

ILLINOIS POLLUTION CONTROL BOARD

ROCK RIVER WATER	)	
RECLAMATION DISTRICT,	)	
Petitioner,	)	
and	)	No. PCB 13-11
ILLINOIS ENVIRONMENTAL	)	<b>RECEIVED</b>
PROTECTION AGENCY,	)	CLERK'S OFFICE
Respondent.	)	DEC 14 2012
	)	STATE OF ILLINOIS Pollution Control Board

TRANSCRIPT OF PROCEEDINGS had at the hearing of the above-entitled matter, held at 425 East State Street, Rockford, Illinois, on the 28th day of November, 2012, commencing at 9:00 a.m., held before Bradley P. Halloran, Hearing Officer.

1 PRESENT:

2

3 DRINKER BIDDLE & REATH, by:

4 MR. ROY HARSCH

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6 Chicago, IL 60606-1698

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8 appeared on behalf of the Petitioner;

9

10 OFFICE OF THE ATTORNEY GENERAL

11 STATE OF ILLINOIS, by:

12 MR. CHRISTOPHER J. GRANT and

13 MR. ROBERT PETTI

14 69 West Washington Street, 16th Floor

15 Chicago, Illinois 60602

16 Phone: (312) 814-5388

17 appeared on behalf of the Respondent.

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I N D E X

E X H I B I T S

RESPONDENT'S EXHIBIT

ADMITTED

Nos. 1-8

22

No. 9

202

PETITIONER'S EXHIBIT

ADMITTED

No. 4

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No. 6

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1 HEARING OFFICER HALLORAN: Good  
2 morning. My name is Bradley Halloran. I'm a  
3 hearing officer with the Illinois Pollution  
4 Control Board.

5 I'm also assigned to this matter  
6 entitled Rock River Reclamation District,  
7 Petitioner, versus the Illinois Environmental  
8 Protection Agency, a Respondent. Our docket  
9 number is PCB 13-11. It's a permit appeal,  
10 water permit appeal.

11 This hearing has been publicly noticed  
12 pursuant to the Board regulations and rules and  
13 will be conducted in accordance with section  
14 101.600 of the Board's procedural rules.

15 I note for the record that I will not  
16 be making the ultimate decision in the case.  
17 That's left to the five Board members. I  
18 basically ensure that the hearing goes in an  
19 orderly fashion and rule on any evidentiary  
20 issues that may arise.

21 I want to note for the record that  
22 there are no members of the public involved,  
23 just members of the parties. With that said,  
24 Mr. Harsch, would you like to introduce

1 yourself, please?

2 MR. HARSCH: Yes. My name is Roy M.  
3 Harsch. I'm a partner at the law firm of  
4 Drinker Biddle & Reath, and I represent the  
5 Rockford Water Reclamation District.

6 MR. GRANT: My name is Chris Grant,  
7 G-r-a-n-t-, and I'm assistant Attorney General  
8 with the Illinois Attorney General's office,  
9 environmental bureau.

10 MR. PETTI: Robert Petti, P-e-t-t-i,  
11 also with the Attorney General's office,  
12 assistant Attorney General.

13 HEARING OFFICER HALLORAN: A few  
14 administration duties to fulfill.

15 Mr. Harsch just handed me a revised  
16 response to respondent's motion in limine to  
17 exclude irrelevant testimony and documents not  
18 included in the record.

19 It was previously filed, I believe, on  
20 November 26th. I will take it -- I'll take it  
21 as Hearing Officer Exhibit A.

22 Any objection?

23 MR. GRANT: None.

24 HEARING OFFICER HALLORAN: All right.

1 I do want to -- there had been some prefiled  
2 testimony and attachments filed by the  
3 petitioner a week or so ago. There has been  
4 written briefing on it. I have read the  
5 briefs.

6 It basically includes, I believe, two  
7 documents that are attached to a couple of the  
8 written testimony, and I would appreciate it at  
9 this point if you could give me four to five  
10 minutes or a few minutes longer, if you need  
11 be, to hear oral argument in the matter,  
12 Mr. Harsch, and then I'll go to Mr. Grant or  
13 Mr. Petti.

14 MR. GRANT: It's my motion.

15 HEARING OFFICER HALLORAN: Mr. Grant.

16 MR. GRANT: I filed a motion in limine  
17 really on two things. One was to exclude  
18 irrelevant testimony. The second is to exclude  
19 documents not in the record.

20 As far as the documents not on the  
21 record, it's not so much of a concern so long  
22 as it's not a document that was not presented  
23 to Illinois EPA, not considered by Illinois  
24 EPA, or available to them if it's put in as an

1 exhibit.

2 I think the second part is that the  
3 final decision of Illinois EPA in this matter  
4 was made on August 1, 2012. We'd like to  
5 retain the right to object to anything that's  
6 submitted that was generated after that date  
7 and was not considered by the Agency.

8 HEARING OFFICER HALLORAN: Let me --  
9 let's go to the testimony of Jim Huff and the  
10 attachments. Could you zero in on that first,  
11 please?

12 MR. GRANT: Just one second.

13 HEARING OFFICER HALLORAN: Something  
14 about the rulemaking. You talked about the  
15 rulemaking.

16 MR. HARSCH: The document referenced in  
17 the motion, Mr. Grant, is the testimony of  
18 Mr. Cobb. It was entered in a prior  
19 proceeding.

20 MR. GRANT: We don't have any really  
21 strong objections. At the time we filed it, we  
22 noted that there were documents that were not  
23 in the record that were being used.

24 But there are -- frankly both of us are



1 planning on using some other documents that  
2 weren't included in the record specifically  
3 without formally moving the Board to supplement  
4 the record with the documents, so not so much  
5 of a problem.

6 I'm more concerned about the -- a lot  
7 of the reference to groundwater degradation  
8 regulations. Now, the issue behind this really  
9 was -- goes back to about the beginning of 2011  
10 when the petitioner wanted to meet with  
11 Illinois EPA and have discussions about this  
12 excess flow basin as well as some other things,  
13 and there were a lot of potential objections  
14 that Illinois EPA had.

15 One of them was the groundwater  
16 anti-degradation provisions, and there was a  
17 lot of back and forth on that. There was a lot  
18 of discussion.

19 But when the Agency's final action was  
20 taken, it did not rely on the groundwater  
21 anti-degradation provisions of the part 628  
22 regulations. The final decision, which they're  
23 bound by, is based only on section 12A, water  
24 pollution provisions in the statute, section

1 39, the provisions that require -- you know,  
2 that forbid the Agency from issuing a permit if  
3 it violates a section of the Act, and then one  
4 of their construction management guidelines in  
5 part 370.

6 So my concern was, and still is, that  
7 because what this hearing is all about and what  
8 this matter is all about is whether or not the  
9 Agency's final decision is correct, the final  
10 decision based only on the water pollution  
11 provisions of 12A and that construction  
12 standard.

13 And I was concerned that there was --  
14 and we saw this in a lot of the testimony, the  
15 written testimony, a lot of discussion about  
16 whether or not Illinois EPA's interpretation of  
17 the part 620 regulations was appropriate in  
18 this case. That has absolutely nothing to do  
19 with what the case is in for.

20 If the Agency had in its final decision  
21 said, okay, we're going to deny this because it  
22 would violate the part 620 regulations, then  
23 that would be relevant.

24 Because the Agency has not and because

1 we believe this is a very open and shut water  
2 pollution case and that's what the Agency  
3 relied on, I just didn't want -- there's two  
4 problems. One is we'd spend a lot of time  
5 today on stuff that's just not relevant.

6 And, secondly, I don't want the Board  
7 to be confused as to what this hearing is all  
8 about because the petitioner has the burden of  
9 proof. And the way that I read it and from a  
10 simple standpoint is they have the burden of  
11 proof -- of proving that this excess flow basin  
12 would not cause water pollution and, thereby,  
13 violate the statute. That's it.

14 So that's essentially the reason that  
15 we filed this. One of the reasons that I moved  
16 to exclude the documents was they're not  
17 relevant either if we're going to get into  
18 testimony on groundwater regulations and what  
19 the anti-degradation provisions are. That just  
20 doesn't have any relevance to what we're doing  
21 here today.

22 HEARING OFFICER HALLORAN: Okay. Let  
23 me stop you. I'm looking at what Mr. Harsch  
24 submitted, the testimony of James E. Huff. And

1 there's quite a number of attachments.  
2 Attachment four, it's a water pollution control  
3 permit.

4 Do you have a problem, first of all,  
5 with the testimony of James Huff, the written  
6 testimony?

7 MR. PETTI: In total?

8 HEARING OFFICER HALLORAN: In total.

9 MR. GRANT: No. As long as I'm able to  
10 retain my objection to testimony regarding the  
11 620 regulations and groundwater degradation,  
12 that entire area, which we do.

13 Anything that doesn't have to do with  
14 water pollution including groundwater pollution  
15 because groundwater pollution -- because then  
16 we don't think -- because the hearing is based  
17 only on the final decision of the Agency, not  
18 on what discussions they had over all sorts of  
19 other potential bases for rejection of the  
20 plan. So we can maintain that.

21 Now, as far as his testimony on it, you  
22 know, we'd like to exclude the reference to the  
23 part 620 of the regulations.

24 HEARING OFFICER HALLORAN: I'm going to

1 take that as administrative notice, judicial  
2 notice. The Board is well aware of part 620.

3 MR. GRANT: Okay.

4 HEARING OFFICER HALLORAN: So I guess  
5 your objection is overruled.

6 MR. GRANT: Okay. I just want to make  
7 sure I made it clear in the record because in  
8 our post-hearing brief we'll --

9 HEARING OFFICER HALLORAN: I'm just a  
10 little confused, and it is on the record, what  
11 you're objecting to.

12 But this whole packet of Mr. Huff's  
13 resume -- and, Mr. Harsch, could you expound on  
14 that? I mean, what -- I'm not sure why this  
15 was altogether sent to me.

16 MR. HARSCH: It's the prefiled  
17 testimony.

18 HEARING OFFICER HALLORAN: But it's  
19 also -- it has a bunch of other stuff attached  
20 to it.

21 MR. HARSCH: It has the exhibits that  
22 Mr. Huff references in his testimony that we  
23 intend to introduce when the witness reads  
24 their testimony today.

1 MR. GRANT: I think, you know, if  
2 there's something that's particularly  
3 egregious that he's using -- if he's going to  
4 read the testimony, I think that takes away a  
5 lot of the -- a lot of the problem I'd have.

