezing 11:10</p> <p>frequency 22:16,24</p> <p>frequently 2:13</p> <p>freshwater 53:8,12,25 78:21 85:6 96:25 97:18</p> <p>friend 7:5 41:5</p> <p>front 10:22 71:23 79:24</p> <p>fronts 55:4</p> <p>frozen 80:5</p> <p>fry 64:3</p> <p>fuel 60:2,3</p>
--	--	--	---

<p>full 9:18 36:25</p> <p>funded 6:1</p> <p>funding 5:16 11:18</p> <p>funny 63:21</p> <p>Furthermore 58:1</p> <p>future 25:14</p> <p>FY16 47:7 60:18</p> <hr/> <p style="text-align: center;">G</p> <hr/> <p>gain 22:23</p> <p>gallons 34:1 91:2,3</p> <p>gap 78:10</p> <p>garbage 76:2</p> <p>Garvey 75:15 77:7,8,9 83:10,17,18,24 84:1,13 94:13,14</p> <p>gates 30:22 36:22</p> <p>gateway 54:21</p> <p>gateways 76:24</p> <p>general 17:7 66:2 93:19</p> <p>generators 59:15 60:1,6,10,12 61:21</p> <p>gentleman 73:4 83:24</p> <p>gentlemen 10:8</p> <p>geography 42:8</p> <p>Georgia 76:5,6</p> <p>germane 69:10</p> <p>gets 75:24 81:8</p> <p>getting 68:25 72:16 91:24</p> <p>given 40:17 89:14</p> <p>gives 9:14 30:1 47:25 63:2,3</p> <p>glad 6:15 11:7 99:1</p>	<p>GLMRIS 2:5,14 3:3,13 4:5,10 7:8,10 11:18 12:7 13:1,11 14:16 15:13 19:12 21:21 22:1 23:6,12 28:19 36:21 37:14 41:24 42:21 48:21 50:10,11 51:1 54:17 61:5,15,17 62:17 67:22 88:3 99:7</p> <p>glmr.is.anl.gov 3:19</p> <p>gloves 65:13</p> <p>goal 3:20 67:22 68:24 69:6 73:11</p> <p>goals 3:12 14:16 15:2</p> <p>gobies 53:14</p> <p>goby 53:18,20,21</p> <p>goods 84:6 94:25</p> <p>Goss 1:14 2:25 4:14,15 10:20 12:20 97:12</p> <p>government 73:23,24</p> <p>governmental 15:10</p> <p>governor 70:18 97:5</p> <p>grab 65:13</p> <p>Grafton 63:12 64:8 70:3 75:21 84:16,19</p> <p>Grand 31:6</p> <p>Granite 71:9,13</p> <p>great 1:4,19 2:4 3:10 4:22 5:10,12 6:6,7,22 7:1,13 10:3 11:15 13:5 18:22 27:11 28:16</p>	<p>34:11,13 35:4 43:1,3 45:13 46:13,18 47:5,25 49:4,7 52:1,8,10 53:3,9,15 54:9 56:6,17 57:11,18 58:19,23 61:1 67:11 76:20 78:20 79:10 84:23 85:12 88:17,19 89:3,9,16 95:3 99:3</p> <p>green 2:11 35:8</p> <p>grew 45:1,2</p> <p>grid 60:15</p> <p>ground 13:8 47:16</p> <p>groundwater 55:10</p> <p>group 5:11,13 10:17,19 42:4 77:9,11,14 99:20</p> <p>groups 39:4</p> <p>grow 81:23</p> <p>growing 47:23</p> <p>guarantee 45:7</p> <p>Guard 49:12</p> <p>guess 21:11 43:22 65:16 68:9 76:21 82:14 84:3 97:16</p> <p>Gulf 78:8 81:1 84:7</p> <p>guys 65:2 76:18 80:18</p> <hr/> <p style="text-align: center;">H</p> <hr/> <p>habitat 97:13</p> <p>habitats 53:21</p> <p>half 8:20 10:19 31:23 59:4 60:21 80:4</p> <p>Hall 7:4</p> <p>hallway 2:22</p>	<p>halt 76:25</p> <p>hand 4:13 79:18 86:18</p> <p>hands 65:8</p> <p>hang 97:22</p> <p>happen 16:15 46:11 67:11 85:20 95:18,19</p> <p>happens 59:18 76:18 77:20</p> <p>happy 81:22</p> <p>hard 65:1 72:21</p> <p>harm 54:11</p> <p>harmonics 60:14</p> <p>harvesting 69:25</p> <p>hatched 65:4</p> <p>haven't 7:9 50:20</p> <p>having 19:24 20:10 29:20 46:14 67:7 74:16</p> <p>head 10:20 12:23 48:21 73:5,6,11</p> <p>headquarters 8:15</p> <p>headwater 14:7</p> <p>headwaters 96:5</p> <p>health 77:13 79:4</p> <p>hear 3:23 7:13 8:23 9:3,24 41:13 49:16 94:24</p> <p>heard 7:9 8:8 9:7 20:18 22:12 40:13 45:21 54:3 65:10 68:2 72:20 87:3 98:6 99:3</p> <p>Heartland 84:17</p> <p>He'll 65:14</p> <p>help 2:23 4:17 6:5,13 7:17,24 12:3,20 19:10 23:14 28:20 39:6 40:24 42:6 65:21</p>
---	---	---	---

<p>92:25 99:9,15 helping 5:6 helps 24:18,20 27:19 52:6 herbicide 25:22 herbicides 20:16 hereby 100:3 herring 57:5 he's 48:11 65:14 98:25 Hettel 42:11,13,14 43:12,15,20 44:8 45:1,4 49:14 89:2,3,7,17 H-E-T-T-E-L 42:14 Hi 77:8 high 9:25 20:5,6,8 31:9 33:7 54:25 58:6 62:2 70:9 higher 8:15 58:14 highest 53:12 high-head 62:1 highlights 37:16 highway 56:18 highways 46:10 81:14 hill 75:22 historically 33:5 96:8 history 34:3 hit 46:17 48:7,19,20 hitchhike 23:22 hitchhiking 23:22 hitting 63:20 hold 58:13 home 12:21 honest 78:9 honestly 97:7</p>	<p>hooked 59:13 60:15 hope 10:23 hopefully 12:8 52:6 hospital 63:20 host 10:15 47:17 hours 62:19,23 95:19 House 3:1 5:8 56:3 94:21 98:18 huge 42:19 57:18 86:9,10 95:11 hull 23:23 human 44:24 96:17 human-mediated 96:9 humans 45:6 69:4 hundred 4:24 10:9 33:15 72:21 96:7 hundreds 81:9 hurts 78:25 hybrid 37:5,6 hybrids 36:10 56:9 hydro 10:13 hydrologic 16:8 32:1 33:3 <hr/>I<hr/>ice 71:23 72:1 I'd 55:3 idea 26:2,4 29:20 34:24 36:11 69:2 73:13 87:18 91:5 ideally 47:2 identified 13:7,22 19:13 20:5,7,15 23:2 31:4 40:3 identify 14:17 21:9 42:3 48:22 82:7</p>	<p>83:15 identifying 27:13 I'll 4:13 6:12 12:5,7,11,19,23 24:6,13 41:6,25 59:3 87:4 I-L-L-A 55:18 Illinois 1:6,20 35:17 42:15,23 45:10 51:23 52:22 55:10,21 66:11 70:3,17 71:6 73:21,25 76:7,18 82:23 97:5 I'm 2:5,7 6:15 7:3 8:11 10:21,22 11:7,21 12:21 24:4,10 26:18 38:4,25 40:4 43:7,10 45:9 51:23,24 52:3,11,20 54:3 55:20 65:10,22 68:5 71:6,16 72:10 73:6 76:21 77:8,9,14 78:7 79:2,3,23 81:19 83:14,22 84:15,17 86:14 93:20 94:14 97:7 imagine 26:10 28:22 30:17 32:6 34:9 46:21 47:13 77:12 immediate 58:19 immediately 5:4 18:15 20:22 56:14 59:25 impact 14:20,22 19:25 20:2,10 26:16 31:13,16 32:12 67:10 74:24 impacts 14:21,25 15:4 17:18</p>	<p>18:6,10 19:6 32:23 33:11 35:21 38:11,13 73:25 90:19,22 impede 32:7 implement 19:5 21:4 implementable 20:21 21:3 implementation 17:22,23 18:6 26:11,23 28:18,22 37:20 54:24 implemented 14:19 19:12 20:22 22:20 25:13,17 26:8 27:2,4 28:7 58:18 implementing 36:20 important 3:22 10:16 16:14,20 17:1,4 19:9 25:12 26:7 29:4 37:14,22 38:18 39:4,10 74:25 95:8 99:5 imposed 42:19 impossible 20:3 impressed 50:18 impressive 80:19 improve 22:21 48:24 improvement 34:6 improvements 55:8 94:11 improving 43:25 58:14 inactivate 27:24 87:21 inception 11:17</p>
--	---	--	---

