

Kalamazoo River, Area 2

Meeting

Taken on: July 25, 2017

JENSEN LITIGATION SOLUTIONS

180 North LaSalle Street

Suite 2800

Chicago, IL 60601

312.236.6936

877.653.6736

www.jensenlitigation.com



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UNITED STATES

ENVIRONMENTAL PROTECTION AGENCY

PUBLIC MEETING

Regarding the Proposed Cleanup Plan For
Area 2 of the Kalamazoo River Site

July 25, 2017

Proceedings held at the Otsego District Library
Beginning at approximately 6:00 p.m.

Presented by:

DIANE RUSSELL

U.S. EPA Community Involvement Coordinator

JAMES SARIC

U.S. EPA Remedial Project Manager

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1 Otsego, Michigan
2 Tuesday, July 25, 2017
3 At approximately 6:00 p.m.
4

P R O C E E D I N G S

5
6
7 MS. RUSSELL: Just some housekeeping
8 things as folks are coming in so we can get
9 rolling here.

10 For one thing, we do not have
11 microphones tonight. So I just want to let
12 everyone know that Jim and I are going to do our
13 best to make sure that we speak loudly. I don't
14 think either one of us have a problem doing that.

15 But if for some reason you're having a
16 hard time hearing, please just let us know so
17 that we can correct that. We want to make sure
18 everyone has the information that they need
19 tonight.

20 With that, I just wanted to -- we do
21 have some fact sheets up front in case you didn't
22 get one of those. One of the things that's in
23 the fact sheet is a comment form.

24 So if you're interested in submitting

1 comments, there's a couple ways that you can do
2 that for this proposed plan that we're going to
3 be talking about tonight.

4 You can send in a written comment. And
5 you have to stamp that and send it my way and
6 we'll go ahead and put that into the record.

7 There is a public comment form also on
8 our website. Our website is on the front in the
9 gray box towards the bottom. So you can just go
10 to our website. There's a comment form.

11 And you can also do it verbally tonight.
12 We have a court reporter with us tonight, so we
13 can also enter that.

14 So just a few things before I pass it
15 over to Jim. I just wanted to say, again, the
16 purpose of tonight's meeting is to go over what
17 EPA is proposing for clean-up in a section of
18 the river -- of the Kalamazoo River that we call
19 Area 2.

20 There's a nice map of where that's
21 located on the front of the fact sheet, just so
22 you'll get a general idea of where that's at.

23 But Jim is going to go into more detail
24 about what we're proposing for this piece.

1 And the format for tonight's meeting,
2 we're going to be giving a presentation, and you
3 know, having a space for you to ask your
4 questions.

5 But then we're going to take a short
6 five minute break. That break is meant to kind
7 of just create a line between the portion of the
8 meeting where, you know, you can ask questions
9 and we can respond.

10 But the last part of the meeting where
11 we're actually accepting formal comments, the
12 EPA and the representatives will not be
13 responding. So if you have a question during the
14 public comment period, we will not be able to
15 respond.

16 So make sure if you have any questions
17 as we go through the presentation, there's a nice
18 little spot on the back of your agenda, you can
19 jot those down so you don't forget and make sure
20 you ask us during that time. Because after that
21 five minute break, we won't be able to respond.

22 Also, we do have a good showing tonight.
23 Again, thank you all for coming and spending your
24 evening with us to get this information. We

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1 greatly appreciate your interest in this project.
2 But just to make sure folks have enough
3 time to ask questions during the public comment,
4 we ask that you keep it under five minutes, if
5 you can.
6 If you would like to make a public
7 comment, and I'll remind you of these
8 instructions again so you don't have to commit
9 them all to memory at this moment, but we have
10 cards up front that we'll have you fill out your
11 information for our court reporter so she can
12 properly record your information so that we get
13 that recorded properly.
14 So there's cards that look like this.
15 If you're interested in making a verbal comment
16 tonight, grab one of these at some point and I'll
17 be calling these numbers up when it comes time
18 and then you'll step up to make your comment.
19 Okay. So just another couple reminders
20 before I get into some introductions. If you
21 haven't done so already, if you could, again, we
22 are competing with this issue of not having a
23 mic, if you could silence your cell phones or
24 other media devices.

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1 And then also if you have a question,
2 just as I'm doing, try to speak very clearly and
3 enunciate so our court reporter can record that
4 clearly.
5 Okay, so to stick with tonight's agenda,
6 real quickly, just a couple of introductions.
7 I'll introduce myself. I'm Diane
8 Russell, I'm the EPA Community Involvement
9 Coordinator out of EPA's community office in
10 Flint. And I'll be presiding over tonight's
11 meeting.
12 So if you have any questions about, you
13 know, the meeting format and such, just find me.
14 Find me out.
15 I have Jim Saric here who is EPA's
16 Project Manager. And he will be going over a lot
17 of the technical aspects of what we're proposing.
18 And then also I have a representative
19 from the Michigan Department of Environmental
20 Quality, Dan Peabody, who is right here, who
21 represents the State side of things.
22 So with that, I'm going to turn it over
23 to Jim so that you can go ahead and learn about
24 Area 2.

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1 MR. SARIC: Thanks, Diane.
2 MS. RUSSELL: You're welcome.
3 MR. SARIC: Can everybody hear me okay
4 in the back? Excellent.
5 So I'm Jim Saric and I'm going to talk
6 to you today about Area 2 and the Kalamazoo River
7 and our proposed alternative or proposed remedy
8 for that.
9 Have a seat right up there, Dayle. I
10 want you right there where I can see you.
11 And tonight, some of the objectives,
12 we're going to talk about the proposed remedy and
13 how we got there.
14 And then as Diane pointed out, we'll
15 have an informal comment period followed by the
16 formal public hearing. And we'll go through it.
17 It takes me about 35 minutes to go through this
18 presentation.
19 So I'll try to make sure everybody can
20 understand it. And afterwards, if you have
21 questions as we go through here, we will do that.
22 And after that, after today's public
23 comment period, we have a sixty-day comment
24 period that's ongoing. And it started, I think,

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1 on July 1st and it goes to the end of August.
2 And once we get the comments, we're
3 going to respond to those and respond to the
4 summary. And then we'll finalize -- based on
5 the comments we receive today, we're going to
6 finalize the decision, what's called a Record of
7 Decision, which will happen in the fall.
8 And this is the same process we
9 followed for Area 1 upstream. And many of the
10 things you'll see and some of the information
11 we're going to present is very similar to what
12 we've had in the past and hopefully will be for
13 other areas as we move downstream.
14 So this is the Kalamazoo River site.
15 And Area 2 is what we're talking about right in
16 the backyard that we have here.
17 And the Kalamazoo site, really it's an
18 eighty-mile stretch of the Kalamazoo River. And
19 it also includes multiple landfills and paper
20 mills on the site. So it's not just about the
21 river. But it covers a lot.
22 And we have different Operable Units.
23 At EPA we have these designated Operable Units
24 just to make them functional areas that we can

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1 address.
2 So we can address the landfills
3 separately from the paper mills separately from
4 the river itself.
5 But the river is Operable Unit 5, which
6 is Portage Creek and that eighty miles of the
7 Kalamazoo River from Morrow Dam all the way down
8 to Lake Michigan.
9 Now, the river itself, Operable Unit 5,
10 is then broken down further into seven areas.
11 And each of the areas are divided by a dam.
12 So in Operable Unit 5, we have Area 1
13 upstream through Area 7 going downstream. And
14 we're actually doing work in five of the
15 different areas.
16 And previously a couple years ago we
17 made a decision, a Record of Decision in Area 1.
18 And today we're talking about Area 2, which is
19 this smaller area right there. And Area 2 is
20 between the former Plainwell Dam to the Otsego
21 City Dam.
22 It's, you know, a two-mile stretch.
23 It's 1.9 miles. It's not very long from a length
24 standpoint, a river mile standpoint. However,

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1 it's very unique and it's different than some of
2 the other river stretches we have upriver.
3 So here is Area 2 and here is the former
4 Plainwell Dam, so the water goes right through
5 there. The main channel comes through here and
6 there's the Otsego City Dam. So it's a two-mile
7 stretch.
8 And a couple things to note that makes
9 this unique is you can see this area where
10 there's a lot of smaller channels or smaller
11 branches of the channel. We call that the
12 anabranch area. You're going to hear about the
13 anabranches. We're going to talk about those.
14 There's another river, the Gun River,
15 that flows in right here. There's a pond, we
16 call it Pond G.
17 This island right in the middle, we call
18 that Knife Blade Island. It looks like a knife
19 blade, and we had to find some name to call it.
20 But this is Area 2. Again, a smaller
21 section. About two miles, about two-and-a-half
22 feet deep, generally. It's deeper in some
23 sections.
24 But that's what we're going to talk

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1 about and the remedy and the alternatives all
2 involving what to do with the contamination in
3 Area 2.
4 Now, we start out with kind of a
5 conceptual site model. What are we dealing with,
6 what is the contamination?
7 And it's the PCB contamination, the
8 polychlorinated biphenyl, that really came into
9 the river due to the recycling of carbonless copy
10 paper from the 1950s to the 1970s.
11 And the exposure that you get here is
12 really from fish consumption. You know, it's
13 okay to be out in the river and recreate in the
14 river and move around and recreate up on the
15 floodplains and different areas, but the exposure
16 that you get really is from fish consumption.
17 There is a do-not-eat-fish advisory
18 that's been established by the Michigan
19 Department of Natural Resources that's been out
20 here for years. So there's signs on the river
21 about that.
22 And what we've done here in the river
23 and in a lot of areas we have addressed is what's
24 called a Record of Decision. We have addressed a

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1 lot of the landfills and come up -- you know,
2 come up with solutions and implemented the
3 remedies in the landfills, and the same thing
4 with many of the paper mills.
5 So the contamination that remains really
6 is from the erosion from the banks and the
7 contamination that's in the stream itself. You
8 know, that's really what you have.
9 That ongoing uncontrolled erosion of
10 that material going into the banks, that's the
11 most significant source that's left. Because we
12 have addressed a lot of the major sources working
13 from upstream to downstream over the last twenty
14 years or so on the project.
15 Now, conceptually what you have is a
16 series of dams. And Area 2 is no exception where
17 you had the dams that were there. And over time
18 that water level -- you know, the dams were
19 lowered down to a silt level.
20 And when that happened, when the water
21 was dammed up, it was kind of impounded and it
22 had PCB material being deposited across this
23 whole area.
24 And then over time when the dam was

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1 lowered, now this previous material that was
2 lake bottom or impoundment bottom, as we call it,
3 that material now is part of the floodplain. And
4 it's exposed to the ecological receptors that are
5 there.