6 I was -- you know, we were putting an  
7 objection out with the idea that this would  
8 just be all of the sudden in the record as  
9 evidence. We could cross-examine on it. But  
10 if he's going to actually read the testimony  
11 in, then -- if we needed to have a question and  
12 we have the opportunity to do that, that's  
13 fine.

14 HEARING OFFICER HALLORAN: Mr. Huff is  
15 going to read the testimony in?

16 MR. HARSCH: Yes. My intention was to  
17 have all three witnesses read their testimony.

18 HEARING OFFICER HALLORAN: We had  
19 talked about in our conference call having it  
20 admitted. This is the first I've heard of  
21 that.

22 MR. HARSCH: I think given the State's  
23 objection to portions of Mr. Carroll's  
24 testimony and Mr. Huff's testimony, it was just

1 more reasonable to have them read it.

2 In brief response, if I could, I guess  
3 we disagree with Mr. Grant about what this case  
4 is about. The reference to water pollution,  
5 that's a term that's defined, and we'll go over  
6 that in our case.

7 We did have a number -- the District  
8 did have a number of meetings with the Agency,  
9 as shown in the record, and we were told what  
10 the Agency's concerns were, and they clearly  
11 have been that we would have to show that  
12 groundwater would not be impacted by the  
13 proposed project. And that was listed as the  
14 principal thing we had to show and we believe  
15 that's the water pollution that the Agency's  
16 referring to in their denial.

17 And it's clear. The testimony will  
18 be -- will support that, that that is the  
19 underlying basis of the Agency's decision. We  
20 think it is relevant. And we've already noted  
21 on the record that -- how you're going to  
22 handle the motion. So that's enough said, I  
23 think.

24 HEARING OFFICER HALLORAN: Yeah.

1 Regarding this, I am going to mark it  
2 Petitioner's Exhibit A. I'm overruling the  
3 State's motion. I'm taking judicial  
4 administrative notice. And that was James E.  
5 Huff's written testimony and attachments.

6 And then Dana Carroll, Mr. Grant, or  
7 Mr. Petti --

8 MR. HARSCH: What did you mark that?

9 HEARING OFFICER HALLORAN: Exhibit A,  
10 Petitioner's Exhibit A, Mr. Huff's written  
11 testimony.

12 MR. PETTI: The written testimony and  
13 the exhibits together as Exhibit A or each  
14 individual attachment is going to be dealt with  
15 separate?

16 HEARING OFFICER HALLORAN: No. I  
17 admitted the whole. If we part and parcel it  
18 out, I think it --

19 MR. PETTI: I understand.

20 MR. GRANT: It's very similar to  
21 Mr. Huff's testimony. If he's going to read  
22 it, then we don't have any objection to it at  
23 this point.

24 MR. PETTI: The objections are the



1 same. I would say, you know, that with regard  
2 to the 620 regs being discussed that you've  
3 taken notice of that. And I think we've kind  
4 of moved past it. There's nothing specifically  
5 glaring that we really want to cull out for  
6 argument. I think your ruling on Mr. Huff  
7 would apply in the same manner as Mr. Carroll.

8 And I -- we didn't raise the objection  
9 in the motion to Mr. Droessler. I think the  
10 only reason we didn't do that was because --  
11 and I can't recall exactly, but I don't think  
12 we had it at the time.

13 I would presume that we would want to  
14 put the same objections on the record to his  
15 testimony as regarding the 620 regs and any new  
16 information. But I don't believe there was  
17 anything new in there. I just put that out  
18 there now as opposed to doing it while he's  
19 testifying.

20 HEARING OFFICER HALLORAN: Okay.  
21 Mr. Harsch, any --

22 MR. HARSCH: I mean, they were all  
23 submitted at the same time electronically to  
24 the counsels.

1 HEARING OFFICER HALLORAN: All right.  
2 I'm taking the testimony of Dana Carroll and  
3 the attachments, take it as Petitioner's  
4 Exhibit B. I'm taking particular  
5 administrative notice of regulation 620.

6 You know, I guess you could also  
7 argue -- there's a Joliet case. There's a  
8 sentence in here that says, "Additionally, if  
9 there was information in the Agency's  
10 possession upon which it reasonably should have  
11 relied, the applicant may also submit such  
12 information to the Board for its  
13 consideration."

14 MR. GRANT: And I agree that we're not  
15 totally limited to the record. Again, my  
16 concern in filing the motion -- and I wrote it  
17 in an hour, so I don't know if Mr. Harsch saw  
18 it, but I had some typos in mine, too.

19 It really had to do with defining what  
20 the relevance, the scope of the hearing was  
21 going to be, whether it was the Agency's letter  
22 or something else. So I made my point on that.  
23 So that's fine.

24 HEARING OFFICER HALLORAN: Any

1 response, Mr. Harsch?

2 MR. HARSCH: Are you going to receive  
3 then --

4 HEARING OFFICER HALLORAN: I'll mark it  
5 Exhibit C, also administrative notice, the  
6 testimony of Gregory Droessler and the  
7 attachments.

8 MR. HARSCH: I believe the specific  
9 document that was objected to in Mr. Carroll's  
10 testimony was, in fact, the document he  
11 references that he obtained from the Agency's  
12 own website. So we clearly have a document  
13 that was available to the Agency.

14 MR. GRANT: Well, I don't agree with  
15 that.

16 HEARING OFFICER HALLORAN: There are  
17 some others -- I'm not sure where these go,  
18 Mr. Harsch. You filed Larry McFall, plant  
19 manager resume.

20 MR. HARSCH: It was included as part of  
21 Mr. Carroll's attachments along with his  
22 resume. There's a question that he feels  
23 Mr. McFall is better qualified to answer.

24 HEARING OFFICER HALLORAN: And Dana

1 Carroll's resume, that should go with his  
2 written testimony.

3 MR. HARSCH: Mr. Carroll's. We can  
4 hold out Mr. McFall's resume because I intend  
5 to call him as a witness.

6 HEARING OFFICER HALLORAN: All right.  
7 We'll clean this up a little when we take a  
8 break. I think that's about it.

9 MR. GRANT: I have one -- just for  
10 clarification, Mr. Harsch and I spoke about it,  
11 but I'm wondering do I need to move the record  
12 into evidence or is the record already in  
13 evidence? If not, I'd like to move that the  
14 record be put into evidence.

15 HEARING OFFICER HALLORAN: Mr. Harsch.

16 MR. HARSCH: There's only one document  
17 that I have no idea what it is, where it came  
18 from, and that's the Washington, Indiana  
19 PowerPoint regarding the Washington, Indiana  
20 CSO project.

21 MR. GRANT: For the record, we're  
22 talking about Bates stamps number 848 through  
23 866.

24 MR. HARSCH: In the electric number

1 that I got, it did not bear an Agency exhibit  
2 number.

3 MR. GRANT: It's not? I'm sorry?

4 MR. HARSCH: It did not bear an Agency  
5 exhibit number.

6 MR. GRANT: I don't -- we didn't put  
7 those Agency exhibit numbers on it. It was  
8 included because it was a document that  
9 Illinois EPA included among those that it  
10 relied on in making its final decision.

11 My understanding is that it was part of  
12 a USEPA online educational thing. We included  
13 this as an example.

14 MR. HARSCH: So I would have no problem  
15 with the introduction of everything in the  
16 record with the exception of that document. We  
17 might have some questions of the Agency  
18 witnesses regarding it.

19 MR. GRANT: It may or may not come in.  
20 So that's fine. If we're going to use it,  
21 we'll move it at that time.

22 HEARING OFFICER HALLORAN: Okay. So as  
23 it stands, the record is admitted into evidence  
24 except for Exhibit 9, and we'll address that

1 later.

2 MR. HARSCH: Yeah. That would be --  
3 excuse me. That would be Respondent's  
4 Exhibit 9, Hearing Exhibit 9 might be more  
5 specific.

6 Some of the things in the record are  
7 marked with an IEPA exhibit number. That's not  
8 something that this did not have. This is  
9 probably appropriately Respondent's Hearing  
10 Exhibit No. 9.

11 HEARING OFFICER HALLORAN: Okay.  
12 Respondent's Exhibit 1 through 8 are admitted.

13 MR. GRANT: Actually, the entire record  
14 is here. We only took some excerpts from the  
15 records for the exhibits that you have in front  
16 of you. So the record would be -- has been  
17 filed with the Board. They have --

18 HEARING OFFICER HALLORAN: Right. You  
19 said is the record into evidence.

20 MR. GRANT: Yeah. I wasn't sure  
21 whether I need to move it in. It is in?

22 HEARING OFFICER HALLORAN: Yes.

23 MR. GRANT: In its entirety?

24 HEARING OFFICER HALLORAN: Let me bring

1 back Respondent's Exhibit 9. Is this in the  
2 record?

3 MR. GRANT: Yes.

4 MR. PETTI: It's all stuff that's in  
5 the record. We just pulled things out for  
6 clarity, for expedience, instead of flipping to  
7 page 700 and back to page 100.

8 MR. GRANT: We'll try to clarify when  
9 we use it. This is in the record. This is  
10 not. If we use this, we'll refer to it again  
11 and then move it in separately if we need to.

12 HEARING OFFICER HALLORAN: Okay. Was  
13 that all?

14 MR. GRANT: Also, I spoke to  
15 Mr. Harsch. There's two other things that are  
16 not currently in the record that we would like  
17 to move in.

18 One is Respondent's Hearing Exhibit  
19 No. 3. It's the NPDES permit for the facility.  
20 We'd like to move that in. I don't think  
21 Mr. Harsch objects.

22 MR. HARSCH: No, I do not.

23 MR. GRANT: And just to save time, the  
24 second one we have is I have the curriculum

1 vitae of William Buscher who will be a witness  
2 for us today. And that's Respondent's Hearing  
3 Exhibit No. 7.

4 MR. HARSCH: Again, I have no  
5 objections to any of the exhibits I was  
6 provided this morning, 1 through 8. 9 is the  
7 only one I have --

8 HEARING OFFICER HALLORAN: Okay. As I  
9 earlier stated then, Exhibits 1 through 8 are  
10 admitted into evidence. We're going to address  
11 Respondent's Exhibit 9 at a later date.