<p>include 10:19 25:20 26:22 31:2 54:18 91:4</p> <p>included 4:8 15:8 21:13</p> <p>includes 26:1 29:10</p> <p>including 54:7 56:22 74:3</p> <p>incorporate 95:4</p> <p>incorporation 8:6</p> <p>increase 55:9</p> <p>increased 94:22</p> <p>incredible 56:4</p> <p>in-development 20:24</p> <p>Indiana 31:5 40:10</p> <p>indigenous 88:24</p> <p>indirectly 81:2</p> <p>individual 73:20</p> <p>individually 24:1 33:25</p> <p>individuals 10:15</p> <p>industry 28:6 42:16,24 45:15 57:11,12 63:16 71:21 80:24 82:15,23 83:1 85:12</p> <p>inflict 57:18</p> <p>inform 92:25</p> <p>information 9:9 12:4,13 13:24 16:5 19:2 20:20 21:15,18,20 30:4 40:22 51:6 86:22 92:22,24 93:5 98:9,10</p> <p>infrastructure 29:13 31:18 36:1 38:21 39:21 55:7</p>	<p>initial 40:21</p> <p>initially 91:24</p> <p>injuries 46:11</p> <p>inland 43:3 57:14 71:10</p> <p>input 3:23</p> <p>inspired 55:25</p> <p>installing 75:20</p> <p>instance 44:9 53:18 60:9,15</p> <p>instead 29:10,20,22</p> <p>integrity 51:11</p> <p>intend 85:15</p> <p>intended 96:12</p> <p>intending 85:15</p> <p>intentional 38:22</p> <p>interbasin 1:4 2:4 11:16 13:12 95:8,17 96:3,11</p> <p>interconnected 17:19 80:25</p> <p>interest 66:7</p> <p>interested 6:2 75:9 93:3 98:19 100:13</p> <p>interesting 84:22 89:8,12 94:6</p> <p>interests 52:2</p> <p>interim 56:14 58:17</p> <p>intervention 96:18</p> <p>intimately 8:9 97:9</p> <p>introduce 2:24</p> <p>introduced 32:22 34:19 43:2 89:6</p> <p>introducing 73:9</p> <p>introduction 35:3 54:2</p>	<p>invalid 78:6</p> <p>invasion 81:19</p> <p>invasive 4:21,23 9:22 10:12 11:24 13:4 25:22 50:13 51:10 53:14 54:2 56:13,19 57:10 72:8 81:6 88:13,19</p> <p>invertebrates 77:22 78:2</p> <p>investigating 52:24</p> <p>involve 25:18 50:24</p> <p>involved 8:3,10 10:8,15,18 94:21 97:9</p> <p>iPhone 93:14</p> <p>irritates 75:2</p> <p>Island 7:6 44:5</p> <p>issue 39:19 51:5 96:8</p> <p>issues 58:10 60:22</p> <p>items 99:14</p> <p>it'll 12:12</p> <p>it's 3:19 7:15 8:11 9:10 10:6 11:8,24 12:15 14:3,12 20:1,3 22:3 24:9,23 26:14 27:23 28:3,8 31:19,21 34:24 35:11 38:5,16,18 39:4 42:2 43:11 46:22 47:9 48:14 51:23 54:22 55:17 57:7,8 58:12 59:17,20 60:16 63:21 70:12 71:10 72:23 73:1,12 74:11,13 75:6 76:3,4,5,12 77:10,23</p>	<p>78:14,15,20 79:10,11 80:19,25 81:11,12 82:25 83:1,7,20 84:3,10 86:1 88:20 90:19 91:12,18,19 93:13,22 94:2,5,6,7,16,17 95:10 97:3 98:15,23</p> <p>I've 7:25 11:23 44:8,9 62:23 64:1,22 72:19 85:9 94:8</p> <hr/> <p style="text-align: center;">J</p> <hr/> <p>Jack 8:18</p> <p>Jacksonville 10:11</p> <p>January 1:7 3:14 11:11 15:17</p> <p>job 34:5 42:22 46:13,18 54:20 56:4 60:23 71:11 84:21</p> <p>jobs 45:22 57:12 81:2</p> <p>John 1:14 2:25 4:15 6:15 8:8,16 9:11 10:20 63:10 65:9 69:8 71:1,5 73:2 79:22 85:16 96:21 97:11,12,24</p> <p>join 41:10</p> <p>joined 7:3</p> <p>joining 2:3</p> <p>joke 64:11</p> <p>Jon 31:9</p> <p>Journal 69:9 79:25</p> <p>JR 1:15</p> <p>July 15:11,16</p>
--	--	--	--

<p>jump 63:23 64:2,23</p> <p>jumping 62:5 63:19</p> <hr/> <p style="text-align: center;">K</p> <hr/> <p>Karl 80:14,16 82:2 88:7,11</p> <p>Kentucky 79:25 80:6</p> <p>key 7:6 15:6 48:7</p> <p>kicked 59:15,16</p> <p>kids 77:21</p> <p>kinds 27:7</p> <p>kitchen 71:18</p> <p>knock 60:22</p> <p>knocked 83:5</p> <p>knowledge 22:23</p> <p>known 2:5 63:16 66:4</p> <hr/> <p style="text-align: center;">L</p> <hr/> <p>laboratory 22:18</p> <p>laid 46:18</p> <p>lake 5:10,12 17:6 29:23 30:19 33:21 34:11,19,21 36:4 44:4 45:5,8 55:11 57:18 58:13 71:10</p> <p>lakefront 32:4</p> <p>lakes 1:4 2:4 3:11 4:22 6:6,7 7:2,13 10:3 11:15 13:5 27:11 28:16 34:13 35:4 43:1,3 45:13 47:6 52:1,8,10 53:3,10,15 54:9 56:17 57:11 58:19 61:2 67:11 76:21 78:21 79:8,10 84:23</p>	<p>85:12 88:17,19,21,25 89:3,10,16 95:3 96:24,25 97:19 99:4</p> <p>lake-ward 33:20</p> <p>land 96:3</p> <p>Landrieu 85:4</p> <p>large 28:4 29:7 48:5 55:24 84:4</p> <p>larger 29:9</p> <p>largest 78:21</p> <p>Larson 49:17 51:21,22</p> <p>L-A-R-S-O-N 51:24</p> <p>last 4:24 8:20 10:19 36:9 37:25 46:2 60:20 64:6 80:20 82:4,16 83:25 84:13 94:8,9</p> <p>lasts 93:25</p> <p>late 46:25 64:8 95:13,14</p> <p>later 15:17 29:12 57:25 70:22 76:1</p> <p>latitudes 53:13</p> <p>Lauren 1:10 2:2,5 4:15 41:7,8 49:16,20,23 51:20 52:18 55:14 58:25 63:9 69:11 70:25 73:16 75:13 77:1,4,6 79:14 80:10 81:25 82:3,7 83:9,12,19,23 84:12 86:16 87:4 88:5,9 89:21 91:16 94:13 96:19 98:2</p> <p>laws 26:6,19</p>	<p>layer 82:25</p> <p>leaders 54:22</p> <p>learn 47:17 70:13</p> <p>learned 11:23 22:24 46:21 48:25 60:21</p> <p>learning 43:24 48:2</p> <p>least 6:23 13:15 16:9 62:3,13 66:2 69:7 72:16 78:24 85:18 92:25</p> <p>leave 36:19 39:14 92:1</p> <p>leaves 37:7</p> <p>left-hand 22:10 23:6</p> <p>legal 83:7</p> <p>legislation 15:11,13,16 16:6</p> <p>length 91:11</p> <p>less 31:22 37:6,11</p> <p>lessons 22:23 48:25</p> <p>let's 22:1,9 34:9 64:22</p> <p>level 18:4,8,13,14 22:5 66:3 92:21</p> <p>levels 35:20 70:9</p> <p>life 71:25 74:5 75:11</p> <p>light 27:24 28:2 56:10 87:20</p> <p>likely 54:11</p> <p>limestone 48:10</p> <p>limit 41:15</p> <p>limited 55:11</p> <p>line 8:14 13:8 42:19 50:10 94:16</p>	<p>lines 8:13,21 35:8</p> <p>list 5:2 19:17 40:6 53:20 69:13 75:14 79:15</p> <p>listed 3:19 12:15</p> <p>listing 13:18</p> <p>literal 52:11</p> <p>little 4:16 5:15 6:17 9:3 12:5,13 13:11 15:12 31:7 33:14,25 37:4 43:7 46:1 47:22 48:9 53:5 60:2 61:4 63:2 65:24 67:1 70:14,23 74:11 77:22 78:2 83:6 87:4 91:9 92:14 93:2 95:7,21 97:4,13</p> <p>live 63:12 71:6,17 73:19 84:16</p> <p>living 64:19</p> <p>load 64:16</p> <p>loading 35:3 46:6,8 81:9</p> <p>loads 46:4,5</p> <p>local 39:18 63:15</p> <p>locations 85:3</p> <p>lock 23:6,7,9,11,12 28:19 46:3 61:6,8,17 62:6,8,16 88:3</p> <p>locks 1:19 36:21</p> <p>long 6:23 11:11 12:16 19:5 47:1 60:6 86:8 89:24 91:6,12</p> <p>longer 3:17 31:21 94:8</p> <p>long-term 39:20 55:5 58:21 75:12</p> <p>long-time 7:5</p> <p>loop 67:4</p>
---	---	---	--