6 But this channel that existed now is
7 unstable and down in size and it makes the banks
8 collapse and it transfers PCB material
9 downstream. So that's fundamentally the problem
10 we have to deal with.

11 Now, the next step in the process once
12 we think about conceptually what is happening,
13 we come up with objectives. You know, what are
14 we trying to achieve?

15 And these remedial objectives are
16 essentially the same that we had for Area 1 and
17 the same we'll probably have for many of the
18 areas moving downstream.

19 And I'm going to walk through these
20 generally. And I'll talk about the clean-up
21 levels in a second.

22 But you start out with the objectives.
23 And obviously the first objective is to protect
24 those people who eat the fish around Area 2.

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1 And over time, we're trying to get from
2 a do-not-eat-fish advisory where we have
3 different fish tissue targets that we establish.

4 So we're hoping that over time we're
5 going to get to the point where according to the
6 Michigan Fish Advisory Level we can go from
7 do-not-eat to two meals a month for the small
8 mouth bass. That's one target we want to get to.

9 Another is the cancer risk rate is the
10 1-in-100,000 risk chance of getting cancer for
11 what we call the high-end sport angler. And I'll
12 talk about this high-end sport angler a little
13 bit more.

14 But basically this is someone who
15 consumes a one hundred percent bass diet, 125
16 meals per year. So for that individual we want
17 to get to that target, get those fish tissue
18 levels to drop down there. And I will show you
19 what those actual numbers are in a second.

20 And then we hope to achieve that in fish
21 by getting the sediment level to this surface
22 weighted average concentration. And I'll touch
23 on that again in a second.

24 But the general concept is if the

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1 average concentration across a certain area of
2 the river is this 0.33 milligrams per kilogram
3 number, that the fish tissue will come down over
4 time.

5 So our goal is if we can get the
6 sediment targets in Area 2, the concentration
7 down there, the fish tissue will come down over
8 time. It takes years for the fish tissue
9 concentrations to come down. That's Remedial
10 Action Objective 1.

11 The second one is to protect the
12 ecological receptors, such as a mink that may be
13 there, you know, from sediment exposure. And the
14 concentrations associated with RAO 2 are higher
15 than that for RAO 1.

16 So if you achieve the human health RAO
17 for fish tissue, you'll get that, you'll achieve
18 the same remedial objective for the ecological
19 receptors.

20 Remedial Action Objective 3 is kind of
21 to protect the terrestrial receptors in the
22 floodplain. You know, the mammals, the birds
23 that may feed in the floodplain. You want to
24 protect them from PCB concentrations in the soil.

Page 17

1 We want to do that.

2 RAO 4 is very important, particularly
3 for Area 2. We want to kind of minimize the
4 amount of PCB migration that occurs downstream.
5 We don't want to keep having PCBs going
6 downstream. So we want to develop a remedy and
7 have something where we're going to reduce that
8 transport.

9 And obviously RAO 5 is to protect people
10 that reside in the area from PCB exposure.

11 And those are the five remedial
12 objectives.

13 So once you have your objectives, you
14 have your conceptual site model, the next step is
15 developing those preliminary remedial goals or
16 your cleanup goals.

17 And we have done the human health and
18 ecological risk assessments. We have used the
19 same approaches that we did in Area 1. So the
20 same human health risk assessments, the same
21 ecological risk assessments, the same science
22 that went between it.

23 We have updated data. So we've
24 collected lots of samples. We've collected some

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1 2,500 data points in Area 2 alone. So you have
2 updated information. And we put that into there.
3 And again, just like we've seen in the
4 other areas, that PCBs are the primary risk
5 driver. That drives the clean-up out there.
6 Yes, there are other constituents that
7 may be out in the river in the sediment.
8 However, typically what happens with the other
9 constituents, the metals or whatever else is out
10 there, is that the river isn't biased for one
11 chemical to another.
12 They all tend to get deposited in a
13 slower moving section of the river where soft
14 sediment gets deposited, where the river slows
15 down. That's where you find the contamination.
16 It doesn't matter what it is, that's generally
17 where you'll find it.
18 And typically wherever we find anything
19 else, the remediation footprint, the area we're
20 going to clean up for PCBs is so large, it
21 gathers everything else.
22 So by going and addressing the PCB risk,
23 we kind of address everything else.
24 And again, just to drive home the point

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1 that fish consumption is the primary risk, you
2 know, more so than anything up in the floodplain.
3 It's all about don't eat the fish or getting the
4 fish to a lower level where we can go from there.
5 That's really the risk driver of the site.
6 As far as clean-up levels and these
7 PRGs, the Preliminary Remediation Goals, so for
8 fish tissue, the number is -- this is the
9 1-in-a-100,000 chance of getting an excess
10 cancer, and it's 0.042 milligrams per kilogram.
11 That's a pretty low number. That's our fish
12 tissue number.
13 And we have other numbers. They are
14 based on a hazard index. This is for ecological
15 receptors, you'll see to address RA0-2, this .6
16 number is higher than the .05.
17 So if we get the fish tissue down to
18 that .04, we're going to address everything else.
19 And again, that sediment number is .33.
20 And the relationship here is if we can
21 get the surface weighted average concentration to
22 0.33, we can get the fish tissue down, and that's
23 the plan.
24 Now, in soil, up on the soil, we have

Page 20

1 this 11 milligram per kilogram number. That
2 clean-up level in the soil is to address the
3 ecological receptors.
4 And that number -- if we get the
5 floodplain soil to that, that's protective of the
6 ecological receptors. And that number is lower
7 than that for, let's say, a recreational user.
8 For a recreational user, that number might be 23.
9 So we're protective of those.
10 And for any residential properties that
11 we come across in any of the numbers, 2.5 is the
12 number for the residential numbers. Only for the
13 residential property. So that's how these
14 numbers fit.
15 Now what does that mean? So we looked
16 at different fish tissue scenarios. Different
17 receptors.
18 So we looked at this sport angler, the
19 CT or the central tendency angler, that's an
20 angler that -- that's how they developed the fish
21 advisory number from.
22 So we looked at that angler and that's
23 where some of the clean-up numbers come from,
24 that .1.

Page 21

1 This is the sport angler that we looked
2 at, this high-end sport angler, eats 125 meals
3 a year, fifty percent on the site, and that
4 number -- that's where that .042 number was
5 developed.
6 And we did look at the subsistence
7 angler because they get it all the time. What
8 about the subsistence anglers. And that would be
9 somebody that eats 179 meals a year. And the
10 clean-up number on that would be .01.
11 Now, what you also do when you develop
12 these numbers is you also look at the background
13 number. You really can't clean below your
14 background number. And it's what we see
15 upstream, up above Area 1, up above Morrow Dam.
16 So there's two numbers. So here's this
17 .04 number for fish and here's this .01 number
18 for the subsistence angler.
19 And immediately upstream Morrow Lake,
20 the small mouth bass we see is .14, all right?
21 So that's above. That's higher than both the
22 .042 number we're trying to achieve and it's
23 also higher than the subsistence angler.
24 In fact, further upstream in Ceresco the

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1 small mouth bass number is .03. So we go back
2 one slide.

3 And my point is that for our subsistence
4 angler, that number, that .01 is below the
5 background -- any of the backgrounds for
6 upstream.

7 So it doesn't mean that we're not
8 protecting the subsistence angler. I think it's
9 our assumptions that went into developing that
10 are probably extremely conservative.

11 And I think that it just goes that -- I
12 believe that this sport angler that is chosen is
13 really more representative of what's out there
14 based on the fish surveys. That's why that .042
15 number came out from there.

16 So besides the numbers, let's move on
17 and get into the remedies, the data, what do we
18 do.

19 So we took twenty-five hundred samples.
20 This is Area 2. There's all kinds of dots out
21 here. And you know, we call these Skittles
22 diagrams because they look like Skittles.

23 And I don't want to confuse you with
24 the numbers, but here's the thought process.

Page 23

1 If you see the color being gray or
2 white, or you know, the lighter, you know, black
3 and white shades of grays, that means the
4 concentrations are extremely low, okay?

5 And this is the surface. The top six
6 inches. But if you see colors that are red or
7 orange or yellow, that's higher levels of PCB
8 concentration.

9 So if you just look at this in the top
10 six inches for all of the samples there, you
11 don't see a lot of oranges and yellows in the top
12 six inches. You do see some of the stuff that's
13 up here, though.

14 Now, here's another slide. And this
15 takes all of the samples and takes the maximum
16 concentration at any depth regardless of surface
17 or any depth.

18 And if you look at that now, you'll
19 see -- look at all of the oranges and yellows up
20 here in these anabranches as we call them. We
21 talked about that.

22 Look at them up there. There are some
23 on Knife Blade Island and some over here. But
24 you see more of it way up here. And why is that?

Page 24

1 Now, what we do is when we look at the
2 historical concentrations, one of the things we
3 look at are old aerial photos of what's there.

4 And this is -- I want you to keep an eye
5 on this Knife Blade Island just as a reference
6 point. Just to see. But we know we have a lot
7 of contamination. We see this at depth up here.
8 So why is that?

9 When you look at historic aerial photos,
10 and again, the contamination was deposited from
11 like 1950 to 1970, when you look at that, and
12 here's 1955, we see that Knife Blade Island
13 doesn't exist. It was under water.

14 And see how the channel goes all the way
15 to the north bank up there in '55. The same
16 thing in 1960, the channel goes all the way up
17 there. Still it's way to the north over here in
18 1967. The same thing in 1974. It's really not
19 until 1988 when you start seeing that Knife Blade
20 Island.

21 So the point being that the historic
22 channel, the way the river migrated, was way to
23 the north. And it deposited those PCBs further
24 to the north.

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1 And over time as that channel -- that
2 braided channel went back and forth, it covered
3 over the contamination, so a lot of it was at
4 depth.

5 And that's really what -- by looking at
6 some of these historic aerial photographs, it can
7 teach us what happens and why did it happen.

8 So the next step, and here's a different
9 slide, we looked at this area, we take the river
10 in sections. We break it up into different
11 sections. And they are all lettered.

12 And we did an analysis called the
13 surface weighted average concentration. The idea
14 is what's the average concentration of the PCBs
15 in this section in A. And the same thing with C.