12 Mr. Harsch, do you want to give an  
13 opening?

14 MR. HARSCH: Very brief. This case is  
15 a -- regards a denial of a construction permit  
16 that the Rockford Water Reclamation District  
17 had applied for as part of its efforts at  
18 eliminating sewer overflows during wet weather  
19 events, something that they have been dealing  
20 with the Agency for some period of time and  
21 which, in fact, is the subject of a complaint,  
22 a commitment agreement between the Agency and  
23 the District.

24 The basin as proposed, it was intended



1 to be a sustainable or green infrastructure as  
2 opposed to a concrete basin or synthetic lined  
3 basin.

4 It would be used under worst case model  
5 assumed conditions using a 10-year storm event,  
6 which in and of itself was conservative, once  
7 per year where flows would be directed to that  
8 basin when flows exceeded the amount that the  
9 treatment plant was capable of accepting, and  
10 those flows would be retained in the basin  
11 until those flows reduced where the flows then  
12 would be pumped back to the treatment plant for  
13 full treatment.

14 Under worst case models, some assumed  
15 conditions, the filling and emptying would  
16 occur within a 48-hour period once per year.  
17 In actuality, as you'll hear today, the  
18 likelihood of the use of that basin for that  
19 long a time or even in a given year is probably  
20 much less than once per year.

21 The District proposed construction of  
22 the basin which is really a retention basin or  
23 a flow equalization basin to be constructed in  
24 a manner that it would be aesthetically

1 pleasing to the area and that it would have a  
2 use during the time period when it was not  
3 being used for the storage of storm water.

4           And that use would be the proposed --  
5 in a manner that it would be used as a  
6 polishing wetland where they would irrigate  
7 part of the treated effluent that they  
8 discharge currently into the Rock River into  
9 the basin where the wetland plants would take  
10 up nutrients from the discharge for their  
11 polishing and prior to discharge to the Rock  
12 River, a portion of the treatment plant  
13 effluent.

14           The District as normal sought to obtain  
15 the initial comments and reactions of the  
16 Illinois Environmental Protection Agency.  
17 Preliminary reports were submitted.  
18 Preliminary meetings were held.

19           The District was told what the problems  
20 were that the Agency had. They clearly  
21 centered around the concept that Mr. Grant has  
22 referred to earlier as the anti-degradation  
23 provisions of the groundwater rules with  
24 basically a requirement to show that the basin

1 as proposed when it's storing untreated  
2 wastewater would not result in an increase in  
3 contaminants in the groundwater.

4 Mr. Huff on behalf of the District  
5 responded to those points, submitted detailed  
6 information. It's in -- will be -- it's in the  
7 permit record and it will be, I guess,  
8 introduced individually.

9 And when it became evident that the  
10 Agency -- we couldn't convince the Agency to  
11 accept our position, we -- the District  
12 proceeded to file a permit application.

13 The Agency then included all of the  
14 historical information it had provided the  
15 Agency, so to make sure that would be in the  
16 record and be considered, and the Agency  
17 proceeded ultimately to issue the denial which  
18 is the present permit appeal.

19 We think that the project as proposed  
20 will not result in water pollution, as that's a  
21 defined term in Illinois, and that the project  
22 is not subject to the specific rules cited by  
23 the Agency as having operability and a basis  
24 for the denial, as set forth in the denial.

1 HEARING OFFICER HALLORAN: Thank you,  
2 Mr. Harsch. Mr. Grant.

3 MR. GRANT: Sure. Just real quickly.  
4 This case is really very simple. It's -- the  
5 information presented to Illinois EPA along  
6 with the permit application indicated that a  
7 substantial amount of raw untreated sewage  
8 would be discharged on a regular basis by the  
9 District into groundwater at the location in  
10 question which is owned by the petitioner and  
11 subsequently discharged directly into the Rock  
12 River without any treatment, without any  
13 measures taken to prevent what we consider to  
14 be, per se, water pollution.

15 The Agency worked hard and tried to  
16 cooperate with the District and suggested that  
17 they install a liner to prevent this. At one  
18 time an installation of a liner would have  
19 prevented migration of raw sewage and  
20 contaminants associated therein into the  
21 groundwater into the Rock River. However,  
22 despite a really very small expense compared to  
23 the expense of operating the facility, the  
24 petitioner refused to do that.



1 DANA CARROLL,  
2 called as a witness herein, having been first  
3 duly sworn, was examined and testified as follows:

4 DIRECT EXAMINATION

5 BY MR. HARSCH:

6 Q. I'm going to provide Mr. Carroll with a  
7 copy of your prefiled testimony, what has been  
8 marked and accepted into evidence as  
9 Petitioner's Exhibit 2.

10 Is that a copy of the prefiled  
11 testimony that you've prepared?

12 A. Yes, it is.

13 MR. HARSCH: At this point in time, I'd  
14 request that Mr. Carroll read his prefiled  
15 testimony.

16 MR. PETTI: No objection.

17 HEARING OFFICER HALLORAN: I'm sorry,  
18 Mr. Harsch?

19 MR. HARSCH: That he read his --

20 HEARING OFFICER HALLORAN: Sure. Go  
21 ahead. I'm sorry.

22 THE WITNESS: My name is Dana L.  
23 Carroll. I am an engineering manager of the  
24 Rock River Water Reclamation District,

1 Rockford, Illinois. I received a bachelor of  
2 science in civil engineering in 1976 from the  
3 University of Illinois, Champaign, Illinois.  
4 I'm a registered professional engineer in  
5 Illinois.

6 My work experience includes four years  
7 at the District in my current capacity as  
8 engineering manager and seven years at the  
9 District as engineering supervisor in the  
10 1980s.

11 I ran my own consulting firm Carroll  
12 Engineering & Associates for 13 years prior to  
13 rejoining the District. Carroll Engineering  
14 served many municipal clients including the  
15 City of Elgin as their permit compliance  
16 consultant, for their combined sewer overflow  
17 or CSO program.

18 Prior to that I spent eight years with  
19 a consulting firm in the Chicago suburbs named  
20 Rust Environment and infrastructure at the  
21 time. At Rust I worked on many combined sewer  
22 separation and wet weather flow control  
23 programs. I also worked on many treatment  
24 plant upgrade projects.

1           Additionally, I have worked on several  
2 professional publications including as  
3 principal author for the Control of  
4 Infiltration and Inflow in Private Building  
5 Sewer Connections published by the Water  
6 Environment Federation in 1999 and as a  
7 technical reviewer of the Wastewater Collection  
8 Systems Management, Manual of Practice Number  
9 Seven, published by the Water Environment  
10 Federation in 1999. A complete resume is  
11 attached as Attachment A.

12           My current responsibilities at the  
13 Water Reclamation District are as manager of an  
14 18-person engineering department involved in  
15 collection system and treatment plant upgrades  
16 and expansion engineering as well as overseeing  
17 the District's service connection program. The  
18 District's annual capital improvement program  
19 budget is approximately \$15 million.

20           Due to the critical nature of this  
21 project and its unique circumstances, I have  
22 functioned as the District's representative and  
23 project manager over the history of this  
24 project.



1           The project team includes as prime  
2 consultant Clark Dietz & Associates represented  
3 by Mr. Greg Droessler, project manager, for  
4 civil engineering design and permitting.

5           Significant sub-consultants include  
6 Huff & Huff, Incorporated, represented by  
7 Mr. James Huff for environmental impact,  
8 wetland design, and permitting assistance and  
9 Orchard, Hiltz & McCliment, Inc., OHM, for  
10 hydraulic modeling, not testifying at this  
11 hearing.

12           I will be testifying to the District's  
13 general policies and practice for the  
14 development of this project, the others to  
15 their individual areas of expertise. Specific  
16 testimony related to treatment plant operations  
17 can be provided by Mr. Larry McFall, plant  
18 operations manager, upon request or in response  
19 to questions where he is better suited to  
20 respond. My resume has been provided in  
21 attachment A.

22           The project is briefly described as an  
23 excess wet weather flow pump station that will  
24 intercept excess flows at the headworks of the

1 treatment plant and pump those flows into an  
2 earthen, vegetated basin for temporary storage  
3 until they can be returned to the plant for  
4 processing.

5 The District's treatment plant is  
6 currently rated at 40 million gallons per day  
7 for secondary treatment and 80 million gallons  
8 per day for hydraulic capacity.

9 Our experience has shown that we can  
10 successfully manage flows greater than that  
11 with the current facilities. However, by the  
12 2002 Compliant Commitment Agreement, attachment  
13 B, with IEP, we are obligated to control and  
14 treat up to a 10-year, 24-hour rainfall event.

15 The project's operational plan is that  
16 once headworks flow has reached a rate of  
17 80 mgd, the proposed excess flow facilities  
18 would be utilized. Upon headworks flow rates  
19 decreasing below 80 mgd, stored flows would be  
20 redirected to the plant until the basin is  
21 empty.

22 Based on the historical record and the  
23 hydraulic modeling, we anticipate that influent  
24 flow rates will begin to decrease to or below

1 the 80 mgd threshold within four to six hours  
2 in a major event and we will be able to empty  
3 the basin within 48 hours of first flow being  
4 diverted to the basin. A project location map  
5 is included in the permit record as page 263  
6 and is attached for reference as attachment C.

7 Rock River Water Reclamation District  
8 is a regional wastewater collection and  
9 treatment agency organized under the 1917  
10 Sanitary District Act. The District currently  
11 serves about 230,000 people in seven  
12 municipalities plus unincorporated areas  
13 totalling 85,000 service accounts.

14 The District owns and operates the  
15 entire collection system including local  
16 lateral sewers. The system consists of  
17 approximately 1,100 miles of sewer, 24,000  
18 manholes, 31 pump stations, and two wastewater  
19 treatment plants.

20 A significant portion of the collection  
21 system is over 80 years old. The project is  
22 located at the Kishwaukee Street treatment  
23 plant. Therefore, the entire system is  
24 tributary to it, thus it would benefit all the

1 rate payers of the District.

2 The United States Protection Agency and  
3 the Illinois Environmental Protection Agency in  
4 a conjunctive effort have made excess wet  
5 weather flow within separate sanitary sewer  
6 systems a priority issue for several years.

7 There has been an active effort at the  
8 federal level to propagate a separate sewer  
9 overflow control policy for several years.  
10 This effort is ongoing. USEPA held a workshop  
11 with stakeholders in July 2011 to continue the  
12 discussion and express its concern on this  
13 issue.

14 IEPA's biennial report published in  
15 September 2011 highlights their efforts. A  
16 copy of this report is attached as attachment  
17 D. The District has found that IEPA  
18 aggressively enforces environmental regulations  
19 relative to SSOs including issuing notices of  
20 violation.