<p>lose 53:9</p> <p>loss 45:22</p> <p>lost 62:10</p> <p>lot 2:23 4:23 6:17 7:19 9:8 11:23 24:25 33:12 34:6 40:9 51:6 56:21 70:17 71:9 72:22 76:8,10 79:12 80:17,22 84:25 86:21 88:16 91:8 92:19 93:4 98:10</p> <p>lots 71:9 76:23</p> <p>Louis 6:19 7:4 40:3 50:1</p> <p>love 19:25 51:25 71:17</p> <p>low 14:2 20:5 35:20 70:6 94:24 97:14</p> <p>lower 22:9 31:4 36:14,16</p> <hr/> <p style="text-align: center;">M</p> <hr/> <p>magnetic 47:16</p> <p>mail 4:10</p> <p>main 53:2 87:25</p> <p>maintain 25:7</p> <p>maintaining 35:16</p> <p>maintenance 54:15</p> <p>major 72:23 74:18</p> <p>majority 14:4 58:6 96:4</p> <p>manage 30:7,15</p> <p>managed 30:21 31:1 39:11</p> <p>management 17:5 25:20 26:7,19,22,25 27:13 29:5 30:14 32:13 33:11 39:9</p> <p>manager 3:3 8:18</p>	<p>11:15</p> <p>managers 56:3</p> <p>manmade 54:13</p> <p>manufacturing 75:20</p> <p>map 13:7 33:23</p> <p>maps 25:8</p> <p>March 4:3 40:16 64:4</p> <p>Marina 52:5</p> <p>marine 50:3,4 51:7,14 80:16 93:23</p> <p>Mark 7:5</p> <p>market 68:14,22 69:3 73:4,15</p> <p>marketability 68:1</p> <p>marketable 68:15</p> <p>marking 65:10</p> <p>markup 86:11</p> <p>marshy 33:5</p> <p>Marty 42:11,13,14 43:12,15,20 44:8 45:1,4 46:17 49:3,14 80:22 81:8 89:2,7,17</p> <p>marvel 47:10</p> <p>master's 11:22</p> <p>materials 2:11</p> <p>matter 38:14 74:22</p> <p>matures 21:10</p> <p>maximize 41:16</p> <p>may 13:14,23 14:19 17:11 18:15,16 27:25 29:9 30:25 33:7 37:22 40:23 51:4 61:19 67:2,3 68:11 88:18</p> <p>maybe 33:6,14</p>	<p>56:10 63:19 65:6 67:8 70:13 82:16 86:12 88:17</p> <p>mcconahey 75:16 77:3,5</p> <p>McConahey 73:17 75:14</p> <p>McCook 91:1</p> <p>meal 75:24 76:10,15 86:3</p> <p>mean 23:22 44:17 70:18 71:11 72:16,22,24 79:5 86:21 91:24 96:25</p> <p>meaning 6:25</p> <p>means 34:23 68:6 92:23</p> <p>measures 15:3 26:23 58:17</p> <p>measuring 24:20 25:13</p> <p>mechanisms 97:11</p> <p>media 9:10 53:2</p> <p>medium 9:25 20:5,6,8 81:22</p> <p>meet 73:24 94:2</p> <p>meeting 1:4 2:3,8 3:12 4:8 40:9 41:6 63:14 72:6 83:14 99:22</p> <p>meetings 3:9</p> <p>member 51:7</p> <p>members 18:24,25 26:14 40:23 47:9 51:4 73:21</p> <p>memorized 89:25</p> <p>mention 86:24</p> <p>mentioned 15:5 20:14 21:6 29:3 35:13 37:12 40:1 46:22 50:9 51:2</p>	<p>63:6 70:12 98:8</p> <p>mercury 34:17 70:8</p> <p>mess 64:23</p> <p>methods 7:15 58:4</p> <p>Metropolitan 87:11 91:4</p> <p>Mexico 78:9 81:1</p> <p>Michael 75:15 77:7,8 83:10,17 84:1 94:14</p> <p>Michigan 17:6 29:24 30:19 33:21 34:19 36:4 44:4 45:8 55:11 58:13 71:10</p> <p>mid 95:14</p> <p>middle 3:2 4:17 12:22 98:24</p> <p>mid-year 11:17</p> <p>migrating 72:14</p> <p>Mike 94:14</p> <p>miles 44:3 47:1</p> <p>military 8:1</p> <p>million 27:6 34:1 38:12 46:2 47:23 57:12 80:4 85:12 90:10,11</p> <p>millions 38:19,20</p> <p>mind 70:1</p> <p>minds 69:5</p> <p>Minneapolis 11:12 81:4</p> <p>Minnesota 85:10,13</p> <p>minnows 48:5</p> <p>minute 80:20</p> <p>minutes 8:22 24:5,14 41:16 46:6 51:12 52:4 59:6</p>
--	---	--	--

<p>misleading 95:22</p> <p>mispronounce 42:1</p> <p>Mississippi 1:4 2:4 3:11 5:5,21 7:12 10:1,3 11:15 13:5 27:11 35:17 52:22 53:4,6,9,11,17 54:11,23 56:18 57:3,19 58:20 61:1 72:9 80:3 82:24 88:20,23 89:1,16 95:4 97:20</p> <p>Mississippi...the 80:8</p> <p>Missouri 5:22 77:20 84:3 100:3</p> <p>mitigate 15:3 18:9 31:16 32:22 90:21</p> <p>mitigating 33:10</p> <p>mitigation 14:23 15:3 18:5 31:20 32:12 36:6,24 37:10 38:1 58:7 90:16</p> <p>mitigations 58:8</p> <p>mix 36:10</p> <p>mixing 22:8</p> <p>mixture 88:21</p> <p>moderate 2:7</p> <p>Moderator 1:10</p> <p>modernize 55:6</p> <p>modes 23:17 24:3 92:18</p> <p>modified 15:12 23:8</p> <p>modify 22:20</p> <p>mollusk 57:6</p> <p>mollusks 54:2</p> <p>moment 21:24</p>	<p>34:9</p> <p>moments 2:9</p> <p>money 64:13 72:24</p> <p>monitor 30:9</p> <p>months 15:15,16 52:6</p> <p>moot 51:5</p> <p>morning 6:16,19 64:24</p> <p>mother 80:9</p> <p>mouth 63:20</p> <p>move 6:8 7:24 10:22 23:20 26:3 39:7 53:15 62:6,7 93:12,14 97:17</p> <p>moved 53:19</p> <p>movement 23:18 24:3 26:16 51:10 54:9,10 60:24,25</p> <p>movements 16:15</p> <p>moves 23:24</p> <p>moving 5:4,5 10:1 23:15 74:18 78:17,20 97:17</p> <p>multiple 17:21 60:18</p> <p>multiuse 16:12</p> <p>municipal 16:25 17:2</p> <p>museum 1:19 6:22,23</p> <p>mussel 43:5 53:25 54:3,4</p> <p>mussels 54:1,6</p> <hr/> <p style="text-align: center;">N</p> <hr/> <p>nail 48:21</p> <p>national 1:19 5:23 6:22 99:5,6</p>	<p>nation's 99:13</p> <p>native 53:8,22 54:6 69:20 84:5,8 88:18,24,25 97:13</p> <p>natural 33:3,22 38:14 45:11 97:15</p> <p>naturally- occurring 96:5</p> <p>nature 55:25 96:11</p> <p>navigation 16:14 21:19 28:18 30:13 31:11 35:16,22 42:16,24 45:15 61:16,23 78:14,15 93:6,17</p> <p>nearly 20:3</p> <p>necessarily 5:3 26:20 28:7 96:1 97:18</p> <p>necessary 29:14 31:15,20 32:12 36:24 90:17</p> <p>negative 14:22</p> <p>neither 90:5 100:8</p> <p>net 62:25</p> <p>nets 62:21 65:2</p> <p>network 17:20</p> <p>newer 23:4</p> <p>news 9:9</p> <p>nice 11:8</p> <p>night 64:14 98:24</p> <p>nine 40:2</p> <p>Nineteen 10:9</p> <p>Ninety 10:3</p> <p>non-Asian 47:19</p> <p>non-cargo 92:13 93:6</p>	<p>nonconnection 95:16</p> <p>nongovernmental 9:1</p> <p>non-native 69:7 88:17,21,23 89:3</p> <p>non-navigable 31:8</p> <p>nonstructural 25:15 26:8,23 27:1</p> <p>nor 43:1 100:9,12</p> <p>north 53:24 58:15 78:22 97:8</p> <p>northeastern 55:10</p> <p>northwest 31:5 40:10</p> <p>note 55:3 69:9 79:24 90:25</p> <p>nothing 24:24 39:15 47:10,12 74:23 75:24 76:1,2</p> <p>noticed 64:1,22 90:3</p> <p>notoriously 34:4</p> <p>nourishing 80:9</p> <p>novel 9:19</p> <p>nuisance 2:15 9:25 14:18 23:11,20 24:3 25:5 26:17 27:18,20,22,25 28:8,12 30:6,9,25 39:16,23 43:1,2 45:17 67:23 87:14,18,25 88:1</p> <p>nut 52:7</p> <p>nutrient 34:8</p> <p>nutrients 34:16</p> <p>nutritional 68:18</p>
---	---	---	--