16 Because if you're a fish, you're not
17 going to live in one spot. You're going to live
18 in an area. You're going to be exposed to the
19 area in which you swim around.

20 So we try to break it up into these
21 different surface weighted average concentrations
22 or subareas.

23 And we looked at it. And we know we've
24 got fish that are contaminated. We've taken

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1 samples of fish and we know they are contaminated
2 in the river.

3 But when we looked at these SWACs, the
4 surface weighted average concentrations, in
5 Area A and C, which is the main channel, we see
6 that A is .08 and C is .22. You combine them
7 both at .13.

8 The point being in the main channel,
9 the surface weighted average concentrations are
10 lower than .33. They are lower than our clean-up
11 efforts. But yet the fish are contaminated.

12 So we looked at it and thought why would
13 that be? But if you look at the surface weighted
14 average concentrations in these areas up here,
15 you start seeing 3.9, 5.8, 7.4, 12.3. You've got
16 higher concentrations in the anabranches.

17 So potentially the reason why the fish
18 are getting contaminated is because it's --
19 they're not getting it from the main channel,
20 they're either getting it from swimming up into
21 the anabranches, or erosion from those upstream
22 anabranch areas is dumping PCBs into the river.
23 And potentially it could be one of those things.

24 So we looked at it and we said all

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1 right. You've got this section here. Here's the
2 main channel, that black line. And here's the
3 anabranches.

4 And one of the thoughts is what if you
5 take the dam out and you lower the water level
6 and all of a sudden the fish can't get into the
7 anabranches. Is that a solution?

8 So here's a normal -- you know, about a
9 two-year flood environment, here's kind of normal
10 flow, you know, a little less than that, what it
11 might look like.

12 You take the dam out, the Otsego Dam
13 out, and sure enough, a lot of these anabranches
14 are dry under normal flow conditions. You still
15 have water coming in from the Gun River.

16 But here's the main channel you see
17 there, and a lot of it is dry.

18 So we're like, hey, taking out the dam
19 helps solve that problem to some degree. But the
20 issue is, if you just take out the dam, this
21 river is going to want to migrate everywhere.
22 It's going to want to move all around here
23 because historically it wanted to move so it will
24 continue to move.

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1 So taking out the dam alone is not going
2 to solve the problem because that river is going
3 to migrate, erode the PCBs and dump them back
4 into the river.

5 So we worked with, you know,
6 Georgia-Pacific, the consultants. We worked with
7 the Michigan Department of Environmental Quality,
8 the Michigan DNR, the U.S. Fish and Wildlife
9 Service, NOAA, trying to develop various options
10 to realign the river, make a stable river channel
11 that would not -- you know, that we could kind of
12 control that would look natural and fit into
13 everything along with removing the dam.

14 And we came up with the design that we
15 call channel option three. We looked at a few
16 options.

17 So the idea is, you take the dam out and
18 you form this new channel here with a couple
19 meanders. And it's wider than the other channel.
20 And also it has -- these are ripples or areas
21 that would slow down the velocity. They would be
22 almost like little speed bumps in the river, if
23 you will, and they would slow down the velocity
24 of the river coming down through there.

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1 And then along the banks, the banks
2 would look much more natural. And if you get an
3 idea to go downstream to where we're doing the
4 time critical removal action, you'll see a lot of
5 the trees along the sides, that's the idea.

6 It's not going to be a riffraff channel,
7 but it's going to have some rock in it because
8 you have to control the river, but it's going to
9 be a combination of the natural channel design
10 with some of the rock in there. But it's going
11 to be a wider, more stable channel.

12 And you're not going to be able -- you
13 won't have a situation where you're going to have
14 the fish getting access to all of the anabranch
15 areas that you do.

16 And along the sides of the bank, you're
17 going to get -- we're going to have these
18 different types of bank treatments that are there
19 and it will be sloped and we'll remove -- as we
20 relocate the channel, we'll remove different
21 material.

22 And the idea is that you're trying to
23 create kind of a clean buffer. So here's the
24 channel bank, like a ten-foot clean buffer

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1 between the bank and the river. That's part of
2 what you're trying to establish. So that's kind
3 of the idea.
4 So once we had this idea of, all right,
5 we're going to remove the channel -- or the dam,
6 relocate the channel in this central channel
7 design, then it became what do we do with the
8 other materials up in the floodplain? What do we
9 do with everything at Knife Blade Island, the
10 anabranches, this green area here?
11 These are areas where we have the -- you
12 know, basically the concentration is greater than
13 eleven parts per million. And we have to do
14 something with these areas to make sure we're
15 protective of all of the ecological receptors.
16 We can cap it or excavate it.
17 But the bottom line is once we take the
18 dam out and we go and realign this channel, and
19 heck, the cost to do that is around --
20 approximately thirty million dollars just to take
21 the dam out and do that, now we're left with
22 developing alternatives for the remaining part of
23 it.
24 And that's what we're going to get at

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1 tonight.
2 So we looked at eight different options.
3 Eight different alternatives in this situation.
4 And we're required, you know, to look at
5 no action. We do nothing. But that's not what
6 we want to do. We want to do something. So
7 we're not going to talk further about the
8 no-action alternative.
9 We looked at the monitored natural
10 recovery. That's what MNR is. That's where you
11 basically take the dam out and let it go from
12 there. And neither one of those are really
13 protective options.
14 Then we go to a series of capping
15 options. And I've got some great slides that I'm
16 going to show you that visually will -- I can
17 walk through and explain it easier than just
18 reading from here.
19 But we looked at a series of capping
20 options, excavation options, a combination of
21 capping and excavation, and then full excavation.
22 And then we looked at this last one
23 which was basically take the dam out and dig
24 everything out up to 0.33.

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1 And that's, you know, spending
2 three-hundred-and-twenty-five million dollars,
3 take ten years to do it, rip everything up out
4 there.
5 And that creates -- although there is
6 no guarantee that the fish tissue will still get
7 there, that would be the most aggressive
8 clean-up. But again, there is no guarantee that
9 the fish tissue would get there and there will
10 be a lot of environmental harm by doing that.
11 So I really want to focus on options
12 three through seven, the capping, the capping and
13 excavation, and the full excavation option as
14 being the ones that we kind of go through.
15 Now, all of these include the following
16 things. They all include removal of the dam,
17 right? Realigning that channel that we talked
18 about. And at Gun River we have to do some
19 excavation where Gun River comes in.
20 All of these options, three through
21 seven, take about five years to implement the
22 remedy of construction. So they are all similar.
23 When we go in, we did our sampling, we
24 did our investigation, we found some areas

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1 greater than 50 parts per million. We want to
2 get those out of there.
3 So when we're going out there, we're
4 going to look to find these hot spots greater
5 than 50 and we'll get those out of there and
6 remove them and ship them off site.
7 And as far as long-term monitoring, the
8 success to any of our programs is that none of us
9 are going away. The EPA is not going away, the
10 State is not going away, none of the companies
11 are going to away.
12 It's going to take 32 years, probably,
13 approximately, for the fish tissue to get to some
14 of these targets that we talked about.
15 So part of that is a real robust
16 long-term monitoring program of fish tissues,
17 sediment and surface water sampling. And all of
18 this is going to help out there.
19 And then for some properties, we're
20 going to have to have controls on them to make
21 sure they don't become residential in some areas.
22 Now, the EPA, we take these
23 alternatives, we took all of these eight
24 alternatives and we evaluate them against what

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1 we call our nine selection criteria and our
2 threshold criteria.

3 It's protection of human health and the
4 environment, obviously. Compliance with
5 applicable or relevant and appropriate
6 requirements.

7 So these are -- did the remedy comply
8 with the laws or applicable regulations or
9 guidelines that are out there.

10 And that's the threshold for all of the
11 alternatives, they have to kind of pass the
12 threshold criteria to then be able to say let's
13 evaluate them for -- are they amenable, are they
14 effective in the long-term, are they permanent,
15 are they short-term.

16 We do have a preference for treatment,
17 but I can tell you that none of the alternatives
18 here are treating the material. Primarily what
19 you have in the river is you have reworked PCB
20 material over time. Reworked sediment. You
21 don't have source material.

22 And so given the concentrations, none of
23 it really, you know, allows itself or generates
24 itself to be able to be treatable.

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1 So none of the remedies really talk
2 about treatment, but they're going to be
3 effective. And we'll talk about that.

4 And then cost effectiveness is very
5 important.

6 The last two criteria, State and
7 community acceptance, you know, that's why we're
8 here. We're going to take the public comment
9 and we're going to consider the alternatives and
10 then we're going to make a decision based on the
11 input.

12 And we have been involved in this and
13 will be continued to be involved with a lot of
14 this over time.

15 Now, don't read this, you know.

16 MS. RUSSELL: This is also on page five,
17 I believe, of the fact sheet. So you can have
18 up-close views of this.

19 MR. SARIC: Right. And my point was
20 that in your fact sheet, you have a copy. And as
21 I go through some of these, there's some figures,
22 and you might want to refer to that. It's easier
23 to go through it from there.

24 And likewise, if you go on the website,

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1 you can see the proposed plans, and you can see
2 these charts. Because we do the same thing.

3 Besides the alternatives, we compared them
4 against the nine criteria.

5 And the only point I want to make about
6 this is that for alternatives three through
7 seven, they all comply. They all are effective
8 in one way or the other. They all take about
9 the same timeframe to implement, and they take
10 about the same timeframe to get the fish tissue
11 together.

12 The differences are really that the more
13 material you excavate, the more difficult it is
14 to implement, and the costs are different.

15 So we'll go through the alternatives.

16 And the best way I think to look at these is by
17 seeing these pictures. And I think it's the
18 easiest way for me to explain it.

19 So alternatives one and two, we talked
20 about no action and monitored natural recovery.

21 And you know, we're not talking about those.

22 So alternative three. Alternative three
23 is basically you remove the dam, we put in the
24 bank treatments with the new channel, and then

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1 you cap everything.

2 You cap the anabranches, you cap Gun
3 River, you cap Pond G, you cap the ecological.

4 It's all capping. And so it's a 43.8 million
5 dollar alternative, of which 30 million of it is
6 take the dam out and basically a new channel
7 design. But it's an all capping alternative.

8 That's what alternative three is if you
9 do that. It's protective. You know, it can be
10 done. You're capping all the area that's there.

11 Alternative four is very similar to
12 alternative three. The only difference is, you
13 notice this yellow line along the river? And the
14 yellow line is that ten foot bar.