21 The District, like all older  
22 communities, has excess wet weather flow issues  
23 given the age of the infrastructure and the  
24 manner in which it was designed and

1 constructed.

2           However, collection system backup or  
3 sanitary sewer overflows can be caused by root  
4 intrusion or grease buildup regardless of the  
5 age of the infrastructure.

6           Of the District's 1100 miles of sewer,  
7 we believe upwards of 200 miles is in need of  
8 rehabilitation to reduce excess wet weather  
9 flows. The District has budgeted and executed  
10 an excess wet weather flow or I & I reduction  
11 program since the 1980s. The current program  
12 consists annually of mainline and service  
13 lateral lining, mainline point repairs, manhole  
14 replacement, cleaning, and televising.

15           The current annual system  
16 rehabilitation budget including contracted and  
17 force account work is about \$6.3 million or  
18 approximately 40 percent of our annual capital  
19 improvement program project budget.

20           From my experience, most collection  
21 system owners do not expend this portion of  
22 their budget on system rehabilitation without a  
23 compliance order. Based on current rate of  
24 work, the District expects to maintain or

1 increase its collection system rehabilitation  
2 budget for at least the next 50 years.

3 Under the District's program to address  
4 wet weather flow issues, we have completed the  
5 following work: 93 miles of mainline sewer  
6 lining, 16 miles of mainline sewer repair or  
7 replacement, 17,000 feet of private services  
8 line, 77,000 feet of private services repaired  
9 or replaced, 1,170 manholes given major rehab  
10 or replaced, and 50 miles of sewer cleaned and  
11 televised annually.

12 The District entered into a Compliance  
13 Commitment Agreement with IEPA in 2002 and  
14 referenced as attachment B. That agreement  
15 required that the District evaluate its  
16 interceptor system and treatment plant ability  
17 to handle a 10-year storm event and to make any  
18 improvements necessary to achieve that goal.

19 The evaluation study performed by Black  
20 & Veatch, published October 2006, and in the  
21 record as pages 105 to 114, identified the need  
22 for the proposed excess flow basin.

23 The project consists of a  
24 65.4-million-gallon-per-day maximum flow rate

1 pump station and a 25-million-gallon vegetated  
2 retention basin to ensure 10-year, 24-hour  
3 storm event hydraulic treatment capacity in the  
4 collection system and treatment plant.

5 The pump station would draw off flow in  
6 excess of the wastewater treatment plant  
7 hydraulic capacity and hold those flows in the  
8 basin until the treatment plant can receive  
9 them.

10 Based on modeling with 38 years of  
11 rainfall data, it was determined that the  
12 10-year, 24-hour event would produce a peak  
13 flow rate at the treatment plant of 145 mgd.  
14 The treatment plant's current hydraulic  
15 capacity is 80 mgd.

16 The operational plan is to temporarily  
17 transfer flow to the excess flow basin if the  
18 influent flow rate exceeds 80 mgd and return  
19 flows to the treatment plant as soon as  
20 influent rate decreases below 80 mgd. The  
21 District estimated the time from beginning of  
22 transfer to complete draining of the basin to  
23 be no more than 48 hours in a 10-year, 24-hour  
24 event.

1           The design approach to the pump station  
2 had to recognize high flow rates at low head;  
3 therefore, an axial flow pump station approach  
4 is proposed. This approach is also conducive  
5 to the type of occasional use this station will  
6 witness.

7           This station is typical of storm water  
8 pumping stations that function only during  
9 heavy wet weather. The storage basin likewise  
10 will see only occasional use during wet weather  
11 flows estimated at once per year.

12           Therefore, the District looked at  
13 design solutions that would be flexible and  
14 conducive to such occasional use. One typical  
15 design element that seemed nonefficient nor  
16 practical was concrete. In this case the  
17 concrete in the basin will sit exposed to the  
18 elements of heat and cold extremes. This will  
19 promote cracking in a material that is  
20 inherently inclined to crack and, therefore,  
21 cause excessive routine maintenance for it to  
22 perform its intended function -- intended  
23 purpose.

24           A flexible liner geo-textile was



1 considered. However, these materials also  
2 suffer from deterioration from exposure to  
3 sunlight. Worst of all, a flexible liner,  
4 either clay or geo-textile, is very difficult  
5 if not impossible to design against flotation  
6 pressures from below as is the case here even  
7 if protected by a layer of soil.

8 It was estimated during the design  
9 process that a flexible liner basin may have to  
10 be elevated six to seven feet to avoid the  
11 flotation pressures during river flooding.

12 This approach would have required  
13 significant offsite fill material at great  
14 cost. At this point the constructed wetland  
15 concept was proposed.

16 The District is working to implement  
17 green or sustainable features in all of its  
18 current and future projects. This is good  
19 public policy, good environmental policy, and  
20 cost effective. Additionally, it is published  
21 USEPA policy to promote green solutions, please  
22 see Strategic Agenda to Protect Waters and  
23 Build More Livable Communities Through Green  
24 Infrastructure, published April 2011,

1 attachment E.

2 Since the ARRA Stimulus program, USEPA  
3 has required states to set aside a portion of  
4 their state revolving loan funds for green  
5 projects, again attachment E. IEPA's biennial  
6 report published in 2011 gives significant  
7 detail as to IEPA's commitment to these green  
8 solutions.

9 Even the White House is pushing the  
10 issue. On September 20th this year, the White  
11 House Council on Environmental Quality and the  
12 USEPA held a joint conference on this topic.  
13 The following is a quote from the IEPA's  
14 June 5, 2010 letter to the general assembly  
15 concerning Public Act 96-26, Illinois Green  
16 Infrastructure For Clean Water Act of 2009:

17 Chapter five: Recommendations,  
18 Performance Standards. IEPA should adopt at  
19 the very least a set of storm water volume  
20 retention performance standards that varies  
21 according to the conditions at a particular  
22 site.

23 Such performance standards are becoming  
24 standard around the country and are seen as the

1 best method of improving water quality while at  
2 the same time recharging groundwater,  
3 conserving energy and other resources, and  
4 helping to reduce flooding and sewer overflows.

5 This quote tells us that IEPA  
6 understands that sewer overflows and storm  
7 water are intermingled, that green solutions  
8 should be applied, and that groundwater  
9 interaction is to be expected.

10 This recommendation recognizes what  
11 every septic system designer and installer  
12 understands, which is that soil provides  
13 natural water treatment processes for raw  
14 wastewater that are beneficial and cost  
15 effective. Please see record page 40.

16 The District for its part requires all  
17 new or upgraded pumping stations to have an  
18 energy audit of the design. The District has  
19 implemented cogeneration to produce its own  
20 electricity from treatment by-products and is  
21 working to expand its production of bio-gas.

22 Finally, the District has implemented a  
23 native landscape plan within the storm water  
24 pollution prevention plan at the treatment

1 plant.

2           Specific to the proposed project, the  
3 District believes that the constructed wetland  
4 approach is appropriate because, A, it is cost  
5 effective. The benefit is \$1 million in  
6 reduced construction costs. This comes from  
7 avoidance of an expensive liner solution like  
8 concrete;

9           B, it is more sustainable than a  
10 concrete lined basin that will crack and need  
11 routine repairs. Also, it mitigates the  
12 concern of hydraulic pressure under the liner  
13 caused by river flooding;

14           C, the location of the proposed project  
15 is already a natural setting. The District has  
16 reclaimed the area from a blighted urban  
17 condition and performed land reclamation work;

18           D, the constructed wetland will provide  
19 greater environmental benefit over a  
20 traditional basin. For example, it will  
21 provide habitat for waterfowl using the Rock  
22 River and it will increase vegetated area in an  
23 urban environment. These are all in addition  
24 to the use for final polishing and infiltration

1 of a portion of the District wastewater  
2 effluent.

3 As the permit record shows, the  
4 District or its consultants held numerous  
5 discussions and meetings with IEPA staff prior  
6 to submittal of the permit application to  
7 explain the approach and the design basis of  
8 the project. This can be seen in the record as  
9 follows:

10 One: Record page 12, IEPA Exhibit 2,  
11 transmittal of the preliminary design report on  
12 March 3rd, 2011;

13 Number two: Record page 22, meeting  
14 agenda for the March 10, 2011 meeting with IEPA  
15 staff to discuss the project, including the  
16 preliminary design report and meeting minutes,  
17 page 152, IEPA Exhibit 5;

18 Record page 183, IEPA Exhibit 16,  
19 attendee list for the June 6th, 2011 meeting;

20 Number four, Huff & Huff response  
21 letter of June 28th, 2011 to June 6th questions  
22 from IEPA, on page 189 of the permit record.

23 The District has offered to accept  
24 specific operational restrictions within the

1 permit and routine groundwater monitoring to  
2 demonstrate our goodwill and allow for  
3 verifiable evaluation of the design claims that  
4 this project will comply with class one  
5 groundwater regulations.

6 The groundwater section has obstinately  
7 refused to negotiate reasonable operational  
8 controls. This can be documented by the  
9 following pages from the permit record and the  
10 denial of the permit without a specific  
11 response to the June 28, 2011 Huff letter.  
12 That letter responded in detail to IEPA's draft  
13 questions. RRWRD awaits a response.

14 One: Huff & Huff response letter of  
15 June 28 on page 189 of the record.

16 Permit plan set, which was left out of  
17 the record, sheet number C4.1 shows existing  
18 monitoring wells and proposed new additional  
19 monitoring wells. See attachment F.

20 Number three: Telephone conversation  
21 of June 22, 2011 between Dana Carroll and Allen  
22 Keller in which RRWRD reenforced our desire to  
23 negotiate a mutually agreeable solution with  
24 operational controls as discussed in the

1 June 28th letter.

2 The IEPA has denied this permit based  
3 on inconsistent policy and bias by the  
4 groundwater section. I support this statement  
5 as follows.

6 MR. GRANT: I'm going to object at this  
7 point. I mean, these aren't facts. He's here  
8 to testify to facts. As far as opinions about  
9 how bad the Agency is, I don't know that that's  
10 appropriate.

11 HEARING OFFICER HALLORAN: Mr. Harsch.

12 MR. HARSCH: I think it's appropriate  
13 for the witness to respond to the -- what it  
14 believes to be the unreasonableness of the  
15 Agency's decision.

16 MR. GRANT: It's more like final  
17 argument. It's something he can put in his  
18 post-hearing brief. I don't see the point of  
19 having the witness testify to it under oath.