<p style="text-align: center;"><u>O</u></p> <p>objective 7:21</p> <p>O'Brien 46:3</p> <p>obviously 97:6</p> <p>occasionally 96:17</p> <p>occasions 68:5</p> <p>occur 96:17</p> <p>Ocean 89:9</p> <p>o'clock 91:21</p> <p>offering 42:17</p> <p>officials 6:5</p> <p>oh 12:23 51:17 52:5 83:8</p> <p>Ohio 5:22 76:19 80:4</p> <p>oil 64:25 65:5,17 76:13,15</p> <p>oils 68:3</p> <p>okay 58:12 83:23</p> <p>old 80:2</p> <p>Omega-3s 68:16</p> <p>ones 50:23 57:23 67:2 74:15</p> <p>one-way 29:22 30:8 62:14</p> <p>ongoing 24:19 49:9</p> <p>online 62:12</p> <p>onto 48:25</p> <p>open 9:5,11 17:15 36:4,20 37:7 71:13 79:16 86:21,24</p> <p>openness 49:9</p> <p>operable 43:9</p> <p>operate 25:7 30:8,12,15 58:3 60:8</p> <p>operated 60:4</p>	<p>operates 99:11</p> <p>operating 48:3</p> <p>operation 44:10 54:15 62:11</p> <p>operational 43:17,22 60:12</p> <p>opinion 9:2,4 58:10 77:16</p> <p>opinions 9:8</p> <p>opportunities 7:11 21:8</p> <p>opportunity 2:10,19 4:25 11:6 30:1 41:19 46:14</p> <p>opposed 29:8</p> <p>opposite 19:24 20:10</p> <p>optimize 22:24,25 48:17,22</p> <p>option 24:25 54:12</p> <p>options 7:17,19 8:5 11:3 13:2 14:19 16:7,10 18:3 25:17 54:21 92:5 98:10</p> <p>oral 4:8</p> <p>order 14:11 19:9 60:19 79:19 83:15</p> <p>Ordinarily 17:5</p> <p>organic 34:16</p> <p>organisms 67:1</p> <p>organization 8:12 35:12 55:24 65:25 71:3</p> <p>organizations 10:18</p> <p>original 43:9,23</p> <p>originated 44:14</p> <p>origins 80:7</p> <p>Orleans 40:4</p>	<p>50:2,6</p> <p>others 2:16 66:1 67:24 80:11</p> <p>otherwise 100:13</p> <p>ought 75:8 93:22</p> <p>ourselves 74:13 93:10</p> <p>outrage 59:5 62:19</p> <p>outrages 57:24</p> <p>out-and-out 66:11</p> <p>outcome 100:13</p> <p>outcompete 66:22</p> <p>outdoorsman 81:18</p> <p>outdoorsmen 79:23</p> <p>outfalls 36:2</p> <p>outlawed 82:16</p> <p>outline 7:15 12:7,11</p> <p>outreach 26:2</p> <p>outset 35:13 40:1</p> <p>outside 6:6 13:13,20 22:14 57:14 64:22</p> <p>overall 40:12</p> <p>overtopping 32:8</p> <p>oysters 82:25</p> <p style="text-align: center;"><u>P</u></p> <p>p.m 1:7 99:22</p> <p>Pacific 83:3</p> <p>packet 3:20</p> <p>page 12:12 24:9,10 79:24</p> <p>pages 9:18,20 21:22 50:20 80:21 98:12</p> <p>paid 53:5</p> <p>pair 23:13 65:13</p>	<p>panel 3:25 44:13 80:13 98:4</p> <p>PANELISTS 1:13</p> <p>pants 76:17</p> <p>paper 2:11,13</p> <p>parallel 24:1</p> <p>parameters 48:3</p> <p>pardon 58:9</p> <p>parked 71:22</p> <p>participating 41:14</p> <p>participation 41:16</p> <p>particular 15:20 19:18 29:17 32:2 33:1 35:5 36:18,19 37:6 63:6 66:7 74:16 75:17 85:25</p> <p>particularly 5:1 50:16</p> <p>parties 100:9,12</p> <p>partner 8:16</p> <p>partnering 57:1</p> <p>partners 97:8</p> <p>partnership 13:17 49:4</p> <p>pass 39:2</p> <p>passage 47:23</p> <p>passion 98:11</p> <p>past 45:12</p> <p>path 39:22 40:20,24 84:24</p> <p>pathway 13:16,22,23 14:8 15:24 96:6</p> <p>pathways 13:13,19,21 14:1 16:1 19:14 95:25</p> <p>pay 5:2 72:20 75:2 85:17</p>
--	--	---	--

<p>PCBs 34:16</p> <p>pearl 82:24 83:1</p> <p>pearls 83:3</p> <p>pelicans 72:14</p> <p>pending 91:7</p> <p>people 59:20 63:22 71:2 72:8 73:8,24 75:3 79:15 80:17,23 85:19,23 86:8,9 93:22,25 98:17</p> <p>people's 42:6</p> <p>per 34:1</p> <p>percent 16:24 20:1,2 66:20 67:9 79:6 85:2</p> <p>percentage 67:8</p> <p>perennial 14:11</p> <p>perfect 63:3</p> <p>perhaps 25:21 38:22 68:15 88:24</p> <p>period 40:13 51:2 92:4 94:11</p> <p>permanent 4:19 25:10 56:13 58:11 96:16</p> <p>permanently 69:1 81:16</p> <p>permit 93:19</p> <p>permits 41:20</p> <p>persistent 34:16</p> <p>person 75:9</p> <p>personal 71:19</p> <p>pertains 42:7</p> <p>petroleum 50:5</p> <p>pharmaceuticals 34:18</p> <p>physical 16:8 20:17 22:2,6 25:18 31:2,12</p>	<p>32:1,3 33:9,13,18 36:11,23 37:8 38:7,10 45:6,18,21,23,24 52:11,15 54:12,18 56:11 57:20 58:21 74:21 81:16 89:8 90:2,17,23</p> <p>pick 2:10 68:12</p> <p>picked 12:9</p> <p>pick-up 64:16</p> <p>picture 7:22 25:8 47:3 94:15</p> <p>pieces 21:15</p> <p>pipes 35:8</p> <p>placed 22:15 33:2 38:10</p> <p>placement 90:22</p> <p>places 32:3</p> <p>placing 33:9,13 37:8</p> <p>plain 74:21</p> <p>plan 5:18,24 24:8,12 25:15 27:13,16,19 29:18 31:25 36:9 55:6 76:6 90:7,8,9 97:9</p> <p>planet 47:11 56:1</p> <p>planktivores 66:14</p> <p>plankton 66:18 67:2 70:7 78:3</p> <p>planning 11:23</p> <p>plans 72:17</p> <p>plant 27:23 28:5,13 29:2,8 35:14,25 57:7 71:13,14 75:21,23</p> <p>plants 25:23 33:24</p>	<p>34:10,17 36:22 71:11 76:7 87:8,10,15 88:2</p> <p>player 38:1</p> <p>please 41:2 42:3 49:21,24 71:4 77:2,4 79:21 82:1 84:13 86:17 91:17</p> <p>pleasure 6:21</p> <p>plenty 3:25 4:11 52:12</p> <p>plowed 96:3</p> <p>pocket 79:1</p> <p>point 5:9 10:21 29:24 30:3,4 33:7,19 35:6 43:22 44:25 48:7 52:4,13 61:7,9,13,15 62:16,19 65:1 70:6 73:3 80:11 86:5,21 95:12</p> <p>pointed 58:6</p> <p>points 17:8 28:11,15 29:21,23 30:8 33:10 35:9</p> <p>poisons 20:17,25</p> <p>polar 6:18</p> <p>pole 72:4</p> <p>politicians 75:7</p> <p>pollutants 34:15,16 35:4 87:17</p> <p>pollute 58:13</p> <p>polluting 74:8</p> <p>pollution 81:13 92:9</p> <p>pontoon 64:23</p> <p>Pool 44:5</p> <p>pools 64:5</p>	<p>poop 78:7</p> <p>populations 25:21 28:21</p> <p>portion 35:16 90:14,15</p> <p>position 89:18</p> <p>positioning 22:24</p> <p>possibility 56:10</p> <p>possible 23:17 34:25</p> <p>possibly 3:22 61:20 91:25</p> <p>potential 13:19 18:7 19:14 20:8 25:4 30:11 35:21 38:4,25 45:22 61:6 66:22 95:23,25 96:6</p> <p>potentially 19:16 20:21 34:12 38:21 39:2 88:22</p> <p>pound 72:20,22,25 85:17</p> <p>pounds 80:4 85:19,22</p> <p>power 57:24 59:8,9,19 60:11,16 61:19 62:10,11 71:19</p> <p>practice 28:6</p> <p>practices 26:22,25</p> <p>precipitation 14:6 17:9,13 29:6 30:18,21</p> <p>predators 70:10</p> <p>predicted 32:15</p> <p>preengineered 46:22 48:8</p> <p>prefer 24:17,22 68:10 97:21</p> <p>preference 70:12</p> <p>prepared 80:15</p>
---	--	---	---