15 So in alternative three, you're capping
16 everything but you're only using the bank
17 treatment. You're not -- you don't have a
18 buffer. A clean buffer.

19 Here in alternative four, you have
20 either a five part per million or ten part per
21 million average concentration. Kind of a clean
22 buffer along either side.

23 So you have this -- in addition to the
24 bank treatment, you've got this extra buffer of

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1 clean material adjacent to the river. Just in
2 case you get erosion, for kind of an extra level
3 of protectiveness that may happen.
4 And that's what we have there in
5 alternative four. And that's why there is two
6 cost differences.
7 Because one of them is if the buffer is
8 ten parts per million, it's 44.4. If it's 45
9 million, that means the buffer is 5 milligrams
10 per kilogram. So given the different buffer
11 concentration, you've got different costs.
12 Now, alternative five, and this is the
13 one we prefer, so you can pay attention here, is
14 that in this one you take the dam out. You've
15 got the channel rerouted. You have the ten foot
16 buffer, just like we talked about.
17 And in this one you cap the anabranches,
18 which are these areas here, you cap those, but
19 you excavate. These little yellow areas, the
20 ecological areas, it's about five acres of
21 property, you excavate all of these yellow areas
22 so that the ecological receptors are all
23 protected.
24 So now we're protecting 99 to 100

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1 percent of the ecological receptors, you get them
2 out of the system, we're going to do the
3 excavation in the Gun River, we're going to cap
4 this Pond G, we're going to remove some of the
5 higher concentration stuff at depth at Knife
6 Blade Island. And that's alternative five.
7 So that's kind of a combination of
8 excavation and capping. But by taking and -- you
9 know, realigning the river, in this situation,
10 alternative five, you're going to cap the
11 anabranches but excavate the ecological hot
12 spots. That's the one way to look at it.
13 In alternative six, it flip flops. In
14 alternative six, you remove the dam, the same
15 thing, you have that channel with the buffer, but
16 in alternative six you excavate all of the
17 anabranches, rather than cap them, you excavate
18 the anabranches but you cap those ecological
19 areas. So you flip flop in doing that.
20 So in this situation, you're making the
21 stable channel, but you're going to now go
22 through and excavate the anabranches but cap the
23 ecological areas, and your cost goes up about
24 twenty million dollars to do that, from there,

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1 just to give you an idea.
2 And alternative seven that we looked at,
3 in this situation you go and you take the dam
4 out, you have the new channel design, and now
5 you're going to excavate the anabranches and
6 excavate the ecological hot spots, excavate
7 Pond G.
8 If you factor in all of these
9 remediation areas, now your remedy goes up to
10 like seventy-five million dollars, which is
11 another eight million beyond that.
12 So that's where these fall along the
13 various alternatives that we looked at. And
14 really, you know, we looked at them all and we
15 looked at the various criteria. Again, I believe
16 this is in your fact sheet.
17 MS. RUSSELL: Page seven.
18 MR. SARIC: Page seven. Thank you,
19 Diane.
20 And you know, a lot of the alternatives,
21 other than one and two, you know, they protect
22 the health and human environment. They comply
23 with the ARARs. They are long-term protective,
24 they are short-term protective.

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1 But you know, our preferred alternative
2 is alternative five. And kind of the reason for
3 that -- again, alternative five is, to go through
4 it one more time, is to take out the dam. In
5 alternative five, you have the buffer along the
6 river, the five part per million buffer, so it's
7 the lower concentration buffer, and you're
8 excavating Gun River, you're excavating these
9 ecological hot spots, but you're going to cap the
10 anabranches from there.
11 And you know, in looking at the
12 different alternatives, we believe alternative
13 five is protective, it's complies with all of the
14 requirements, it's extremely effective and
15 permanent, it's cost effective, and really when
16 you look at this, you're creating a new stable
17 channel.
18 By removing the dam, you're creating a
19 new stable channel that is really going to limit
20 fish access into the anabranches, which is what
21 we want to do.
22 You're going to cap the anabranches. So
23 you're still going to get connectivity between
24 the floodplain area and the channel, when you get

1 floods, you're still going to do it, but now by
2 capping the anabranches you're going to be in a
3 situation where you're not going to have PCBs
4 getting into the river.

5 So by having that stable channel design
6 and taking the dam out, you change the dynamic,
7 you stabilize this section of river. We've got
8 the situation where the ecological receptors are
9 now all protected and we've got a situation where
10 the fish won't have access to the anabranches
11 and we won't have PCBs migrating downstream from
12 these areas. That's what this remedy provides.

13 And some of the details, right, dam
14 removal, and with that channel option three, the
15 bank, the buffer of five milligrams per kilogram.

16 We're going to excavate all those
17 hotspots, we're going to excavate those
18 floodplain soil areas to really address the
19 ecological receptors, capping those northeast
20 anabranches, and the Gun River excavation.

21 As I touched on the long-term
22 monitoring, it's going to be 32 years or more.
23 That's how long it takes fish tissue to recover.
24 That's part of it. We're going to do that.

1 The total amount excavated is about
2 29,200 cubic yards. But when we get out in the
3 field, we'll know if that's more or less.

4 The total amount capped is about 28
5 acres in the anabranches. And the construction,
6 it's about a five-year time period to do the
7 construction and the cost is 46.4 million dollars
8 for that alternative.

9 To give you some idea on the fish tissue
10 projection, how we look at this and what it
11 means, how we came up with the 32 years, you can
12 see it.

13 So this is the small mouth bass
14 projection. So our concentrations are right
15 about here, which is .15. If you look at Morrow
16 Lake, here's the concentration in the fish and
17 small mouth bass in Morrow Lake right now.

18 This is the concentration in Ceresco,
19 further upstream. And then here's the two meals
20 per month number. So we hope we can get those
21 down. And then over time, we're going to monitor
22 to get to those different targets and the bottom
23 line being that .042 number that may take about
24 32 years.

1 But that's really the process that we
2 went through, the chronologic sequence for having
3 the contamination, what are we going to do,
4 what's our conceptual site model and objectives
5 and coming up with alternatives.

6 And alternative A-5 we believe is the
7 best remedy and preferred remedy and one we hope
8 to implement. And we welcome comment.

9 Diane?

10 MS. RUSSELL: Thank you, Jim.

11 I'll just check in real quick. Are you
12 guys holding up all right? I know it's a lot of
13 information to take in.

14 We want to remind everyone that now is a
15 great time to ask some questions about this and
16 what the EPA is proposing for this area of the
17 river. So Jim is happy to answer any questions.

18 Make sure that you speak clearly so our
19 court reporter can capture your question, okay?

20 [REDACTED]
21 QUESTION 1: I have two questions.

22 My name is [REDACTED],
23 K-o-r-n-h-e-i-s-e-r.

24 The first question is, the five-year

1 construction, does that mean this stretch will be
2 closed for five years?

3 MR. SARIC: I can't answer that question
4 yet because we haven't gotten to that design.

5 I would say that it wouldn't be closed
6 for all five years but I can't be for sure. I
7 can't guarantee.

8 Because what happens is we get into the
9 design and we talk to the contractors that are
10 actually going to build it and then do we need to
11 close it for five years.

12 I mean technically Area 3 is still
13 closed and there are still a lot of people going
14 down that river. So I don't know for sure. I
15 can't answer for sure if it's going to be five
16 years or so. But we're going to try to work
17 with everybody on it.

18 QUESTION 2: The other question was, you
19 said for alternative four, there were two cost
20 figures because you weren't sure if the bank
21 buffer was going to be brought down to a target
22 of five parts per million or ten.

23 MR. SARIC: Correct.

24 SPEAKER: And then alternative five,

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1 there's the same two figures. But you were
2 saying it's going to -- the target will be five,
3 not --

4 MR. SARIC: Yeah, in our proposed
5 alternative we proposed the five to go with that.
6 So that's in our proposed plan when you take that
7 alternative five, we have the buffer being -- the
8 lower number being five parts per million.

9 MS. RUSSELL: We had a question here,
10 go ahead.

11 QUESTION 3: My name is Robert Rowley.
12 Is there any idea how long before that
13 five year construction period starts? Is there
14 any guess as to how long it would be?

15 MR. SARIC: I will look in my crystal
16 ball. I can tell you typically it's about -- I'm
17 guessing it will be a couple of years.

18 You know, we come up with a Record of
19 Decision in the fall and then maybe, you know, we
20 get an agreement and take about a two-year period
21 to get the design, it's two to three years of
22 design, and then we actually get in the field
23 implementing everything.

24 So from the time we have a Record of

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1 Decision, if it's a two to three year window
2 until we start, that's typical.

3 SPEAKER: So we're looking at eight
4 years before it's completed.

5 MR. SARIC: Yes. Hopefully sooner but I
6 think that's kind of a usual timeframe.

7 QUESTION 4: Another question I have.
8 I'm on the Otsego City Planning
9 Commission. There's a lot of interest in the
10 riverfront these days when you have a river walk
11 in the city.

12 And it looks like in this version,
13 number five, you're talking about building up the
14 banks of the river to keep it in a certain area.

15 What sort of construction would be used?
16 What I'm getting to, is it something where a path
17 going along the river would be possible and a
18 reasonable thing to do as part of this project?

19 Will it cost a lot of extra to do it
20 or is it something that wouldn't be advised to
21 do at all?

22 MR. SARIC: No, I think actually a path
23 is doable. And I will give you a couple of
24 examples.

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1 So in Portage Creek, when we did our
2 time-critical removal work in Portage Creek, when
3 you're doing the remediation, digging up the
4 river, as part of it you need haul roads or roads
5 that end up being patched alongside the road.

6 So I'm sure we can work with the city
7 about what do you want to that look like at the
8 end. And the Department of Natural Resources
9 owned some of that property too, so we talked
10 with them, what do you want?

11 So I think that between what we did at
12 Portage Creek, or if you take a look at Area 3
13 down below the M-89 bridge, you'll see we have
14 the haul roads adjacent to the area and those may
15 be a natural path that can be used for some of
16 that.

17 So you know, I can't speak with
18 certainty over what we're going to do there. But
19 we certainly -- like we've done in other areas,
20 I'm sure we're going to work with you.

21 We work with cities all the time, the
22 trustees, to say, okay, what is your vision for
23 what you want here, we'll try to make it work.

24 MS. RUSSELL: We had a question back

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1 here.