20 HEARING OFFICER HALLORAN: Well, he's  
21 almost done, Mr. Grant.

22 MR. GRANT: Okay.

23 HEARING OFFICER HALLORAN: May the  
24 record reflect your objection.

1 MR. GRANT: Thank you.

2 HEARING OFFICER HALLORAN: Go ahead,  
3 sir.

4 THE WITNESS: The IEPA's standards,  
5 Illinois Recommended Standards for Sewage  
6 Works, recognize that sanitary sewers will  
7 exfiltrate some raw wastewater and accepts that  
8 limited amounts of that are not detrimental to  
9 the environment or public health.

10 Within RRWRD's system, that could be as  
11 much as 2 million gallons per day based on an  
12 eight-inch pipe and the 240 gallons per inch  
13 diameter per mile per day standard.

14 As discussed above, the IEPA is  
15 promoting storm water management practices that  
16 induce infiltration of contaminants in storm  
17 water into the ground with no limitation nor  
18 control on soil type or groundwater exposure.

19 None of the proposed standards cited in  
20 the Agency's June 2010 letter to the general  
21 assembly discusses limiting infiltration rates  
22 from storm water based on soil or groundwater  
23 condition.

24 However, it does make point that there



1 are contaminants in storm water. The  
2 wastewater storm water professional community  
3 has accepted that storm water contains  
4 significant potential contaminants such as BOD,  
5 suspended solids, and fecal coliform.

6 The District can demonstrate that the  
7 Rock River and neighboring drainage ways are  
8 very elevated in fecal coliform during any  
9 rainfall event to levels of 25,000 CFU, yet the  
10 IEPA refuses to acknowledge the relationship  
11 between these facts.

12 We believe that this refusal to  
13 acknowledge what is common professional  
14 knowledge comes from bias. We believe that  
15 this bias is demonstrated by the groundwater  
16 section's absolute refusal to negotiate  
17 reasonable operational controls for our  
18 proposed project.

19 Mr. Droessler and Mr. Huff's testimony  
20 will explain that the two cited provisions of  
21 the Illinois Recommended Standards for Sewage  
22 Works do not apply to the proposed project and  
23 that the permit record shows that we have shown  
24 that water pollution will not result from this

1 project.

2 MR. HARSCH: I have a few additional  
3 follow-up questions.

4 HEARING OFFICER HALLORAN: You may.  
5 BY MR. HARSCH:

6 Q. You referenced the Compliance  
7 Commitment Agreement that the District has  
8 entered into with the Illinois Environmental  
9 Protection Agency which is found as attachment  
10 B to your testimony accepted as Petitioner's  
11 Exhibit 2.

12 Were you with the District at the time  
13 that that Compliance Commitment Agreement was  
14 negotiated?

15 A. No.

16 Q. Is Mr. McFall -- was he present at the  
17 District at the time?

18 A. Yes, he was.

19 Q. Would he be a better witness then for  
20 me to --

21 A. Yes.

22 Q. You've described in some detail all of  
23 the projects that the District has carried out  
24 to rehab or rebuild its sewage collection

1 system.

2 Will that have an impact on the amount  
3 of flows reaching the treatment plant during  
4 wet weather events in the future?

5 A. We expect it to have a significant  
6 impact over time.

7 Q. Would you explain what that impact  
8 would be?

9 A. The impact would be reduced rate at  
10 which these wet weather flows would come to us  
11 and then also reduced volume in the longer  
12 term.

13 Q. The modeling that was performed that  
14 you've testified to was based on historical  
15 flow rates, was it not?

16 A. And historical flow data to the  
17 treatment plant and historical rainfall, all  
18 from record.

19 Q. Do I understand correctly then as  
20 you -- as the District continues to make these  
21 improvements, then the amount of flow from a  
22 specific storm that the treatment plant would  
23 receive should be less?

24 A. Yes.

1 MR. PETTI: Objection. Speculative.

2 HEARING OFFICER HALLORAN: Mr. Harsch.

3 MR. HARSCH: I'm sorry. I didn't hear  
4 the basis.

5 MR. PETTI: Speculation. And also this  
6 is not information that was presented to the  
7 Agency that is part of the record.

8 MR. HARSCH: I will withdraw the  
9 question and start over again.

10 BY MR. HARSCH:

11 Q. Based on your professional engineering  
12 opinion and experience that you've testified  
13 to, will the sewage treatment plant receive  
14 less flows as the collection system is lined,  
15 manholes rebuilt, and the other types of  
16 projects --

17 A. That is our expectation, yes.

18 Q. That's your professional opinion?

19 A. Yes.

20 Q. That would occur?

21 A. Yes. In my opinion that will occur.

22 Q. And is that an accepted professional  
23 opinion in your -- in the environmental  
24 engineering professional community?

1           A.     Yes, I believe it to be accepted  
2     generally.

3           Q.     If such improvements would result in  
4     less flow from a given storm event, does that  
5     translate to the likelihood of the use of the  
6     basin being reduced in your professional  
7     opinion?

8           A.     Correct. Over the long term, we would  
9     expect the need for the basin to be  
10    dramatically reduced.

11          Q.     Can you describe in greater detail the  
12    efforts that the District and -- both the park  
13    District have done in the area that this basin  
14    is being located?

15          A.     Well, the area was originally  
16    developed. It was a very low income area. It  
17    had fallen on really hard times over time.  
18    Many houses were abandoned. Some had burned.  
19    The neighborhood has had serious crime issues.

20                 So the District in recognizing its need  
21    for land as the demands on us grow for  
22    processes that we must perform, we've acquired  
23    the land, we've cleaned it up, removed the old  
24    debris, the old houses, and isolated it from

1 certain bad elements that exist in the area.

2 Q. Had the District proposed this project  
3 based on a five-year storm event, would there  
4 be any changes in the project?

5 MR. PETTI: Objection. Relevance. It  
6 wasn't proposed on a five-year storm event.

7 HEARING OFFICER HALLORAN: Mr. Harsch.  
8 Could you keep your voice up, too, please?

9 MR. HARSCH: Sure. I'll withdraw the  
10 question and start over.

11 BY MR. HARSCH:

12 Q. The preliminary plan that was prepared  
13 for this project was part of a facility plan  
14 that was prepared by the District?

15 A. By a consultant for the District, yes.

16 Q. And was that facility plan provided to  
17 the Illinois Environmental Protection Agency?

18 A. The section of it relating to this  
19 excess flow basin was put in the record, yes.

20 Q. And it's contained in the permit  
21 record?

22 A. Yes.

23 Q. Does that facility plan, portion of the  
24 facility plan show differences in design that

1 would be required based on a five-year and a  
2 10-year storm event?

3 A. It does briefly discuss that, yes.

4 Q. What would be the size of the project  
5 if it would have been designed on a five-year  
6 storm water --

7 MR. GRANT: Let me just object for a  
8 second, but I really just want to ask Roy can  
9 you refer us to a document? I'm not saying  
10 that it wasn't provided.

11 THE WITNESS: It's in my testimony.  
12 I'll find it. Record pages 105 through 114.

13 MR. GRANT: Thank you. Sorry. I lost  
14 track.

15 BY MR. HARSCH:

16 Q. What would be the impact on the size of  
17 the basin had it been designed on a five-year  
18 storm event?

19 A. I don't specifically remember the  
20 values stated in that, but I recall it being  
21 approximately one-quarter or one-fifth of what  
22 we were proposing. I think Mr. Droessler can  
23 testify to that.

24 Q. And currently the basin was proposed

1 for approximately 2.3 million gallons?

2 A. 25.

3 Q. Excuse me. 25. Sorry.

4 Would Mr. McFall be a better witness to  
5 ask questions regarding how the District would  
6 make a decision when to utilize the basin?

7 A. Yes.

8 MR. HARSCH: That's all the questions  
9 that I have.

10 HEARING OFFICER HALLORAN: Thank you,  
11 Mr. Harsch. Agency.

12 CROSS-EXAMINATION

13 BY MR. PETTI:

14 Q. Mr. Carroll, my name is Robert Petti.  
15 I'm with the Attorney General's office. I'm  
16 going to ask you some questions.

17 A. Sure.

18 Q. If I accidentally call you Mr. Beck,  
19 forgive me. That's the nameplate that's in  
20 front of you. My eyes just might go to that.  
21 I've done it a couple times already in my head.

22 In your -- the written testimony that  
23 was read into the record, if we could refer  
24 quickly to page 3 at the bottom. You discuss a



1 separate sanitary sewer system.

2 Q. Can you describe what that is for me?

3 A. A separate sanitary sewer system is one  
4 that would have no known direct storm water  
5 connections.

6 Q. Direct connections to what, if I may?

7 A. Storm sewer, inlets in the street,  
8 recognized storm water intakes.

9 Q. And that is what the system is at the  
10 Rock River?

11 A. Ours is classified as a separate sewer  
12 system, yes.

13 Q. And similarly, could you describe for  
14 me what a separate sewer outflow system or  
15 outflow control would be?

16 A. A separate sewer overflow control  
17 policy, the SSO policy.

18 Q. What is separate sewer overflow here?

19 A. Okay. Separate sewer overflow would be  
20 a backup in the system that might come out of a  
21 manhole top, might back up in someone's  
22 basement.

23 Q. And those backups would occur due to  
24 storm water?

1 A. Correct.

2 Q. And could you describe for me the  
3 difference in your opinion between storm water  
4 and wastewater, if there is one?

5 A. The probably recognized definition  
6 difference is wastewater includes waste  
7 discharges from occupied buildings. Storm  
8 water doesn't necessarily include direct  
9 wastewater from occupied buildings.

10 Q. Now, your facility -- when I say "the  
11 facility," I'm referring to the District's  
12 treatment facility, just so we're clear --  
13 operates under an NPDES permit, correct?

14 A. Correct.

15 Q. And that is for treatment of  
16 wastewater, correct?

17 A. Correct.

18 Q. And, to your knowledge, can a facility  
19 or a person or anybody in the industry get a  
20 separate permit that would be classified as a  
21 storm water treatment permit?

22 A. Yes.

23 Q. At your facility, do the storm water  
24 and wastewater comeingle in the influent to the

1 facility?

2 A. It comes to us commingled from the  
3 collection system.

4 Q. And when it arrives at the system  
5 commingled, is it -- it is then considered  
6 wastewater; it's no longer considered storm  
7 water; is that correct?