prescindent 96:23	22:11 31:8 40:7	protein 68:16	72:18 80:12
present 7:16,18,21 8:5 18:11	50:21 52:15 64:9	86:8,10	82:6,10 87:8
presentation 3:25 4:12	65:21 70:16 86:4 94:20 97:1	provide 9:4 13:15 14:23 17:25	88:8 96:22 98:25
presented 26:13	problem 59:15	28:17 35:3 40:22	questions 2:14
preserve 50:13 51:10	60:19 68:7 73:7	58:18 77:1 90:21	3:23 4:1
press 54:24	74:18 78:7 82:24	92:21,24	12:17,21 20:23
pressure 17:11	83:3 97:6	provided 37:13	39:13 41:2,13
pretty 9:14 22:3,8 27:23 65:5 77:11	problematic 35:2	provides 16:16	43:8 63:13,15
84:24 91:12	procedural 59:24	18:3 19:1 50:11	65:20 74:7
94:16	procedure 18:19	56:12 61:8 62:13	86:15,17 88:5
prevent 7:11,16 13:3 14:17	proceedings 41:23	public 1:4 4:3 7:23	96:20
15:2,23 22:7	process 4:17 8:4	8:11 20:18 26:14	quick 44:17 69:18
26:20 45:17	25:9 48:16 64:18	45:24 47:9 92:9	82:5,10 88:7
48:13 50:12	70:14	98:20 99:22	92:2
51:10 52:12	processing 64:9	pull 66:24	quickly 27:3 73:7
54:10 57:17	75:21,22	pulled 44:18	quite 8:23 9:8
60:23,25	produce 70:4	pulsating 47:4	60:25
preventing 54:8	produced 86:3	pulse 78:11	quote 34:14
prevention 7:15 25:24 67:23	producers 83:4	pulses 48:13,18	<hr/>
previous 29:20 31:23 49:6 95:15	product 80:6	pump 82:13	R
previously 95:21	81:10 85:25	pumping 82:13	Raab 55:15
price 58:5	93:15	pumps 23:8	63:9,11 65:12
pride 93:10	products 50:5	purpose 7:20,21	82:5,9 83:7
primarily 31:7 36:10,15,17 89:5	68:20 84:18	23:10 32:10	89:19,23 90:3
primary 15:24 17:25 37:9	93:13	purposely 45:6	R-A-A-B 63:12
Prime 59:19	profitable 68:23	pursued 66:9	89:23
primer 9:17	program 8:18	pushed 31:1	rained 95:17
principals 84:17	programs 54:7	putting 20:17 22:6	rainfall 17:14
prior 45:17 96:17	progressing 43:25	36:11 45:24	rainwaters 29:11
privilege 12:2	44:1	63:20 65:2 86:18	ran 59:20
probability 19:22 20:9	progression 42:25	<hr/>	range 8:5 11:3
probably 8:11	43:5	Q	13:2 15:9 16:7
	project 3:2 11:15	quagga 54:4	18:3 20:13 21:7
	55:22 56:3	quality 3:1 34:4	36:20 39:17 48:4
	propose 61:14	36:1,5 37:11	69:7 87:1,2
	pros 80:23	55:8 58:8,15	ranging 10:10
	protect 52:16	quantitative 20:1	ranking 20:5,8
	55:25 57:20	quarter 47:7 60:18	rascals 76:9
	protecting 75:10	quarterly 73:25	ratchet 34:5
	protection 58:19	question 2:20	rate 92:14,18
		12:24 69:25	rates 98:14
			reached 35:22

<p>reactions 40:21</p> <p>reader 9:20 16:2,3</p> <p>reading 87:9 98:24</p> <p>real 63:24 65:17 80:19</p> <p>Realistically 78:19</p> <p>realize 25:12</p> <p>really 3:11 7:20 10:2 11:7,24 12:14,17 15:6,23 16:5,12,22 18:12,17,22 19:13 20:4,11,20 23:1,19 24:18 25:3 26:13 27:9 33:7,10 37:16 38:18 39:4,15 40:25 48:21 53:3 54:13 56:6,8 57:2 58:3 61:9 65:1 68:24 69:5 73:7 75:2 77:24 79:11 92:2,3 93:3,4,5 94:6,20 95:2,4,8</p> <p>reason 18:25 21:1 31:5 37:9 61:7 72:13 84:8 93:9 94:23 95:24 98:19</p> <p>reasons 15:21</p> <p>recall 59:5</p> <p>receive 54:19</p> <p>received 11:18 15:11,15</p> <p>receiving 91:15</p> <p>recent 34:7</p> <p>recently 93:24</p> <p>reclamation 33:24 34:10 35:14,25 91:5</p> <p>recognize 42:9 79:19 83:19 95:9</p> <p>recommended</p>	<p>5:17</p> <p>record 41:23</p> <p>recreational 16:17 23:24 31:11 51:25 71:16 93:7</p> <p>red 94:16</p> <p>reduce 58:24</p> <p>reduced 100:7</p> <p>reduction 24:21 34:23 37:1 39:12 64:3</p> <p>redundancies 60:19</p> <p>Reed 63:10 71:1,5</p> <p>R-E-E-D 71:6</p> <p>refers 16:3</p> <p>refine 48:3</p> <p>refined 19:17 20:20</p> <p>regard 12:18 13:9 15:13 18:8 20:9 34:7,22 38:2 39:23 61:4,20 66:4,8 68:1,25 92:17</p> <p>regarding 75:19</p> <p>regards 34:4</p> <p>region 44:18 55:7 57:19</p> <p>regional 8:9 54:22</p> <p>registered 42:10 79:15,17</p> <p>registration 2:18,21</p> <p>regulation 74:22</p> <p>regulations 26:6</p> <p>regulatory 35:1,2</p> <p>reintroducing 73:9</p> <p>related 100:8</p> <p>relationship 49:7</p>	<p>relative 100:11</p> <p>relatively 63:7</p> <p>released 3:14</p> <p>relied 59:9</p> <p>rely 59:8</p> <p>remarks 98:4</p> <p>remediating 36:3</p> <p>remember 34:20 48:10 59:5 61:24 85:10</p> <p>remind 71:2</p> <p>reminding 74:12</p> <p>removal 34:8</p> <p>remove 23:10 87:24</p> <p>removes 70:14</p> <p>renowned 67:13</p> <p>repel 22:18</p> <p>report 2:14 3:14,15,17,24 5:8 7:13 8:2 9:18 12:7 13:11,21 15:15,18,21,25 18:3,14,21,22 21:21 22:1 23:3 26:13 29:10,15 37:13,14,18 40:17,22 42:18,21 46:13 50:10,11 54:17 56:5 58:9 87:14 91:8</p> <p>Reportedly 44:3</p> <p>Reporter 100:1,18</p> <p>Reporting 66:9</p> <p>reports 7:25 8:3 13:25 16:4 53:2</p> <p>represent 42:4</p> <p>representation 15:9</p> <p>representatives 98:22</p>	<p>representing 42:15 71:3 77:15</p> <p>request 40:13 51:3</p> <p>require 54:14</p> <p>requirements 18:5</p> <p>requires 55:4</p> <p>reroute 35:6</p> <p>research 52:22 84:8 92:3</p> <p>reservoir 91:1,2,6</p> <p>reservoirs 29:14 31:17 91:13</p> <p>resident 10:13 44:21 51:23</p> <p>residents 38:12</p> <p>residual 38:15</p> <p>resolved 60:7</p> <p>resource 16:5 25:3 33:22 35:4 74:8 75:11 77:12</p> <p>resources 27:3,5 38:14 45:11 52:14 55:10 78:13</p> <p>responses 69:19</p> <p>responsibility 8:24,25 26:14,15 38:17 39:16</p> <p>rest 95:23</p> <p>restored 62:12</p> <p>result 58:11 59:6 69:21</p> <p>resulted 59:11</p> <p>resulting 31:14</p> <p>return 2:22 62:25</p> <p>reverse 17:10</p> <p>reviewed 50:15</p> <p>revised 93:24</p> <p>Richard 51:21 52:18,20 69:18 71:1 73:16,18</p>
---	---	---	---