2 QUESTION 5: Out of that 29,000 cubic
3 yards, how much of that is characterized as
4 hostile waste?

5 MR. SARIC: Good question. I would say
6 it's less than five percent of that number. I
7 can't remember from the cost estimate off the
8 top of my head. It could be one percent. But
9 it's somewhere in that range.

10 SPEAKER: So the rest of that material
11 is some type of --

12 (The court reporter advises that she is
13 unable to hear the speaker.)

14 SPEAKER: I was asking if the 29,000
15 cubic yards of material that will be excavated
16 under this plan, how much of that would be
17 greater than 50 parts per million PCBs which
18 would make it characterized as hostile waste and
19 it would go to some type of Subtitle C landfill
20 instead of a local municipal landfill.

21 MS. RUSSELL: In the red right here.

22 QUESTION 6: Can you explain in a little
23 bit more detail what goes into capping?

24 MR. SARIC: Yeah. So in some of the

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1 capping areas, when they're going to do a cap
2 like for the anabranch, it might be a situation
3 where you're going to remove certain materials,
4 hotspot material, and then you're going to
5 regrade the area.
6 You might put like a plastic liner on
7 it and then put clean topsoil over it so you have
8 a layer that has a demarkation from one area to
9 the other.
10 In the pond like that Pond G, they
11 actually can put a layer of sand over it, you
12 know, or something like that, six inches or a
13 foot cap, you know, a sand cap that could go over
14 that.
15 The details of that, we haven't
16 finalized all of those. Once you get the
17 decision and we do that in our design phase, we
18 get into the details of what those caps are.
19 But in some areas you dig down a foot,
20 you remove some materials, you put like a liner
21 over it and then put the topsoil on. That
22 situation is probably more grading it to make
23 sure it's graded properly and sloped properly.
24 And then you're going to put, you know, clean

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1 topsoil over that.
2 MS. RUSSELL: We had a question up
3 front here.
4 QUESTION 7: So when is the actual
5 Otsego City Dam going to come out? Is that
6 starting next year?
7 MR. SARIC: Well, that would be once we
8 get a remedy, you know, and then we get a design,
9 then it would be -- I think the question would be
10 somewhere in that five-year construction period.
11 Will it happen early or later, I don't
12 know. And it's kind of the sequencing as we go
13 through this thing. There's benefits sometimes
14 if you're working further upstream, do you
15 really -- that whole two mile stretch, the dam
16 only influences that lower, let's say, mile or
17 mile-and-a-quarter, okay?
18 So taking it out, it may not impact
19 anything upstream. So you may not have to take
20 the dam out right away.
21 However, when you get towards the
22 downstream areas, sometimes you weigh the
23 benefit. Do you lower the water level so you can
24 work in dry material or not. And you have to

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1 balance that out.
2 So once again, you get into the design,
3 you can do that. It's just like we have it down
4 in Area 3, we wrestled some of those issues on
5 sequencing and what makes the most sense.
6 MS. RUSSELL: A question over here?
7 QUESTION 8: Yes. When you explained
8 capping, I guess I'm confused, we still have the
9 watershed, we still have the water flow. It goes
10 in the ground, it flows, and what have we done by
11 just leveling it off?
12 MR. SARIC: Well, if you're going to cap
13 some of those anabranch areas, all you're doing
14 is you're stabilizing that where you're not
15 allowing for a flood situation.
16 So when you have the channel, a new
17 channel, but those anabranches are there and
18 you've capped them, now you're in a situation
19 where if the river floods, which it does, you're
20 not going to erode those areas and have PCB
21 material going in the river.
22 The idea is to prevent that from
23 happening. And then you're preventing exposure
24 to some of the ecological areas.

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1 SPEAKER: So the water is still --
2 MR. SARIC: The water is still going to
3 come over there. So you're still going to get
4 that connection.
5 In normal flow, it's going to be in that
6 main channel more. But when you get higher
7 events, yeah, it's going to spill over the banks.
8 You want that connectivity with the
9 floodplain somewhat, and that's what we're going
10 to have. Because the energy in that river is
11 going to want to flow and expand out. So we're
12 not going to control that.
13 MS. RUSSELL: We had another question
14 right here.
15 QUESTION 9: That was like my question,
16 is this designed for a ten or a hundred year
17 flood event? What are you thinking about in
18 terms of stability for the long term?
19 MR. SARIC: It can handle it all. We
20 have modeled it for what it would be like, you
21 know, in a hundred-year-flood event, you'd flood
22 that whole area.
23 So you can engineer this thing where the
24 banks are going to be stable. And even if you

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1 have any bank erosion, by having that ten foot
2 buffer, it allows you to say, hey, we're going
3 to be out there doing annual inspections. If all
4 of a sudden we have a bank erosion, we can fix
5 that. But yeah, they will be able to handle
6 those hundred year floods.

7 MS. RUSSELL: We had a question here and
8 then here.

9 QUESTION 10: My question is, we have a
10 Superfund site in both Plainwell and Otsego from
11 the former A-1 Disposal. Is there any
12 consideration on getting money from them?

13 MR. SARIC: I'm sorry?

14 SPEAKER: There's two sites that were
15 contaminated from the former A-1 Disposal. One
16 in Plainwell, which was a Superfund site. And
17 there's another one in Otsego, out by
18 Bittersweet.

19 MR. SARIC: Right.

20 SPEAKER: Has there been any testing or
21 consideration for the chemicals that may or may
22 not be leaching into the Kalamazoo River or
23 settled along the banks of the river from those
24 sites?

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1 MR. SARIC: We haven't, you know, done
2 specific work -- we do work on the sites, but
3 nothing that specifically relates to that. And
4 some of them are further away from the river.
5 So I don't know all of the details about the
6 sampling events that have gone on on both those
7 sites.

8 But they are not -- so far to date, as
9 far as we know, they are not connected to the
10 river or impacting the river from that.

11 And when we sample the river, we sample
12 it for other constituents as well, but again,
13 PCBs are the driver for what we have done.

14 SPEAKER: Well, I know there was a lot
15 of chlorinated solvents in there.

16 And I had a discussion with someone at
17 the DEQ not too long ago regarding the Otsego
18 site where there are still chemicals because
19 that site has not been capped and they are
20 leaching down through groundwater into the
21 Kalamazoo River.

22 MR. SARIC: Well again, we haven't seen
23 that. But we can take a look at it certainly.
24 And we are working on those sites as well. We do

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1 coordinate with them. But we haven't seen an
2 impact from that.

3 MS. RUSSELL: And again, just to stress
4 what you said, we do sample for other
5 constituents or other chemicals besides PCB.

6 So if there was a connection in our
7 sampling, that might indicate itself, but so far
8 that's not anything that we have seen to drive
9 any clean up, right?

10 MR. SARIC: Yeah, I mean we've sampled
11 groundwater areas, sampled throughout the
12 sediment.

13 And again, the river -- when it comes
14 to sediment and such in the river, the river
15 isn't biased to one chemical. Typically it's
16 stuff that -- any contaminant that gets
17 deposited, it's in a softer setting, quieter
18 environment, that's where you'll find it.

19 QUESTION 11: Yeah, you alluded to this.
20 By the way, I'm Steve Hamilton if you're still
21 taking names.

22 You kind of alluded to this idea of a
23 model. Hydrology is very complicated, especially
24 with a lot of groundwater coming in on the south

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1 side and so on.

2 Have you or will you build a flood
3 inhibition model to make sure you don't end up
4 leaving the floodplain high and dry or a stagnant
5 swamp or something like that?

6 MR. SARIC: We have one. We have a
7 hydraulic model that looks at it. And that was
8 part of it, modeling the different flow
9 conditions.

10 And I'm sure as we get into the design,
11 we'll tweak that more and try to make it more
12 accurate.

13 And we do that because it's more about
14 what is going to happen in a high flow condition.
15 And we try to truth test it, if you will, to make
16 sure it's there.

17 We have a lot of the same stream experts
18 that are working on downstream and up above. We
19 have a lot of lessons learned, and we'll apply
20 those here too.

21 But it's certainly not an easy 'oh,
22 we're just going to go do this.' It's not
23 simple.

24 MS. RUSSELL: Right here.

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1 QUESTION 12: I just had a question.
2 Where you guys were working down river,
3 you're monitoring a lot of air quality, has the
4 PCB proposed a big condition as far as removal of
5 air quality in the area?
6 MR. SARIC: You know, we're not seeing
7 like a big dust plume of PCBs in the air quality
8 that's monitored.
9 I think a lot of it is just monitoring
10 that and more, you know, kind of air turbidity.
11 We do the same thing with the water monitoring,
12 we test the water turbidity up and down the
13 stream.
14 But we're not seeing any significant
15 release of PCBs in the air.
16 MS. RUSSELL: Dayle?
17 QUESTION 13: Dayle Harrison, Kalamazoo
18 River Protection Association.
19 I didn't see a slide or details on the
20 concentration of PCBs which would be going west
21 from the end of the Knife Blade. Between the
22 Knife Blade and the dam.
23 When you talk about the surface --
24 MR. SARIC: Let me go back to the

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1 diagram on here. So to the west this way?
2 SPEAKER: Exactly, going downstream from
3 that point.
4 MR. SARIC: So we don't have -- the
5 concentrations in here, there are some
6 concentrations higher along here.
7 And the one thing, do you see this nice
8 little line? The reality is that to produce that
9 line, you're going to -- your actual remediation
10 footprint is larger.
11 MR. HARRISON: My question, though, is
12 you talked about the surface level of
13 contamination.
14 The question I have is how the PCBs have
15 been laying in the sediment over the years, that
16 for example, right near the mouth of the dam
17 itself and going upstream maybe a hundred yards,
18 where is the concentrations at five or six feet?
19 MR. SARIC: Some of them -- some samples
20 show them, you know, being at five or six foot.
21 Then it's back, it's down, it's like not there.
22 There is kind of a bright line somebody said.
23 But in some areas you've got it being
24 20 parts per million, some ten, some five, you

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1 know, in different sections.
2 And the biggest thing is even though --
3 my point is that even though you're going to --
4 and I think I might have another figure.
5 But even though -- let me go through
6 this. I think I have one other slide to show
7 you. This one.
8 So even though you have this nice
9 little line here that you're going to -- you
10 know, you're going to impact a much larger area
11 when you actually build that channel.
12 So you're going to excavate a larger
13 footprint because you can slope that bank. So
14 you're going to remove more material.
15 MR. HARRISON: What I'm concerned about
16 is once you remove the dam down to the river,
17 you are going to have a lot of energy moving down
18 through there, you're going to need to push that
19 sediment downstream. And it's going to dig out
20 kind of a deep channel, I think.
21 MR. SARIC: Potentially, yes.
22 MR. HARRISON: I think it's fair to say
23 that. So you have this huge volume of material
24 upstream from the dam, from there up to the west

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1 end of the Knife Blade.
2 MR. SARIC: Right. Okay, I understand.
3 MR. HARRISON: I mean it has to be like
4 50,000 or more cubic yards between the point in
5 the dam and that triangle. Are you going to
6 excavate that?
7 MR. SARIC: Yeah, so it's the same
8 situation downstream in Area 3.
9 Now, the difference is that most of it
10 in the stream in Area 2 here, it's clean. The
11 actual sediment is clean. It's not -- that's
12 why we have the 0.33 SWAC on the main channel.
13 So what happens is that you end up
14 making the channel, making it narrow there.
15 So part of the question becomes this
16 clean material, it's more sand, it's not
17 contaminated with PCBs, what do we do with that?
18 You can take some of that material and
19 excavate it and use it for relocating the channel
20 because it's clean. Or some of it may go
21 downstream, much like we have done in the other
22 areas where we allow some of it to go downstream.
23 But it's not high concentrated PCB
24 material that would go downstream. That's not

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1 the case.