8 A. It's classified as wastewater.

9 Q. So what we're dealing with in the  
10 proposed overflow basin is wastewater, correct?

11 A. It's wastewater.

12 Q. I want to turn to page 4 of your  
13 testimony. At the bottom, you have a listing,  
14 a number of steps that have been taken by the  
15 District to address the wet weather flow  
16 including 93 miles of mainline sewer lining, 16  
17 miles of mainline sewer repair replacement,  
18 1700 feet of private services line, 77,000 feet  
19 of private services repaired or replaced, and  
20 1,170 manholes given major rehab or replaced,  
21 and there's one more, 50 miles of sewer cleaned  
22 and televised annually.

23 Am I reading that accurately?

24 A. Yes.

1 Q. How much did all of that cost?

2 A. Total expenditure over the life of the  
3 program, I'm sorry, I don't have that number.

4 Q. Could you make an estimate?

5 A. Not one that I would have a good level  
6 of confidence.

7 Q. Would Mr. McFall know that number, to  
8 your knowledge?

9 A. I don't know. You'd have to ask him.

10 Q. I ask because you've deferred some  
11 items to him. I thought I'd ask.

12 So you've done all this stuff, these  
13 six different items, at least these six  
14 different items that are culled out in the  
15 testimony. I'm sure there was more that was  
16 done as well --

17 A. Probably.

18 Q. -- to address wet weather flow, but you  
19 don't want to build a liner on this basin,  
20 correct?

21 A. Correct.

22 Q. And why don't you want to build a  
23 liner?

24 A. It's not cost effective. It's not

1 money well spent. We believe every one of  
2 those dollars should be put into lining the  
3 system and trying to get excess wet weather  
4 flow out of the system rather than put into a  
5 basin that would function once a year.

6 Q. Now, in this -- I may have the issue  
7 confused here. So help me out.

8 A. Okay.

9 Q. On page 5 under the project description  
10 and approach, you state that this type of  
11 station -- I would assume you're referring to  
12 the pumping station for the overflow basin --  
13 is typical of storm water pumping stations,  
14 correct?

15 A. Uh-huh.

16 Q. That's in there?

17 A. Yes.

18 Q. Is a storm water pumping station  
19 different than a wastewater pumping station?

20 A. Well, normally there are different  
21 parameter -- different hydraulic physical  
22 conditions to be met. This station happens to  
23 share some of those particular conditions as  
24 far as high volume and low head, low total

1 dynamic head.

2 And the other similarity is, as I  
3 stated here in my testimony, this station's  
4 going to be used one day a year, which is very  
5 similar to the storm water pump station.

6 Q. But it's going to be used for pumping  
7 wastewater, correct?

8 A. Yes.

9 Q. And, again, dealing with the storm  
10 water wastewater issue, at the bottom of  
11 page 6, you discuss a number of initiatives  
12 that have been pushed in the last few years,  
13 and included in that is IEPA's June 5, 2010  
14 letter to the general assembly concerning  
15 Public Act 96-26.

16 Do you see where I'm at?

17 A. Uh-huh.

18 Q. And you have a quote, I assume pulled  
19 from that regarding performance standards?

20 A. Yes.

21 Q. Addressing storm water?

22 A. Uh-huh.

23 Q. Are performance standards of the nature  
24 referenced here different than performance

1 standards that may be referenced for  
2 wastewater?

3 A. I guess not really when you're talking  
4 about the concept of performance standards,  
5 okay.

6 Q. What type of performance standards are  
7 we referring to here, just so that we're clear?

8 Performance of pumps, performance of  
9 retention basin?

10 A. We're talking about performance  
11 standards for green projects. That's what this  
12 is talking about.

13 Q. Okay. What --

14 A. Green sustainable whatever term you  
15 like there projects. That's what this  
16 performance standard is talking about. It's  
17 not talking specifically about storm water  
18 projects. It's talking about policy statements  
19 being made by the Agency to promote and  
20 consider all the benefits of green sustainable  
21 practices.

22 Q. So we're not discussing a specific set  
23 of parameters like a numerical standard?

24 We're not discussing a numerical

1 standard?

2 A. No. It's a performance standard which  
3 is far broader than a numerical standard.

4 Q. That's kind of what I was guessing.

5 And you said that those performance  
6 standards are for green or sustainable  
7 projects?

8 A. Yes.

9 Q. What's a description of a green project  
10 in your mind?

11 What does that encompass?

12 A. As you recognize, Counselor, it's a  
13 very broad concept in our society today and has  
14 a lot of definitions by a lot of people.

15 I think in my mind what it means is it  
16 is a project that utilizes all the  
17 technological knowledge available to try to  
18 find the most long lasting and durable, reduced  
19 maintenance, reduced capital expenditure  
20 approach to the solution needed for that  
21 project. And I guess I want to emphasize and  
22 using all the technical knowledge available,  
23 not some of it.

24 Q. Does that complete your answer?



1           A.     I think so.

2           Q.     You state that reduction of capital  
3           expense is a component of green infrastructure  
4           and green construction?

5           A.     It's one component of it.

6           Q.     Moving outside of your -- the written  
7           testimony, you were asked some questions  
8           regarding future performance of the District's  
9           pipelines and the overall performance of the  
10          District system and how your expectation is  
11          through some of the repairs and improvements  
12          made to the piping and other components you  
13          expect there to be less of a need for or  
14          perhaps less of a need is misstating it, but  
15          there will be less volume of overflow that  
16          would reach the facility.

17                    Am I stating that at all correctly?

18          A.     What we expect to happen as we improve  
19          the collection system and work to eliminate  
20          extra flow out of that system is that the peak  
21          rates coming to us will be reduced. So we will  
22          see fewer and fewer events over time where we  
23          would exceed that 80 mgd number that I talk  
24          about in here.

1 Q. Okay. As you make those improvements  
2 to some of the -- I assume the older parts of  
3 the system, the system as a whole, are there  
4 other parts that may fail?

5 A. May fail? I mean, there's lots of  
6 influences out there in the world we have no  
7 control over, construction by other parties,  
8 you know, grease through intrusions. So when  
9 you say fail, I need, I guess, a clarification.

10 Q. Sure. I'll try to ask some more  
11 specific questions. That's fine.

12 Pipes may collapse?

13 A. I would say that our current and the  
14 designs and construction standards that have  
15 been in place for at least the last 30 years  
16 for most of the duration of my career are  
17 focused around and really strive to provide  
18 systems that are good for 100 years.

19 Q. But it does happen?

20 A. It can happen.

21 Q. And there are breaks in lines other  
22 than just collapses?

23 A. There are.

24 Q. There are other -- they get dirty.

1 They get gunked up. You need to constantly  
2 keep them clean.

3 That's something that is chased over  
4 time?

5 A. Correct.

6 Q. Jumping back to your testimony at  
7 page 9, your written testimony -- I'm sorry --  
8 at the bottom, the last line -- I'm sorry. I  
9 think it's at the top. Well, in any event, I  
10 don't know specifically where it was at this  
11 point. I'm sorry.

12 You stated that there was no response  
13 to Mr. Huff's June letter. Do you recall that  
14 testimony?

15 A. Yes.

16 Q. Would it be fair to say that the  
17 response to Mr. -- in your opinion, would it be  
18 fair to say that the response to Mr. Huff's  
19 letter was the denial of the application?

20 A. No.

21 Q. Why not?

22 A. Because it did not address the issues  
23 that were put to us and the responses that  
24 Mr. Huff gave as to why those responses were

1 not adequate in the eyes of the Agency.

2 Q. Did the Agency ask for a liner to be  
3 included in this project?

4 A. It did.

5 Q. Were you going to put a liner in?

6 A. It depends on the circumstances.

7 Q. Describe the circumstances in which you  
8 would have put a liner into the project.

9 A. Where it made sense to prevent  
10 groundwater pollution.

11 Q. Define groundwater pollution for me,  
12 please.

13 A. I'll pass that definition to Mr. Huff.

14 Q. Okay. As proposed to the Agency and  
15 the application that is on appeal today, was a  
16 liner part of that proposal?

17 A. No.

18 Q. At the beginning of the examination, we  
19 discussed briefly that your facility operates  
20 under an NPDES permit.

21 Do you recall that testimony?

22 A. Yes.

23 Q. As part of -- pursuant to your permit,  
24 is it permissible for you to shut that facility

1 and allow a million gallons untreated  
2 wastewater to discharge through your effluent  
3 pipes?

4 MR. HARSCH: Object to that question.

5 MR. PETTI: Basis?

6 MR. HARSCH: It asks for a legal  
7 conclusion of the witness.

8 MR. PETTI: I'll ask it again.

9 BY MR. PETTI:

10 Q. In your professional opinion, having  
11 knowledge of the permit in this case as an  
12 operator of the facility, is it permissible to  
13 shut down the facility and allow a million  
14 gallons of untreated wastewater to discharge  
15 through the effluent pipes?

16 MR. HARSCH: Object to the question  
17 unless you want to define what facility you're  
18 referring to.

19 MR. PETTI: I think I defined the  
20 facility earlier as the treatment facility.  
21 And the witness agreed that that's the facility  
22 we've been discussing.

23 HEARING OFFICER HALLORAN: I think  
24 Mr. Carroll can answer. He's been around the

1 block in his professional career. So objection  
2 overruled.

3 THE WITNESS: Could you clarify for me,  
4 Counselor, discharge to what?

5 BY MR. PETTI:

6 Q. Through your effluent pipes.

7 A. Through our effluent pipes.

8 Q. Let a million gallons of untreated  
9 wastewater run through the facility and out the  
10 pipes.

11 A. Out the --

12 Q. Effluent pipe.

13 A. -- the treatment plant outfall?

14 Q. Yes.

15 A. Shut the treatment plant down and allow  
16 a million gallons untreated to go out the  
17 outflow of the treatment plant?

18 Q. Yes. Is that permissible?

19 A. I'd have to defer that answer to  
20 Mr. McFall.

21 Q. Okay. Would you recommend it?

22 A. It would depend on what the  
23 circumstances are, what other damages could  
24 occur if we didn't.

1 Q. Assume none. Assume you're just  
2 shutting it down for the day and allowing it to  
3 run through.

4 A. Well, that's politely an unreasonable  
5 basis for making the comment and a decision.  
6 Assuming there's no reason to do it, just do it  
7 arbitrarily, I can't answer that question. I  
8 don't deal, sir, in that sort of fantasy world.