<p>82:22 83:8,22 87:7</p> <p>rid 68:25 69:1 75:24,25 76:8</p> <p>rightfully 42:20</p> <p>right-hand 13:7 22:2 23:18 33:23</p> <p>Rim 83:3</p> <p>risk 9:25 14:2 17:5 19:20,21 23:14 24:21 31:14 32:25 33:12 37:1,10 38:11,24 39:1,7,11 54:16 67:20</p> <p>risk-based 18:19</p> <p>risks 38:15 45:24 58:24</p> <p>river 1:4 2:4 3:11 5:22 7:12 11:16 13:6 17:10 27:11 28:25 31:6,7 35:15,18 44:1 51:25 52:23 53:4 56:18,22 57:3,19 58:20 63:17 65:4,15 66:11,23 67:5,10 70:4 71:17,18 72:9,25 73:22 74:1,3 75:3 76:7 77:12 78:18 80:9,24 81:3,21,24 84:4 88:20,23 89:1,16 93:13 95:4 97:16</p> <p>riverborne 92:6</p> <p>riverman 81:18</p> <p>rivermen 80:17</p> <p>rivers 1:19 6:22,25 55:22 58:13 74:4,6 77:13,21 78:2,13,14 79:4 82:24 84:6,10 85:1,3 97:15 99:4</p>	<p>road 11:12 61:6,24 62:16</p> <p>Robinson 42:12 49:17,18,22,25 51:15,19 91:18,19 93:9</p> <p>R-O-B-I-N-S-O-N 49:19</p> <p>rock 7:6 48:10</p> <p>Rockies 95:10</p> <p>role 7:6</p> <p>roll 91:22</p> <p>room 47:14 80:11 99:11</p> <p>roughly 91:3</p> <p>round 53:18</p> <p>rounds 41:19</p> <p>route 16:20</p> <p>routed 28:12</p> <p>row 83:25 84:13</p> <p>run 22:16 63:22 72:4</p> <hr/> <p style="text-align: center;">S</p> <hr/> <p>sad 84:10</p> <p>safely 49:10</p> <p>sailboat 52:5,8,9 63:25</p> <p>sailboats 52:7</p> <p>salmon 86:7</p> <p>Sanitary 36:16 37:7 48:11</p> <p>saturating 62:20</p> <p>save 84:23 85:1</p> <p>savings 92:14,18</p> <p>saw 47:2</p> <p>scales 44:20</p> <p>scared 85:14</p> <p>scenario 32:14 33:1 36:19 37:5</p>	<p>scenarios 32:2,20 38:16 87:24</p> <p>SCF 50:3,4 51:7,15,16,17</p> <p>schemes 70:4</p> <p>scientific 47:14</p> <p>scientific-based 45:16</p> <p>scientists 12:2 67:12,13</p> <p>scooping 64:14</p> <p>scope 15:12</p> <p>screen 30:22,23</p> <p>screens 27:23 87:19</p> <p>screw 74:14</p> <p>scrubbing 64:25</p> <p>sea 10:14</p> <p>SEACOR-related 50:4</p> <p>seat 76:16</p> <p>Seattle 10:12</p> <p>second 2:12 3:22 29:18 41:19 69:25 75:1 83:24 84:13</p> <p>secondary 35:10</p> <p>secondly 76:16</p> <p>seconds 46:9</p> <p>Secretary 8:13</p> <p>sedge 57:7</p> <p>sediment-dwelling 67:1</p> <p>sediments 36:3</p> <p>seek 53:21</p> <p>seem 33:17 47:20 50:24</p> <p>seems 22:8 56:8 64:2 77:25 78:15,16</p>	<p>seen 8:1,12 32:21 52:12 55:1 64:7,15 71:24 85:18,21</p> <p>seldom 74:7</p> <p>selection 54:24</p> <p>self-contained 75:21</p> <p>semi-truck 46:4</p> <p>semi-trucks 81:10</p> <p>senator 85:4,9</p> <p>send 12:24 85:17 86:6 98:25</p> <p>sense 68:15 69:20 76:16</p> <p>sent 4:23</p> <p>separate 76:14</p> <p>separating 55:2 71:9</p> <p>separation 4:19 16:8,9 32:1 45:7,18 50:24 52:11,15 54:12,18 55:4 56:12 57:20 58:5,12,21 78:10 89:9,20 90:2,6,9,12</p> <p>series 27:23 85:8</p> <p>serves 16:19 17:1,4 56:18 66:16</p> <p>Service 5:25</p> <p>seven 46:5 95:19</p> <p>seventh 3:9</p> <p>sever 92:5</p> <p>several 16:13 23:14 68:4 69:13</p> <p>sewage 72:10</p> <p>sewer 17:20 36:2</p> <p>shad 64:3</p>
---	--	--	---

<p>shape 40:24</p> <p>shared 8:24,25 26:13 38:16 39:16</p> <p>shaving 12:22</p> <p>sheet 2:11,13</p> <p>shell 82:12</p> <p>shellfish 82:18 85:8</p> <p>shells 82:12,14 83:2 84:4,8,9</p> <p>She's 80:1</p> <p>ship 36:16 37:7 48:11 70:4</p> <p>shipped 76:11</p> <p>ships 80:4</p> <p>shores 29:23</p> <p>short 60:6 92:4 94:11</p> <p>showing 69:23</p> <p>shut 74:23</p> <p>shutdown 71:13</p> <p>shutoff 81:8</p> <p>shutting 59:12</p> <p>sick 74:4,6,13</p> <p>sierra 51:14,17 55:21,22 56:11</p> <p>significance 6:24</p> <p>significant 5:9 14:5 16:15,16 17:9,11,12 28:23 29:6,11,16 30:17 31:10 32:9,12,14,16,17 ,21 33:22,24 34:15 35:13,15 36:5,25 37:1 38:1,14,24 39:1 59:18 62:9 67:8,10 94:17</p> <p>significantly 31:21 37:6,11</p>	<p>signify 86:17</p> <p>sign-in 2:19</p> <p>silver 63:8 66:6 68:8</p> <p>similar 18:8 30:14 43:4 53:13</p> <p>simple 22:3,8 23:19 27:23 71:15 73:1 74:14 78:1,10,15</p> <p>simply 23:7 25:16 27:17 28:10</p> <p>single 28:11</p> <p>sir 10:25 11:5 48:21 52:16 69:11,16 70:23 75:13 81:25 89:21 91:16</p> <p>site 40:8,11 84:2</p> <p>sites 9:10</p> <p>situation 84:10 86:3</p> <p>situations 62:3</p> <p>six 5:25 73:21</p> <p>size 29:1</p> <p>sky 60:10</p> <p>slide 24:14 37:3 61:13</p> <p>slides 7:14 10:24 11:2</p> <p>slightly 6:17</p> <p>slimy 65:15</p> <p>slogan 70:18</p> <p>sluice 36:22</p> <p>small 53:14 64:3 66:25</p> <p>smaller 31:17,19 87:20</p> <p>smallest 53:16</p> <p>snapshot 11:3</p> <p>snapshots 9:15</p>	<p>sneak 78:4</p> <p>soap 64:25</p> <p>society 68:10</p> <p>sold 86:1</p> <p>solid 50:11</p> <p>solution 5:7 39:8,20,21 50:12 51:9 54:25 56:13 58:3 74:20</p> <p>solutions 17:23 36:12 45:16 74:15</p> <p>somebody 60:24 64:7,10,13 65:7</p> <p>somehow 64:18</p> <p>someone 38:23 73:5</p> <p>someplace 65:6</p> <p>somewhere 81:22 95:11</p> <p>sooner 76:25</p> <p>sorry 24:10 38:25 40:4 78:7 82:20 90:12</p> <p>sort 7:17,24 11:3 19:24 47:2 68:18</p> <p>sounds 43:23</p> <p>source 60:16 68:16 70:11 76:11</p> <p>sources 53:21</p> <p>south 58:15</p> <p>Sparks 51:21 52:18,20,21 69:18 82:22 83:8,20,22 87:7</p> <p>spawn 97:22</p> <p>spawning 97:16</p> <p>speak 39:4 41:18,25 42:10 46:14 58:8 66:1 73:20 75:8,9,19 79:16 83:15</p>	<p>87:14 92:16 95:6</p> <p>speakers 2:25 4:12 41:9 42:10 69:13</p> <p>speaking 27:4 34:25 41:4 55:20 85:16</p> <p>speaks 37:16</p> <p>species 2:15 4:21,23 5:2 9:22,25 11:24 13:4,23 14:8,18 19:15,17,23 20:6,7,11 21:16 23:2,11,15,20 24:3 25:5 26:17,21 27:19,20,22,25 28:8,12 30:6,7,9,25 39:1,16,23 43:1,2 45:17 50:13 51:10 53:6,12,22 54:10 56:13,19 57:3,10 61:10 62:7,14 66:6,13,22 67:24 69:6,20 70:1 72:9 73:10 81:6 83:5 87:15,18,25 88:1,12,17 89:3 96:10</p> <p>specific 12:17 19:20 39:13 83:11</p> <p>specifically 13:10 25:6 28:7 57:4 66:5 68:8 87:15,17 89:13,15 90:21</p> <p>spell 42:2</p> <p>spelling 42:3</p> <p>spend 12:5 21:24 24:4,13 52:5,9 76:22 93:2</p> <p>spent 27:6,7</p> <p>Spernoga 69:8</p>
--	--	--	---