2 SPEAKER: My question then is what --

3 on the core sample between the point I'm talking

4 about, Knife Blade Point moving downstream, how

5 much did we have in the core sample in that zone

6 inside of the flow back from the edge?

7 MR. SARIC: A lot. I think that would

8 be my short answer for you.

9 SPEAKER: I'm sure you have it. I just

10 wanted to know how much or what the levels show

11 at five feet or four feet or six feet.

12 MR. SARIC: I think that -- so again, if

13 you'll look. So here's the line of the channel.

14 You see an awful lot from Knife Blade going down,

15 you see inside, you see a lot of the white and

16 gray. Which a lot of that is all less than one

17 part per million.

18 But along the banks you see higher --

19 outside in the floodplain you see some higher

20 stuff. And this is where we're going to excavate

21 for some of the ecological receptors.

22 And when we go to re-slope the bank on

23 that side, you're going to dig that out of there

24 anyhow and it's going to be removed.

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1 But in the channel itself, you can see

2 all of the dots.

3 SPEAKER: So are those composites six

4 foot cores?

5 MR. SARIC: No. They are 12, 12 to 24,

6 24 to 36, 36 to 48 for every one of those points.

7 Every one represents the individual samples.

8 But what this represents is what is the

9 highest maximum concentration in any of those

10 samples. That's what that represents.

11 MS. RUSSELL: Any other questions?

12 QUESTION 14: Yes, you're making the

13 river a channel. And you're putting a ten foot

14 buffer on each side to control the width. What

15 is the buffer made of?

16 MR. SARIC: The buffer is going to be

17 kind of a natural sand -- so you're going to

18 have a banked treatment there, all right?

19 That's going to be -- it could be rock,

20 it could be -- in some cases we take these --

21 like if you go downstream, you can see it. We

22 take the roots of some of these great big giant

23 trees and we line the bank and stick the tree

24 into the ground itself.

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1 And so it's a combination of sand

2 material that's there that we use from other

3 parts on the site that will be part of the ten

4 foot buffer.

5 SPEAKER: So that shouldn't erode?

6 MR. SARIC: No. I mean the whole idea

7 is -- the theory is if you take the channel and

8 you have the proper width and depth dimensions,

9 right, so it's got -- and you have the proper

10 curvature, and then you apply some of the -- you

11 know, we've done the modeling.

12 In some areas you're going to have to

13 put rock, in some areas you can use a combination

14 of rock and woody debris. In some areas you can

15 use the natural, woody debris. And you can make

16 it stable where it's not going to erode.

17 Now, can I sit here and guarantee we

18 will never have an issue with erosion? No.

19 But by having that ten-foot buffer,

20 we've never seen 10 foot erosion like per year or

21 in a couple years anywhere along here.

22 It is different downstream, but here we

23 haven't seen big rapid erosion along the banks

24 like we have downstream.

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1 So more than likely by having that ten

2 foot buffer, we know that within two seasons

3 we've only eroded two foot, and that more than

4 likely we'll be able to get out there and fix the

5 problem sooner than that.

6 MS. RUSSELL: And they are monitoring

7 pieces to that. So we don't put it in and walk

8 away. There's monitoring.

9 MR. SARIC: Yes, that's part of the 32

10 year monitoring that's going to go on.

11 SPEAKER: And there are funds for this

12 remediation of erosion?

13 MR. SARIC: Yeah, there will be funds.

14 It's all part of the -- you know, we will likely

15 try to negotiate an agreement with the companies

16 to implement the remedy. And part of the cost is

17 the long-term monitoring.

18 QUESTION 15: What are you doing with

19 the soil, what you're excavating?

20 MR. SARIC: Well, some of the stuff

21 that's clean, the clean soil, may be used.

22 Again, it may be used to develop a bank. In some

23 areas we're going to re-direct the river to the

24 right or left, north or south.

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1 So some clean material may be used to
2 make a bank. The contaminated material will be
3 shipped off-site.
4 SPEAKER: To where?
5 MR. SARIC: To a commercial landfill. I
6 think there's two or three that we've been using
7 for some of the other projects. They are near
8 Marshall and other locations.
9 MS. RUSSELL: Is there another question
10 back here? Okay, Dayle?
11 QUESTION 16: You just hit the point of
12 how there's not as much erosion and transfer of
13 PCBs downstream on this side as there is --
14 (The court reporter indicates that she
15 is unable hear the speaker.)
16 SPEAKER: Let me start over.
17 We know that at the Otsego impoundment
18 and also at the Trowbridge impoundment that there
19 are loaded banks of PCBs along the river's edge.
20 And they are constantly eroding. You talk
21 about -- there's so much of that going on.
22 MR. SARIC: Not as much bank erosion
23 going on.
24 SPEAKER: So to go around about to my

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1 question, which is, since that is where the
2 exposure routes are, downstream in the Otsego
3 impoundment, you've got wind erosion, flood
4 erosion, the banks are collapsing, why spend the
5 time and energy now when you've got this time
6 critical emergency situation at the Trowbridge
7 impoundment?
8 And if there is going to be a time at
9 Trowbridge, which I think you should prioritize
10 that, then there wouldn't be much harm in holding
11 off on the implementation of this remedy for a
12 few years until we settle the Trowbridge issue.
13 MR. SARIC: Well, I think that the way
14 we've done things, Dayle, is we're -- you know,
15 we've got this remedial process where we're
16 moving downstream to different areas.
17 We're coming up with decisions and
18 trying to make those decisions and get things
19 moving forward. It's a slower process than the
20 removal process which is we have gone in, we've
21 seen higher levels and targeted that.
22 We haven't made a decision regarding a
23 removal action on Trowbridge. We're working on
24 the removal action in Otsego right now.

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1 So to say, does it make sense to slow
2 one down to do another? You know, I can't answer
3 that. I think I'm here to tell you that here's
4 the remedy, we want to move forward.
5 I don't want to slow any project down.
6 You're always telling me that, try to go faster.
7 So I'm trying to go faster.
8 SPEAKER: Let me give you my response
9 because at the Otsego impoundment, which is
10 about a fifth of the size of the Trowbridge
11 impoundment, you guys decided it was in the best
12 interests to reduce exposure to have a removal
13 action.
14 I think the Trowbridge bank is so high
15 and loaded with PCB that it's even more time
16 critical and we need to establish that and move
17 quickly in that area. That's the stuff that's
18 moving downstream and creating the unclean fish
19 consumption advisory.
20 So I think you know the remedy here is
21 to do the removal action in Trowbridge maybe
22 concurrently with what's going on here. We need
23 to get that impoundment in Trowbridge under
24 control because that's where the PCBs are moving

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1 downstream. It's kind of a no-brainer. No
2 offense.
3 MR. SARIC: Point well taken.
4 SPEAKER: I know there are political
5 issues involved with that. But we need to look
6 at that really, really close.
7 MR. SARIC: Okay. Thanks, Dayle.
8 MS. RUSSELL: If I could just reiterate
9 too, all through this project we have done
10 things, you know, side-by-side.
11 So that longer, more systematic remedial
12 process has gone on alongside any kind of time
13 critical or emergency work that we have to do.
14 And we're going to continue to work that
15 way going forward. We can do both at the same
16 time if found to be needed.
17 Are there any other questions?
18 Did you want to --
19 QUESTION 17: Yeah, do you mind if I
20 take a video of it? Can you explain to me again,
21 you talked earlier about the goal --
22 SPEAKER: We can't hear you.
23 SPEAKER: You talked earlier about the
24 goal to reduce the concentrations in the fish

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1 tissue. And I didn't catch the details on that.
2 I was wondering if you could just tell me,
3 outline that portion of it, the goal to reduce
4 and who would be safe to eat.
5 MR. SARIC: So the goal, right now you
6 have a do-not-fish advisory. And our goal with
7 the fish tissue is to reduce it over time to
8 target levels.
9 So the first would be to get to the
10 Michigan Department of Environmental
11 Quality's standard of the two-meals-a-month
12 level -- to get to that level.
13 And then from there, the next level,
14 kind of the bottom, below that would be -- and
15 that's for small mouth bass.
16 And then from there we get to the
17 100,000 cancer risk number, which is that .042
18 milligrams per kilogram for the small mouth
19 angler to get to that level.
20 And we think we're going to get there
21 by having the surface weighted average
22 concentration in the sediment being that 0.33.
23 If we can get each of those areas in
24 the river to that, then the fish tissue hopefully

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1 will go down over time.
2 SPEAKER: Perfect, thank you.
3 MS. RUSSELL: Okay. Before we get
4 started, I just want to remind folks, again, when
5 we take the break, we're going to be going into
6 the public comment portion of the meeting after
7 we come back from break.
8 And if you have a question at that
9 point, we really won't be able to respond. But I
10 just want to remind everyone, you know, now is
11 the time. And just any other questions that we
12 wanted to get out.
13 SPEAKER: I would like to address two
14 items.
15 MS. RUSSELL: Not now. We're going to
16 take a break first, and then we'll get into that
17 piece, absolutely. So now is the time for
18 questions. I think we had another question. I'm
19 not going to forget, I promise.
20 QUESTION 18: I'm wondering what the
21 logic is of taking the dam down further
22 down-gradient and then moving up. Because it
23 seems like there is going to be a sediment
24 release that bypasses the one you removed by

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1 going that way.
2 Wouldn't it make sense to go upstream to
3 downstream? Why are we doing it this way?
4 MR. SARIC: Well, I think that, you
5 know, in general we are trying to do our work
6 upstream to downstream as much as we can.
7 But as we did our investigation work,
8 the reality is in this section, in the main
9 channel in Area 2, we didn't see a lot of
10 contamination in the main channel.
11 And then as we were doing our
12 investigation work in Area 3 downstream, in the
13 main channel by the M-89 bridge, we didn't see a
14 lot of contamination there either.
15 However, when we went downstream of
16 that M-89 bridge, we started seeing high levels
17 of contamination in the stream and we had a lot
18 of bank erosion. We, you know, documented a lot
19 of bank erosion, you know, going on.
20 So that combination of the higher
21 concentrations in the stream, the high amount of
22 bank erosion, it made sense to kind of say, hey,
23 let's do a time critical removal and address
24 that.