9 Q. Okay. Then we'll make it a more real  
10 world. Assume there's a high rainfall event.

11 A. Okay.

12 Q. Are you permitted to or would it be  
13 permissible to allow a million gallons of  
14 untreated wastewater to flow through the  
15 facility and discharge to the --

16 A. If that million gallons was going to  
17 flood 100 private homes and endanger lives,  
18 maybe.

19 Q. That's not part of my example.

20 A. But I have to base my decisions on  
21 facts and on real circumstances and what are  
22 the consequences of those actions.

23 MR. HARSCH: I think the witness has  
24 addressed the question. It's total

1 speculation.

2 HEARING OFFICER HALLORAN: I totally  
3 agree. Move on, please.

4 MR. PETTI: Okay. Nothing further.

5 HEARING OFFICER HALLORAN: Mr. Harsch.

6 REDIRECT EXAMINATION

7 BY MR. HARSCH:

8 Q. When you reference in your testimony  
9 the 80 million gallon per day limit, that's the  
10 designed maximum flow rate set forth in the  
11 permit, the rated capacity?

12 A. That's the permit rated hydraulic  
13 capacity.

14 Q. That's not necessarily the maximum  
15 practical flow that can be treated?

16 A. No.

17 MR. HARSCH: That's all I have.

18 HEARING OFFICER HALLORAN: Mr. Petti.

19 MR. PETTI: We're good.

20 HEARING OFFICER HALLORAN: You may step  
21 down or aside, as the case may be.

22 (Whereupon, the witness was  
23 excused.)

24 MR. HARSCH: At this point in time, I



1 call Mr. McFall.

2 (Whereupon, the witness was  
3 duly sworn.)

4 LARRY McFALL,

5 called as a witness herein, having been first  
6 duly sworn, was examined and testified as follows:

7 DIRECT EXAMINATION

8 BY MR. HARSCH:

9 Q. Mr. McFall, would you please state your  
10 full name, please?

11 A. Larry D. McFall.

12 Q. And did you provide Mr. Carroll a copy  
13 of your resume that he included along with your  
14 prefiled testimony?

15 A. Yes, I did.

16 Q. I show you this document. Tell me what  
17 that document is.

18 A. This is the resume I provided to  
19 Mr. Carroll.

20 MR. HARSCH: Mr. Hearing Officer, I'd  
21 like to move that this be introduced into  
22 evidence. We took it out of the Petitioner's  
23 Exhibit 2. I would move for it as Petitioner's  
24 Exhibit 4.

1 HEARING OFFICER HALLORAN: Any  
2 objection?

3 MR. PETTI: No.

4 HEARING OFFICER HALLORAN: Mr. Harsch,  
5 I have Exhibit 4 -- Petitioner's Exhibit 4 is  
6 admitted. Thank you.

7 Will I get a clean copy of the written  
8 testimony in the attachments?

9 MR. HARSCH: Yes.

10 HEARING OFFICER HALLORAN: Okay. Thank  
11 you.

12 BY MR. HARSCH:

13 Q. Is this resume true and accurate, to  
14 the best of your knowledge and belief?

15 A. Yes, it is.

16 Q. Would you please describe what  
17 position -- strike that.

18 What is your educational background  
19 briefly?

20 A. I have a B.S. degree in chemistry from  
21 Pittsburgh State University, Pittsburgh,  
22 Kansas. That degree was ACS certified,  
23 American Chemical Society certified.

24 And then I have several hours

1 postgraduate work in organic analysis and  
2 analytical analysis techniques.

3 Q. How long have you been employed at the  
4 District?

5 A. I've been employed at the District for  
6 just short of 15 years.

7 Q. What is your present position at the  
8 District?

9 A. Plant operations manager.

10 Q. What does the plant operations manager  
11 do?

12 A. The plant operations manager has  
13 multiple duties, essentially overseeing the  
14 operations staff, the maintenance staff for the  
15 plant, and the maintenance staff for the lift  
16 stations.

17 The operation manager also has  
18 responsibility for oversight of the industrial  
19 pretreatment program as well as oversight of  
20 the industrial commercial governmental  
21 building.

22 Q. When it comes time to operating the  
23 wastewater treatment plant, are you in charge  
24 of that operation?

1           A.    I am the manager of the operation,  
2 correct.

3           Q.    Were you involved in the events that  
4 led to the issuance of the Compliance  
5 Commitment Agreement Mr. Carroll testified to?

6           A.    Yes, I was.

7           Q.    And was that Compliance Commitment  
8 Agreement issued in response to a notice of  
-9 violation?

10          A.    That would be correct.

11          Q.    And what did that notice of violation  
12 cover?

13          A.    There were storm events that occurred  
14 in June of -- I'm sorry, I don't have the  
15 documents in front of me -- I believe 2002.  
16 The storm events occurred June 4th and 5th,  
17 2002.

18          Q.    Did you prepare a response to that  
19 notice of violation in a proposed plan to deal  
20 with it after a meeting with the Agency?

21          A.    That would be correct.

22          Q.    Do you have a copy of that?

23          A.    Yes, sir.

24          Q.    This would be the standard letter.

1 This is the violation list.

2 Do you have a copy of the letter that  
3 you sent to the Agency?

4 A. Yes.

5 Q. I'm sorry. I misspoke. This is  
6 actually that letter.

7 You were involved with the meetings  
8 with the Agency that gave rise --

9 A. Yes.

10 Q. That are referenced in this letter?

11 And it's your understanding that the  
12 plant's Commitment Agreement in W2002-00140 was  
13 based upon the agreed-upon plan that you  
14 submitted to the Agency in your letter of  
15 November 27, 2002?

16 A. That would be my understanding.

17 MR. HARSCH: I'd mark this as  
18 Petitioner --

19 MR. GRANT: Do you know if that's in  
20 the record?

21 THE WITNESS: It is not in the record.

22 MR. GRANT: Do you have a copy of it?

23 MR. HARSCH: I'm in the process of  
24 providing one. This is Petitioner's Exhibit 4.

1 HEARING OFFICER HALLORAN: I think  
2 Petitioner's Exhibit 4 was the resume.

3 MR. HARSCH: All right. Exhibit 5.  
4 I'd move for the admission of Petitioner's  
5 Exhibit 5. It sets forth the basis upon which  
6 the Compliance Commitment Agreement was issued,  
7 and the Compliance Commitment Agreement is in  
8 the record.

9 MR. PETTI: No objection.

10 HEARING OFFICER HALLORAN: All right.  
11 Petitioner's Exhibit 5 is admitted.

12 BY MR. HARSCH:

13 Q. Mr. McFall, is it your understanding  
14 based on the meeting and discussions that you  
15 had with the Illinois Environmental Protection  
16 Agency that it would have been allowable at the  
17 time to base the improvements that you were  
18 agreeing to on a five-year similar event?

19 A. That would be correct.

20 Q. Why did the District choose not to use  
21 a five-year event and instead use a 10-year  
22 event?

23 A. To the best of my memory, the District  
24 had been striving for some period of time to

1 achieve compliance with 10-year storm events.

2 As a matter of what we viewed as the  
3 best service we could give to our community  
4 without significant expenditures, really vastly  
5 significant expenditures, I would defer that  
6 question to others for a more broad background  
7 of District policy before my time at the  
8 District.

9 Q. Do you agree with Mr. Carroll's opinion  
10 that had you used a five-year design the basin  
11 would have been much smaller?

12 A. Absolutely.

13 Q. Can you explain if the basin would be  
14 permitted and installed how you would decide to  
15 utilize that basin?

16 A. The operation staff are expected to  
17 give full treatment to everything that they can  
18 pump into the plant and would strive to pump  
19 everything into the plant not going to the  
20 basin until such time as we saw other  
21 occurrences that would result in either backing  
22 up homes or would result in other exceedences  
23 [sic] of our permit; example, washing out the  
24 salts from the aeration basin such that our

1 treatment would be hindered.

2 It would be difficult to give a full  
3 range of circumstances, but the short answer is  
4 just that, that we would evaluate each  
5 circumstance and utilize the treatment plant to  
6 the utmost until such time as we deem a problem  
7 in other areas. And then we'd go to the basin  
8 as the backup for the water effluent treatment  
9 at that time.

10 Q. The NPDES permit at your plant, you're  
11 familiar with that?

12 A. Uh-huh.

13 Q. Your plant's rated as design average  
14 flow of 40 million gallons per year?

15 A. 40 million gallons.

16 Q. And has a design maximum flow rate of  
17 80 million?

18 A. 80 million.

19 Q. What happens when the flow rate reaches  
20 81 million gallons currently?

21 A. The design maximum of 80 million is an  
22 engineering number. And based on circumstances  
23 that can occur in the plant, many things may  
24 happen either before that number is reached or



1 on occasions that number could be exceeded  
2 without causing problems.

3           However, if under the right  
4 circumstances there's insufficient capacity in  
5 the final clarifiers, for example, to treat the  
6 flows going through, salts will be washed out  
7 of the aeration basins through the final  
8 clarifies into the river, which will inhibit  
9 treatment.

10           Is that the number 80, 81, 82? That's  
11 dependent on everyday circumstances.

12           Q.    So the designed maximum flow rate is an  
13 engineering calculated number; it's not a hard  
14 and fast number?

15           A.    It is not a hard and fast number.

16           Q.    The permit contains language regarding  
17 utilizing a treatment plant for the -- to treat  
18 the maximum practical flow; is that correct?

19           A.    Yes, it is.

20           Q.    And that's the concept that allows you  
21 to look at how the plant is operating and to  
22 determine how much you could handle without  
23 having the problems you referred to, an  
24 effluent violation, for example, or a sewer,

1 something like that?

2 A. That would be my understanding.

3 Q. How much flow have you, in fact -- flow  
4 rates have you been able to handle in the past  
5 without having an effluent violation?

6 A. The maximum flow rate that I'm aware of  
7 that we have sustained, flow rate is between  
8 130 and 135 million gallon.

9 Q. If the basin, again, were to be  
10 constructed, the plant was sitting there with  
11 all of its units in operation, nothing had been  
12 shut down for maintenance or repair, you could  
13 reasonably expect to address flows greater than  
14 80 million gallons for a short period of time?

15 A. That would be correct, yes.

16 Q. And this would -- would that impact the  
17 actual likelihood of the District utilizing  
18 that basin once per year as predicted by the  
19 model?

20 A. In my opinion, yes, it would.

21 Q. And how would it impact it?

22 A. I would expect to use the basin less  
23 than once a year, something -- once every two,  
24 once every five. It would depend on

1 conditions, but we would strive to not utilize  
2 the basin wherever possible.