<p>79:22 96:21 S-P-E-R-N-O-G-A 96:22 spiny 57:5 split 36:13 spoke 12:1 58:9 spoken 52:2 79:18 spread 27:14 29:22 45:17 54:2 spring 56:23 squares 33:25 St 6:19 7:4 40:3 50:1 77:9 staff 56:3 stake 5:6 25:14 39:19 stakeholder 15:5 39:24 stakeholders 7:23 9:1 15:10 39:19 40:14 51:9 54:23 stand 25:22 26:18 38:4 standard 18:18 58:14 67:6 standards 94:1 start 22:1 24:4,12 42:16,23 47:3 56:15 76:19 81:9 started 19:16 88:25 starters 83:2 starting 42:11 81:3 starts 24:10 state 5:12 9:1 15:9 25:3 35:1 39:18 62:23 70:21 73:23 79:21 84:13 98:22 100:2</p>	<p>state/federal 13:18 states 5:10,12 6:6 27:10,15 57:1 stay 5:18 45:8 steel 71:7 80:24 steering 10:17,18 15:8 stenographer 41:22 83:13 step 4:18 steps 19:13 56:14 stick 24:20 stipulation 34:22 stone 92:1 stop 5:7 32:6 74:20 76:17,22 81:7,11 stopped 92:1 stopper 4:25 stopping 43:25 81:19 storage 29:11 store 29:14 storied 34:3 storm 59:10 storms 29:15 60:7 story 60:6 straight 20:15 strategic 39:22 strategy 5:23 stream 17:1 57:6 77:18,19 streams 14:7 97:23 Street 69:9 79:25 stretch 33:6 strides 58:23 structural 32:20 structure 22:6</p>	<p>23:7 25:19 studied 67:15 studies 18:16 84:22 stuff 9:23 10:14 70:20 75:25 87:20 91:11 subcontinental 95:9,24 subject 88:12 submit 4:9 subsequent 24:22 26:24 subsidize 73:5,14 substantive 67:19 suburbs 17:3,19 successes 45:13 successful 26:10 33:10 suggests 32:3 36:18 suited 21:11 47:2 summarize 40:21 summary 3:15 9:14 12:9 50:21 87:9 summer 52:7 Sunday 64:24 super 56:18 supply 16:20 55:9 69:24 support 58:20 sure 12:21 37:24 52:3 54:4 73:6 82:4 92:11 97:7 surface 22:7 32:5 surgeonfish 47:20 surrounding 17:3 sustain 68:22 74:5 sustained 24:16,23</p>	<p>81:23 sustains 75:12 81:24 sustenance 75:11 Suzanne 100:2,17 swamp 57:7 95:16 swampy 33:5 swarms 64:5 swim 23:21 30:23 swimming 62:5 switch 37:3 92:18 sworn 100:5 synopsis 37:12 44:17 system 13:13 14:3,15,21 15:1,20 16:12,16,19,25 17:7,12,24 23:24 25:7,11 28:1,15,17 29:4,22 30:9,12,15 33:7,13,19,20 36:13,23 47:1 51:12 53:19 56:16 59:24 60:5,17 61:11 74:1 81:3 88:1,23 89:1 systems 59:22 61:21 <hr style="width: 20%; margin: 10px auto;"/> <p style="text-align: center;">T</p> <hr style="width: 20%; margin: 10px auto;"/> T.J 46:3 table 2:22 3:16 tagged 47:19,20 tail 65:14 tailwater 62:2 taking 4:16 41:22 58:23 96:24 talented 12:1</p>
---	--	--	--

<p>talk 5:3 7:7 13:11 64:10 91:20 95:7</p> <p>talked 44:24 48:8 85:9</p> <p>talking 12:5 21:24 24:5 48:11 70:2 85:4 89:8</p> <p>talks 15:25</p> <p>tall 62:4</p> <p>target 5:2</p> <p>tasty 68:6</p> <p>taxpayer 75:2,10</p> <p>taxpayers 58:2</p> <p>team 8:14 11:25 32:19 33:1 49:11 59:19 77:18,19</p> <p>teams 62:20</p> <p>technologies 8:7 10:4 13:2 14:19 16:8 17:22 21:13 23:4,5 24:1 25:16,17 28:3 36:21 54:15</p> <p>technology 18:4 21:9 31:23 36:12 44:21</p> <p>technology-based 27:17 29:19</p> <p>temperature 11:10</p> <p>temporary 13:15 14:8 58:3</p> <p>tempted 18:15</p> <p>ten 10:2 46:2 53:6 57:3 81:20</p> <p>tens 38:19</p> <p>terms 31:19 53:7 68:14 93:25</p> <p>testament 11:25</p> <p>testimony 9:5 100:4,5</p> <p>thank 6:14 11:5,6 41:7 42:14</p>	<p>46:13,15,16 51:20 52:16,17 55:12,13 56:2 58:25 59:1,2 75:13 77:6 79:12,13,14 80:10,18 82:3 84:12,15 86:16 99:15,17,21</p> <p>thanks 2:2 4:15 41:9 51:13 97:24</p> <p>that's 3:20 5:7,22 13:8 15:20 21:21 22:15,16 25:1 32:22 33:24 35:7 44:12 46:4,6,8 50:1,17 51:14 59:19 60:5 66:15,21 67:18 70:20 71:8,17 72:13 73:2,19 74:18 75:4,5 77:13 78:23,24 79:2,9 82:17 84:18,23 85:7,19,20,22 87:5 89:11 91:7 94:4,20 95:1 97:11 98:19</p> <p>theme 99:3</p> <p>themselves 21:24 83:15 88:18,22</p> <p>thereafter 100:7</p> <p>therefore 57:16</p> <p>there's 2:17 3:11 5:2 9:3,13,20 20:2,23 22:11,15,16 24:24,25 30:11 32:11,20 35:25 38:24,25 47:10,12,14 52:1 53:8 57:8 60:9,18 61:21 62:1 63:24 67:5 70:19 74:19 75:25</p>	<p>76:1,2,20,23 78:1,5 83:5 85:24 86:9,10,21 90:18 91:8 93:15 94:22 97:19 98:2</p> <p>thereto 100:12</p> <p>they'd 64:13 82:12,13</p> <p>they'll 86:6 97:22</p> <p>they're 14:11 50:3 55:24 58:3 66:17,18 68:9,15 70:7 72:14,15 75:20 79:9 85:11 86:2 87:23,24 88:4 90:20 97:9,15 99:4,5</p> <p>they've 56:8</p> <p>third 41:19</p> <p>thirdly 2:17</p> <p>Thornton 91:2</p> <p>thoughts 38:1 86:23</p> <p>thousand 50:20</p> <p>thousands 21:22 62:23 81:1,2</p> <p>threat 53:3</p> <p>threaten 53:6 57:10 85:7</p> <p>threatened 53:23</p> <p>threats 53:7</p> <p>threw 86:22</p> <p>throughout 17:19</p> <p>thrown 80:20</p> <p>thus 17:11 25:23 29:25</p> <p>Tim 42:11 49:17,18,22,25 51:15,19 80:22 91:18 93:9</p> <p>tip 87:5</p> <p>title 32:2 36:18</p>	<p>today 2:20 3:21 4:16 5:1 7:7 12:4 21:5 22:20 30:15,16 32:7 37:24 38:5 39:15 40:6 41:2 42:22 43:16 55:21 80:1</p> <p>today's 3:12 69:9</p> <p>Tom 9:19</p> <p>tomorrow 27:4 40:4</p> <p>tongue 87:6</p> <p>tonight 7:18 8:23 9:16 11:8 12:20 41:4,9,11 42:4,10 45:22 86:22 87:3 98:6</p> <p>tonight's 41:23</p> <p>tons 46:2</p> <p>tool 17:4 18:22 19:9 29:4 37:15</p> <p>top 70:10 81:14</p> <p>topic 98:12</p> <p>topics 87:2</p> <p>total 3:9 16:24 18:17 59:6 66:20 90:12 95:1</p> <p>totally 5:23</p> <p>touch 59:3</p> <p>tour 9:7</p> <p>touts 80:7</p> <p>toward 39:22</p> <p>towards 39:8</p> <p>towboat 92:5</p> <p>towboats 94:2</p> <p>towing 80:23 92:6</p> <p>tows 50:5</p> <p>traded-in 21:12</p> <p>tradeoffs 19:8</p> <p>trade-offs 37:23</p>
--	--	---	---