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1 And part of addressing it time critical
2 also happened to go around removing that dam.
3 Because also that dam there in Area 3
4 was in really poor condition. That was beyond
5 its engineering life. That was collapsing and we
6 were really concerned about that.
7 All of those factors together, that's
8 why we jumped ahead to do that. But we're still
9 going to follow up.
10 MS. RUSSELL: We get that question a
11 lot. Why jump ahead. And we still do that
12 systematic upstream to downstream.
13 But if at any time we feel like we need
14 to jump ahead, we have the mechanisms to do that.
15 So like Jim explained, we found a reason
16 to jump ahead, but that doesn't mean that we're
17 not going to look at it again in the upstream to
18 downstream fashion.
19 We're just taking care of the critical
20 stuff that we have to step out of line for.
21 MR. SARIC: And one last thing to get
22 your point, we don't look at it in a vacuum. We
23 don't say, okay, if we just do this, that's
24 great.

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1 We look at it like if you take the dam
2 out, what is it going to impact downstream or
3 what might it impact upstream.
4 So we look at that and we model those
5 velocities going through there. So we look at
6 all of that.
7 MS. RUSSELL: We had one up front here.
8 QUESTION 19: I just want to clarify.
9 The Otsego Dam, is that the one by Bittersweet?
10 MR. SARIC: Is that the one downstream?
11 MS. RUSSELL: The Otsego Township Dam,
12 the time critical one we're working on right now?
13 SPEAKER: Yes, is that by Bittersweet?
14 MS. RUSSELL: Yes.
15 MR. SARIC: Yes.
16 SPEAKER: Okay. So the Trowbridge Dam,
17 that's not scheduled to be --
18 MR. SARIC: That's further downstream in
19 Area 4.
20 SPEAKER: That's not Area 3?
21 MR. SARIC: That's Area 4. The
22 Trowbridge Dam is in Area 4. And believe me, it
23 is confusing. There are lots of parts, I get it.
24 And that's owned by the Department of

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1 Natural Resources. And that's the next area.
2 We're working on that. We have the data
3 collected on that.
4 MS. RUSSELL: Yes?
5 QUESTION 20: Could you please clarify
6 exactly where these dams are that you're talking
7 about?
8 MR. SARIC: Sure.
9 SPEAKER: Do you have a map?
10 MR. SARIC: I have a figure. So here's
11 this -- so here's the Otsego City Dam.
12 SPEAKER: Where is that located?
13 MR. SARIC: Really, it's right behind
14 us.
15 SPEAKER: On your map?
16 MR. SARIC: There's also a map.
17 MS. RUSSELL: All of the dams are
18 outlined on this as well.
19 MR. SARIC: So it is literally right
20 behind us in that direction. That's the city
21 dam. And further downstream is the township dam,
22 which is gone. We have a water control structure
23 that's there now, that exists.
24 Yes?

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1 SPEAKER: I don't know where that Otsego
2 Township dam is at. Can you describe the area?
3 MR. SARIC: It is -- let's see --
4 SPEAKER: I thought that was the
5 Trowbridge Dam.
6 MR. SARIC: No, Trowbridge is down
7 further.
8 SPEAKER: I'm sorry.
9 MR. SARIC: We'll get it.
10 MS. RUSSELL: Yes?
11 QUESTION 21: Is the Superfund paying
12 for all of this? Who pays for all of this, our
13 forefathers that were responsible for all of
14 this?
15 MR. SARIC: So Georgia-Pacific has been
16 involved in a lot of the sampling. They've been
17 paying for a lot of the sampling that's going on,
18 doing the remedial investigation, the feasibility
19 studies. We have an agreement with them. They
20 have been doing a lot of work that's there.
21 And then once we select a remedy, for
22 like, for example, upstream in Area 1, we had a
23 Record of Decision and then we had an order that
24 was issued.

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1 And so that work is going to be
2 conducted by Georgia-Pacific and International
3 Paper upstream.
4 And then in the time critical removal
5 action, the work in Area 3 right now, down below,
6 that work is being conducted by Georgia-Pacific.
7 It's funded by Georgia-Pacific, International
8 Paper and Warehouse.
9 SPEAKER: Menasha is not involved in
10 any of that?
11 MR. SARIC: No.
12 SPEAKER: So does that mean they are
13 going to cover all of that?
14 MR. SARIC: Well, you know, I think we
15 try to negotiate agreements with the responsible
16 parties to conduct the work. Once we select a
17 remedy, we try to negotiate an agreement or use
18 our enforcement mechanisms to get them to cover
19 the cost of the clean up.
20 MS. RUSSELL: Yes, Dayle?
21 QUESTION 22: The design issue, it's
22 all about the money. And a lot of people here
23 probably don't know about the federal lawsuit
24 that Georgia-Pacific has brought to find out how

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1 they're going to distribute the cost of the
2 clean-up, who is going to take what, how much of
3 the percentage is going to be.
4 That's getting in the way of getting
5 this concluded, the money, because this thing is
6 hanging it up, if you will.
7 Any update on that you want to share
8 with us?
9 MR. SARIC: Regarding the lawsuit, there
10 was a trial, I think like sixteen months ago, and
11 there has been no decision from the Judge at this
12 point. So you know, I don't know where we are on
13 that.
14 SPEAKER: Is the lack of that decision,
15 is that stalling the process of moving forward?
16 MR. SARIC: No, I wouldn't say it's
17 stalling. I think we continue to do our
18 investigation work and try to -- it has
19 complicated our negotiations to implement a
20 remedy, but I wouldn't say that it has stalled
21 them.
22 MS. RUSSELL: Did you have another
23 question?
24 QUESTION 23: Will this be the -- the

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1 old paper mill site, I think it was Rock Tenn,
2 that's vacant now, is that land -- I don't know
3 who owns it or anything, but is that being
4 considered in them paying part of the price of
5 the clean up?
6 MR. SARIC: Well, right now we haven't
7 involved them yet. And it's not related to this
8 directly. We haven't put a link to that.
9 SPEAKER: Is that because --
10 MR. SARIC: It's the physical location.
11 SPEAKER: I don't know who owns it
12 anymore.
13 SPEAKER: It's owned by the City of
14 Otsego now. Or the County.
15 MR. SARIC: Right.
16 SPEAKER: So because there's nobody
17 there, they're not responsible?
18 SPEAKER: But remember the PCBs came
19 from the recycling of the carbon paper. The
20 people in Menasha weren't doing that, but in
21 Kalamazoo they were.
22 MS. RUSSELL: We had a question back
23 there.
24 QUESTION 24: A few years ago, wasn't

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1 there around a fifty million dollar settlement
2 reached in Kalamazoo, and how much of that money
3 is still available? Has it been growing, I would
4 think, in some type of fund? Is that available
5 for this project?
6 MR. SARIC: Yeah, so I think it was in
7 2009. You know, it could be 2011. My calendar
8 could be off a little bit.
9 So Millennium Holdings, one of the
10 larger responsible parties, filed for bankruptcy.
11 And as part of the federal government settlement
12 with that, we received -- our claim was like two
13 billion dollars.
14 And we received fifty million dollars
15 in a fund for river clean-up and then fifty
16 million dollars to put in a trust to kind of
17 address the Allied Landfill site.
18 So for the river, I think we still have,
19 you know, we still have like fifty to fifty-three
20 million, I don't know the exact number, for that.
21 We used some of the funds we got for
22 some of the removal actions. Like in Portage
23 Creek. We spent sixteen million dollars on the
24 Portage Creek removal that we did.

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1 But we still have -- I believe it's
2 fifty-two or fifty-three million dollars. So
3 that's kind of still there for that.
4 SPEAKER: Will any of that be available
5 for this type of project?
6 MR. SARIC: It might be. It might be.
7 I think it's -- we're trying to use it, you know,
8 to continue to do work and what we have to.
9 Whether it be removals or working with the
10 various responsible parties to get them to, you
11 know, help with the work. We're trying to keep
12 the project moving as best we can.
13 MS. RUSSELL: I think we had a couple
14 more questions. Before I get to those two
15 questions, I just want to remind everyone that
16 we are under public comment period. And that
17 comment period is going to last until August
18 30th.
19 So if you have information about this
20 site that you want us to know or if there's
21 comments that you want to make about what we're
22 proposing for clean-up in this part of the river,
23 this is the time for us to get the feedback that
24 we need from the community to make the best

1 decisions that we can.

2 And you can submit that on-line. Again,
3 there are forms that are included here, you can
4 mail that in. Or again tonight as we close up
5 these questions, this question portion, just pick
6 up a card at the registration table and we can
7 take your comments tonight at the public comment
8 portion.

9 So with that reminder, you had a
10 question here? And then one there.

11 QUESTION 25: Would you allude just a
12 little bit on the recycling of PCBs? This
13 contamination happened because of recycled PCBs.
14 I have a different concept of recycling.

15 MR. SARIC: It was recycling the
16 carbonless copy paper. I'm certainly not an
17 expert in paper.

18 But during the process of doing that,
19 the effluent or the discharge, if you will, you
20 know, the material that came out of that process,
21 one of the byproducts was the PCBs, is the best
22 way to put it.

23 SPEAKER: So in making new paper --

24 MR. SARIC: During the process of making

1 new paper, that was one of the discharges.

2 SPEAKER: The leftovers?

3 MR. SARIC: Yes. Think of it that way.

4 SPEAKER: Thank you.

5 MS. RUSSELL: We had a question here.

6 QUESTION 26: So then going along with
7 his comment, and this gentleman's here about it
8 coming from Kalamazoo, does that mean that the
9 Otsego paper mills have not contributed to the
10 pollution of the river?