traditional 87:16	trucking 46:11	42:6 43:16 50:8	52:14 76:12,15
traffic 16:17	trucks 46:4	56:16 57:23 58:1	value 68:19
train 87:16,19	true 6:25 78:20	62:25 63:14	valvata 57:6
training 11:20,21 65:23	truly 69:6	89:17	Vanette 73:17 75:14,16 77:3,5
transfer 7:11 13:3 14:9 15:2 19:16 25:24 26:20 28:21 30:11 44:24 50:13 56:19 62:14 67:23 88:22 96:11 98:14	try 14:17,22,25 23:1 24:2 32:25 34:24 48:22 52:12 65:19 66:2 67:22 69:3,6 73:12,13 77:12	undertaking 42:19 56:15	variety 7:15 25:4 57:8
transferring 13:23 19:23 32:11	trying 27:14 32:22 34:5 40:19 83:14 88:13	undone 32:10 38:21	various 8:6,25 54:15 73:24 80:2 85:2
transfers 56:14	tubnose 53:20	unintentional 38:22	vary 33:8
transformer 59:13 60:17	tunnel 31:18	union 71:6	verge 5:4
transformers 59:11,12	tunnels 29:13	unique 8:2 27:1 47:15 61:18 76:3 96:14,15	version 3:17
transited 46:3	turn 6:12 10:21 24:6 41:6,12 60:10 83:20 99:19	unit 64:9	vessel 93:19
transplanted 45:5	turned 15:17	university 76:5	vetted 56:8
transport 84:6 94:25 96:9	Twitter 40:7 41:5	unknowing 96:2	via 89:6
transportation 51:11 55:7 92:5,6,9	twofold 14:16	unknowns 67:14	viable 57:13
treasures 52:14 99:5	two-way 4:20 28:15 29:21	Unless 11:1	Victor 55:18
treat 34:18 87:16,17	type 9:21,22 27:25 98:15	unquote 34:14	virus 83:4 87:22
treated 16:25 17:2 34:2 87:11 88:3	types 8:6 21:10,13 37:17	unrealistic 50:24	voice 98:6,16
treatment 27:19,22 28:2,13 29:1,12 34:17 36:21 87:8,15 88:2	typewriting 100:7	unreturned 92:1	voltage 22:16
tributaries 53:16	<hr/> U <hr/>	unusual 77:11	volume 16:24 34:15 35:14
trout 86:6	U.S 3:6 71:7	upon 48:24 57:18 73:25 74:24	volunteer 79:3,20
truck 44:23 46:5,6,8 64:16	ultimate 17:23 18:16 39:8	upper 23:6,18 36:14,23	volunteers 77:10 79:2
	ultimately 84:23	upstream 53:16 54:8	vortex 6:18
	unbelievable 94:3,10	urge 57:16	<hr/> W <hr/>
	uncertain 50:25	usage 31:10 57:14 74:24	wages 57:13
	understand 6:24 9:16 22:12 26:16 30:3 38:19 39:6	useful 65:6	walk 9:15
		users 14:14,20	wall 7:19 69:9 79:24
		usual 63:25	warning 30:10
		UV 27:24 28:2 87:20	wasn't 60:3 72:7 87:9 96:8
		UV-based 28:4	waste 74:9
		<hr/> V <hr/>	wastewater 16:25 17:2 34:2,17 87:16
		valuable 6:11	

watch 63:22	39:12 48:22	82:20 87:13	wondered 57:25
watching 62:24	85:24 86:12 88:4	88:16 89:5,11	82:17
64:1	weather 28:25	90:1,7,15 92:11	wonderful 77:19
water 16:20	website 2:19 3:18	95:6 97:24 99:17	wood 60:22
17:5,16	4:6,10 6:4 9:18	we've 10:1,5 22:13	work 25:1 46:7
22:8,15,17	12:15 13:24 16:3	32:21 40:5,12	48:3 50:3 55:25
23:9,20 26:6,7	21:21 41:24	60:6,11 61:5	60:14 62:22
28:3,5,10,15	98:23	64:15 65:10	72:21,23 80:16
30:13,19,20,21,2	websites 9:3	66:10 67:14	93:21
4 31:9,13	we'd 6:11 40:18	84:10 85:18,20	worked 52:24 71:7
32:5,6,7,9,11	week 11:13 46:5	94:10,11	worker 71:7
33:14,21,24	52:10 85:4 95:19	whatever 34:25	working 8:15 12:3
34:4,8,10,14,20,	weeks 40:16	73:6,11 74:10	48:1 49:11 51:8
21,25	weight 66:20	82:15 87:21	63:4 86:13
35:9,14,16,20,23	Welcome 6:15	whereas 68:11	world 53:24 76:12
,25 36:1,5 37:11	we'll 3:25 4:11	Whereupon 99:22	worried 10:2 79:3
55:8,9 56:20	43:18 48:25	whether 44:13	worry 4:22 60:11
57:5 58:7,15	49:16 69:14,15	74:11 87:10	worse 75:4
62:6 64:6	70:23,25 89:25	88:21	worth 38:20
66:15,18 78:10	99:9	white 3:1 5:8 56:2	Worthen 71:1
82:12 87:11 88:3	we're 3:10	80:6 94:21 98:18	73:17,18,19
91:4	7:7,14,18 8:4	whole 6:17 8:24	W-O-R-T-H-E-N
water-based 50:14	9:7,22 10:2	10:14 11:23	73:19
waterborne 93:17	15:12 22:4,5	32:10 33:12	wow 84:4
watercraft 71:20	24:8,12,24 39:25	47:17 64:16	wrap 24:6
waters 5:21 22:7	40:3,4,7,15,18	68:12 70:17,20	wrong 43:10 61:20
33:21 34:13	41:3 42:22 46:19	71:25 73:14 76:8	78:12
57:21 85:5	47:7 48:2 50:1,2	79:12 83:5 85:7	wrongly 58:9
watershed 7:1	51:4 56:24	95:4	
13:6 78:5,6	57:4,9 60:13,14	whom 55:23	Y
89:15	69:4 72:16	who's 3:2 83:13	yet 50:20 65:15
waterway 13:13	74:8,9,10	whose 100:4	York 28:4 40:11
14:3,15,21 15:20	77:10,18	who've 22:12	you'll 3:15 8:23
16:12,13,19,25	78:18,19,23 79:1	wide 15:9 20:13	9:2 12:21 21:25
17:7,24 22:6	84:18,25	25:4 48:4 57:7	84:22
25:11 26:3 27:21	85:15,16 86:25	87:1,2	yourself 82:8
29:4 31:13 35:17	89:8 91:14,20	wild 64:22	yourselves 18:23
36:13 38:7,10	93:11 94:23 95:1	Wildlife 5:25	39:5
47:1 57:14	98:19,20	window 6:24	you've 8:3 32:10
waterways 15:22	Wethington 1:16	71:18	54:3 55:1
31:6 42:16,23	3:2 10:22,25	withdrawals 55:11	Yu 79:25
43:3 45:18 50:7	11:5,14 43:11,14	witness 100:3,5	
51:11 53:1 54:5	44:6 46:15 48:20	witnessed 63:18	
56:12 57:1 63:7	51:13,17 52:17		
71:10 90:18	55:13 59:1 61:3		
ways 14:17,18	65:19 73:2 79:13		

<p><u>Z</u></p> <p>zebra 43:5 54:3</p> <p>zero 13:9</p> <p>Zes 100:2,17</p> <p>zip 42:5,15 49:20,22,23,25 51:24 52:21 55:18 71:3 77:2,4,16 79:21,23 82:1,8 84:14,16 91:16</p> <p>zone 29:25 30:1,6,10,21 31:1,3 61:13</p>			
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