11 MR. SARIC: I can't answer that question
12 for all of the 'who has contributed'.

13 I think that, you know, we're really
14 focusing more on, you know, cleaning up the
15 sources and addressing it from there. But we do
16 try to look into it.

17 MS. RUSSELL: It is typically from
18 historical waste. I don't know if you're
19 alluding to anything current, but it is
20 historical waste practices that we're addressing
21 here.

22 MR. SARIC: Yeah, historically in
23 Kalamazoo we had a series of landfills. We had a
24 series of paper mills that all discharged some

1 of that material from the 1950s to the 1970s into
2 the river. It all flowed downstream from there.

3 MS. RUSSELL: Yes?

4 QUESTION 27: My name is [REDACTED].

5 To clarify the answer to the gentleman's
6 question about the recycling, my understanding
7 is that PCBs were added to the encapsulated
8 chemicals in the NCR paper.

9 And that was to prevent the chemicals
10 from drying out because PCBs are oily substances.
11 So when you press on the paper, it breaks those
12 microbubbles and then mixed the chemicals and
13 then you get the ink. So that was the source of
14 the PCBs, as I understand it.

15 MR. SARIC: Right. So in the process
16 of recycling that material, that paper, you
17 then -- a byproduct of being discharged from that
18 was the PCBs, that's correct.

19 SPEAKER: Does that help clarify your
20 understanding, sir?

21 SPEAKER: When you say recycle the
22 paper, the manufacturers aren't recycling it.
23 The manufacturer sells it and the customer uses
24 it. How does the customer recycle it?

1 MR. SARIC: It's not the customer. It's
2 a byproduct. They take the used paper --

3 SPEAKER: From the manufacturer, it's a
4 byproduct. I can follow that. Thank you.

5 QUESTION 28: I actually have another
6 question as well.

7 MS. RUSSELL: Sure.

8 SPEAKER: One of of comments Jim made
9 in passing is maybe indicating some areas that
10 should not be residential in this remediation.

11 Are there some that you're aware of now
12 that should not be residential?

13 MR. SARIC: There's only I think two
14 parcels that are owned by residents, but they
15 don't -- they are not quote-unquote residential.

16 So I would say there is no true
17 residential land use in this area or within our
18 study boundary.

19 SPEAKER: Okay. Because I asked -- I'm
20 the Otsego Township Planning Chair.

21 And I asked because I wonder if we
22 should perhaps put in our master plan an area
23 that we for sure don't allow residential
24 development.

1 MR. SARIC: I think we'll have some
2 discussions about that. Some of these land use
3 kind of things for the property that you guys do
4 own in there. Some of it is within that one
5 hundred year floodplain. I think realistically
6 building homes in some of those areas is a
7 difficult thing to do. Not a good idea.

8 MS. RUSSELL: Okay. Any final questions
9 before we kind of take a quick break and then
10 we'll come back to the public comment portion?

11 Any other questions before we break for
12 that? Okay. We're going to take a quick five
13 minute break. It is 25 after now, we're going to
14 restart at 7:30.

15 (Break from 7:25 to 7:37 p.m.)

16 MS. RUSSELL: We are going to go ahead
17 and get started with the public comment portion.

18 There's a few special instructions for
19 this portion.

20 So again, this is the public comment
21 portion of the meeting. This is a chance for
22 folks who just wanted to submit their comments
23 verbally, we have an option to have a court
24 reporter do that for us.

1 So it's like if you're here already,
2 you can put that into the record and then be
3 done. One and done.

4 If you are interested in making a
5 comment after this meeting, you certainly can.

6 Again, you can send that in through the
7 mail. Click the link on our website. And you
8 have until August 30th. It would be great to see
9 a comment from you. That happens to be my
10 birthday, so I hope to see something from you.

11 I have just a few comments. I have only
12 a few cards taken. What I'm going to ask, if you
13 can -- I understand if you need special
14 accommodations, but if you are able to, if you
15 could come up so our court reporter can hear you.

16 Maybe even come up a little closer if
17 you can't stand, it's understandable, but maybe
18 have a seat close by so she can capture that
19 fully for this evening.

20 So did you have a question about the
21 cards here?

22 SPEAKER: There weren't any cards over
23 there. Are there more cards to be passed out?

24 MS. RUSSELL: Sorry.

1 SPEAKER: Oh, those cards. I thought
2 they were little three by fives.

3 MS. RUSSELL: Dayle, we have been
4 through enough of these. You should know how it
5 all goes.

6 SPEAKER: These are brand new.

7 MS. RUSSELL: Don't worry, I will not
8 forget you.

9 First, I'm going to -- we're going to
10 go ahead and get started.

11 Klaus, you wanted to go ahead. And just
12 go ahead and do this here. And please keep it
13 brief so we can get on with the rest of our
14 evening. So go ahead.

15 MR. GLOBIG: My name is [REDACTED],
16 [REDACTED]. And I live in Kalamazoo.
17 And I have studied the PCB issue for 20 years.

18 I am introducing into the public records
19 two items. The first one is a lecture about PCBs
20 which I presented at the Western Michigan College
21 of Engineering. The second item is an open
22 letter to the residents of Kalamazoo.

23 And the lecture is available on the
24 internet. If you mention my name and PCBs, you

1 will find it.

2 Now, in the interest of public free
3 speech, I have a few copies left for you. Not
4 many, but if you are interested, I think it will
5 be illuminating.

6 So here are some copies, you can pick
7 them up at your convenience. Thank you.

8 MS. RUSSELL: Thank you, Claus. And
9 then I have a card. Who has card number one?
10 Does anybody have card one?

11 SPEAKER: They left.

12 MS. RUSSELL: Now I'm calling card two.

13 MS. [REDACTED]: My name is [REDACTED].

14 And I just wanted to make sure that as
15 you're doing the redevelopment, if you could
16 please include some recreation access outlets or
17 sites. And maybe that has to be, you know,
18 planned with the communities or whatever.

19 But instead of putting up the banks and
20 then not having access to the river, it would be
21 nice if we could have that coordinated in
22 advance.

23 MS. RUSSELL: Okay. Thank you very
24 much.

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1 Dayle, I think you had card three. Your
2 number is up. Would you mind stepping forward
3 and handing me your card.
4 MR. HARRISON: Would I mind? Of course
5 not.
6 MS. RUSSELL: Thank you.
7 MR. HARRISON: I'm Dayle Harrison. I'm
8 the president of the group called the Kalamazoo
9 River Protection Association.
10 For you history buffs, this is our 40th
11 anniversary this year. We're trying to get the
12 river cleaned up and restored and have clean fish
13 to eat, holding the polluters and the companies
14 responsible for the cost of the clean up. Trying
15 to get EPA to get more invigorated. It has been
16 quite an interesting four decades.
17 As far as the proposed plan, I do have
18 some concerns about the selected remedy that the
19 EPA has selected. I think those areas that you
20 call -- I call them gray shaded, you call them
21 anabranches.
22 I would like to see you come in when
23 it's time -- and I don't think you should be
24 doing it until you do further work downstream.

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1 But when it's time to go in and use some
2 of the natural resource damages funds, the Fish
3 and Wildlife might be able to help you with that,
4 to restore those areas. Excavate them and then
5 restore them. I think that would be a good step
6 forward.
7 But I really want to talk about the
8 impact that this site has on downstream areas.
9 By devoting time and energy and money
10 from the companies to clean up this site that
11 we're talking about tonight above the City of
12 Otsego, we're really sacrificing the benefits we
13 would gain from cleaning up the PCBs along the
14 banks of the Trowbridge area and then moving down
15 to the City of Allegan, and then once that's
16 done, move back up here and finish the job here
17 above the City of Otsego.
18 It's unbelievable, the bank of
19 sediments, you can see them. If you canoe the
20 river, many of you have, from Otsego down to the
21 township dam downstream to the Trowbridge, you
22 see the banks literally saturated with PCB waste
23 from the paper companies.
24 We need to get that isolated and removed

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1 like you're doing at the Trowbridge. That should
2 be the top priority and then at a later date
3 think about coming forward after you do the City
4 of Allegan impoundment and Lake Allegan and then
5 come back up here and do something up here.
6 We'll be submitting more written
7 documents regarding this proposal in more detail.
8 I like the plan. I'm still concerned
9 about that area from the Knife Blade downstream.
10 It seems like at the Otsego impoundment you had a
11 wall that you sort of shuffled around and
12 excavated one side in the design process, and
13 then we clean up that side, you went back over
14 and rerouted the river to one side and then you
15 cleaned up the other side.
16 That would reduce a lot of the soil
17 sediment, the so-called clean sediment from
18 moving downstream and creating problems in our
19 floodplain and wildlife habitats.
20 I would like to see some of the data
21 that we haven't seen that goes below the four
22 feet depth of the core samples.
23 I know at the Trowbridge impoundment
24 there are areas where we have three or four feet

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1 of clean sediment that's covering up the
2 contaminated sediment.
3 That's been documented by the U.S. Fish
4 and Wildlife Service and the U.S. Geological
5 survey folks.
6 So thanks for the opportunity to say a
7 few words. Hope you can get moving on it.
8 Thanks for the work that you do do.
9 MS. RUSSELL: Thank you.
10 MR. SARIC: That was your only two?
11 MS. RUSSELL: Yes. If you hadn't had a
12 chance but wanted to, the opportunity is yours.
13 Otherwise, certainly you can submit any
14 comments you have to us on-line or in the mail.
15 And we look forward to continuing to
16 work with all of you as we move forward with this
17 clean-up.
18 So pending any other comments, last
19 chance, again, thank you for spending your
20 evening with us and we look forward to hearing
21 from you in the future. Have a safe drive home.
22 (Meeting adjourned at 7:46 p.m.)
23 *****
24

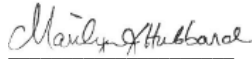
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STATE OF MICHIGAN
COUNTY OF CALHOUN

I, Marilyn J. Hubbard, Certified
Shorthand Reporter and Notary Public in and for
the State of Michigan, do hereby certify that the
foregoing transcript of the public hearing on
July 25, 2017, is true and accurate to the best
of my ability.

IN WITNESS WHEREOF, I have hereunto set my
hand this 2nd day of August, 2017.



Marilyn J. Hubbard
My commission expires:7-25-18

SUBSCRIBED AND SWORN TO
me before this 2nd day
of August, 2017.



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