3 Q. And if you looked at the -- you're  
4 familiar with the flows that you've received  
5 over the past two years?

6 A. Yes.

7 Q. And in your opinion, would you have  
8 used the basin in the last two years based on  
9 the flows that you actually received?

10 A. No.

11 Q. Do you agree with Mr. Carroll's  
12 assessment that long-term flows should reduce  
13 as continued improvements are made to the  
14 collection system that you've testified about?

15 A. In my opinion, yes.

16 Q. And do you agree with its assessment  
17 that that would impact the likelihood and  
18 frequency of utilizing the basin?

19 A. It's my expectation as time goes  
20 forward and continues improving the system, we  
21 would use -- we would use the basin less and  
22 less.

23 MR. HARSCH: I have no additional  
24 questions at this time.

1 HEARING OFFICER HALLORAN: Mr. Grant or  
2 Mr. Petti.

3 CROSS-EXAMINATION

4 BY MR. PETTI:

5 Q. Mr. McFall, my name is Rob Petti. You  
6 may have heard me introduce myself before.

7 You stated that you are the operations  
8 manager for the facility; is that correct?

9 A. Yes.

10 Q. And you're familiar with the NPDES  
11 program for the facility, correct?

12 A. Yes.

13 Q. You stated -- and correct me if this  
14 statement is misstating your testimony in any  
15 way -- that your staff facility expects the  
16 full treatment to everything going to the  
17 plant.

18 I wrote that down. I had to write it  
19 down quickly. If you could correct my  
20 statement.

21 A. My staff expects to strive to treat  
22 everything that comes to the plant.

23 Q. Would you consider the wastewater that  
24 is diverted to the retention pond at issue in

1 this matter to have arrived at the plant?

2 A. I'm sorry. Would you repeat that?

3 Q. I'll back up a little and break it  
4 down.

5 You're familiar with the design of the  
6 overflow basin that is at issue in this matter,  
7 correct?

8 A. Yes.

9 Q. And as part of that design, the  
10 wastewater would be diverted before it enters  
11 the treatment works, for lack of a better term  
12 on my part, to the overflow basin, correct?

13 A. Most of the treatment works. There  
14 would be a preliminary screening.

15 Q. And could you describe what that  
16 screening would be?

17 A. The screening is to take out very large  
18 debris that has been washed into the sewers.

19 Q. So would you consider that screening  
20 part of the treatment facility and part of the  
21 treatment that you were striving for all water  
22 or is there more treatment involved?

23 A. There is certainly always more  
24 treatment involved.

1 Q. So your staff and you as the operations  
2 manager would be striving to achieve treatment  
3 of all of the water that entered the wastewater  
4 basin, correct?

5 A. That would be correct.

6 Q. I'm not as familiar with your permit  
7 obviously as you are, so I have a couple  
8 questions on the permit.

9 The permit requires you, in fact, to  
10 treat all the wastewater that reaches the plant  
11 before it's discharged; is that correct?

12 A. To my understanding, yes.

13 Q. And you also testified that over time  
14 you expect the overflow basin to be used less  
15 and less?

16 A. Correct.

17 Q. But you certainly expect that it will  
18 be used in the future, correct?

19 A. Yes, I would expect at some point in  
20 the future it will be used.

21 MR. PETTI: That's all I have. Thank  
22 you.

23 HEARING OFFICER HALLORAN: Thank you,  
24 Mr. Petti.

1 Mr. Harsch?

2 MR. HARSCH: No further.

3 HEARING OFFICER HALLORAN: You may step  
4 down, sir. Thank you. Let's take five.

5 (Whereupon, the witness was  
6 excused.)

7 (Whereupon, a recess was had.)

8 HEARING OFFICER HALLORAN: Today is  
9 November 28th, 2012. I'm not sure if I  
10 mentioned that at the top of the hearing or  
11 not.

12 (Whereupon, the witness was  
13 duly sworn.)

14 GREGORY DROESSLER,  
15 called as a witness herein, having been first  
16 duly sworn, was examined and testified as follows:

17 DIRECT EXAMINATION

18 BY MR. HARSCH:

19 Q. You have before you a copy of your  
20 prefiled testimony?

21 A. Yes.

22 HEARING OFFICER HALLORAN: Could you  
23 state your name, please, for the record and  
24 spell it?

1 THE WITNESS: My name is Gregory J.  
2 Droessler.

3 BY MR. HARSCH:

4 Q. You have before you a copy of what's  
5 been marked as Petitioner's Exhibit 3, your  
6 prefiled written testimony as an exhibit?

7 A. Yes, sir.

8 Q. Have you prepared this testimony?

9 A. Yes.

10 Q. Would you please present -- read your  
11 testimony today?

12 A. Sure. My name is Gregory J.  
13 Droessler. I'm a senior project engineer and  
14 project manager for Clark Dietz, Incorporated,  
15 an engineering consulting firm founded in 1953.

16 I received a bachelor's of science  
17 degree in industrial technology management in  
18 1995 from the University of Wisconsin,  
19 Platteville. I am a registered professional  
20 engineer in Illinois and Wisconsin.

21 My work experience includes over seven  
22 years with Town and Country Engineering in  
23 Madison, Wisconsin serving as a design  
24 technician in both the municipal and wastewater



1 engineering departments.

2 In 2003 I joined Clark Dietz as a  
3 senior technician and was promoted to staff  
4 engineer upon completing my professional  
5 engineering exam in 2004. And since joining  
6 Clark Dietz, I've been promoted to senior  
7 project engineer, project manager, and now  
8 department manager for the civil/environmental  
9 engineering department in the Kenosha,  
10 Wisconsin office.

11 At Clark Dietz, I've been involved in a  
12 significant number of wastewater projects  
13 primarily focusing on renovation and expansion  
14 of existing wastewater treatment and pumping  
15 facilities, but also in facility planning,  
16 operational review, and NPDES permit  
17 applications. A copy of my resume was  
18 attached.

19 I'm a project manager at Clark Dietz or  
20 of the Clark Dietz team retained by the Rock  
21 River Water Reclamation District to design a  
22 wet weather excess flow facility at the head  
23 end of the wastewater treatment plant.

24 I am the engineer of record for this

1 project, as I have sealed the documents  
2 submitted to the IEPA as part of the  
3 construction permit application.

4 In the fall of 2010, the District  
5 solicited proposals for the design of the  
6 excess flow facility. The Clark Dietz team  
7 proposed a dual function wetland system to be  
8 used first for a polishing filter during most  
9 of the year as part of the secondary effluent  
10 and, second, a short-term excess flow temporary  
11 storage basin during the most intense storm  
12 events. The District liked the approach that  
13 our team -- liked the approach of our team and  
14 was awarded the contract for the project.

15 The Clark Dietz team consisted  
16 primarily of the following firms: Clark Dietz,  
17 Huff & Huff; Orchard Hiltz & McCliment, OHM.  
18 And the role of each firm is as follows:

19 Clark's Dietz role for the project was  
20 leading the overall project design and provide  
21 project management. Clark Dietz completed the  
22 project permitting, site layout and design,  
23 site utilities, excess flow basin design, and  
24 excess flow pump station design.

1           And my specific role for the project  
2 was to provide project management and client  
3 management services, including coordinating the  
4 work performed by the sub-consultants and our  
5 internal staff. I worked closely with Mr. Dana  
6 Carroll who is the District's engineering  
7 manager.

8           Huff & Huff was a significant part of  
9 our design team, as Mr. Jim Huff was tasked  
10 with the design and permitting of the  
11 constructed wetland to be used for the excess  
12 flow basin.

13           Mr. Huff provided the technical  
14 background for the wetland design including the  
15 selection of the wetland plantings for their  
16 ability to thrive in the basin and to assist in  
17 the uptake of nitrate from the groundwater. He  
18 also was responsible for the coordination with  
19 the Illinois EPA.

20           Orchard Hiltz & McCliment, OHM, was  
21 also part of our design team, as the firm was  
22 tasked with providing the statistical model and  
23 for sizing the excess flow pump station and  
24 storage facility.

1           OHM's model included 38 years of data  
2           to predict the 10-year, 24-hour storm event and  
3           that it would produce a peak flow of  
4           145.4 million gallons per day at the plant.

5           The plant's rated peak capacity is  
6           80 mgd. The excess flow pump station sizing  
7           was established at 65.4 mgd. OHM further  
8           utilized the model to predict a total of  
9           25 million gallons of storage would be required  
10          to store this design storm event.

11          The excess flow project consists of a  
12          pump station rated for a maximum flow of  
13          65.4 mgd and a 25-million gallon excess flow  
14          storage constructed of native soils to  
15          temporarily store the 10-year, 24-hour storm.

16          The pump station draws off flow in  
17          excess of 80 mgd and temporarily transfers this  
18          flow to the excess flow basin. The stored flow  
19          is then returned to the front end of the  
20          wastewater treatment plant within 48 hours of  
21          the event for further treatment.

22          The intent of the excess flow basin's  
23          design is to use a green or sustainable design  
24          in an effort to control project costs and to

1 minimize the environmental impact to the area.

2 The basin was designed without a clay  
3 or synthetic liner for these very reasons and  
4 the design allows us to use the native  
5 groundwater along with the treated plant  
6 effluent to create a thriving wetland  
7 environment. This is evident by the fact that  
8 the floor of the excess flow basin is  
9 established at only two feet above the normal  
10 groundwater level in the area.

11 The District submitted a formal  
12 construction permit application on April 4th,  
13 2012 for this project. In addition to the  
14 normal construction permit application forms  
15 and design documents, the District's  
16 application also included extensive  
17 documentation concerning the preliminary  
18 discussions and meetings and responses to  
19 various points that occurred while the project  
20 was initially discussed with the IEPA prior to  
21 formal application. All this material was  
22 received by the IEPA and assigned log number  
23 0317-12 on April 6th, 2012.

24 The IEPA issued a letter of denial to

1 the District for the project, again log number  
2 0317-12. In the denial the IEPA stated that  
3 the two technical requirements -- excuse me.  
4 In the denial the IEPA stated that the two  
5 technical requirements for the Illinois  
6 Recommended Standards for Sewage Works were not  
7 met.

8 The first item cited was a seal is  
9 required at the bottom of the embankment of the  
10 excess flow storage basin per section  
11 370.930 d)2D0 of the Illinois Recommended  
12 Standards for Sewage Works. This seal shall  
13 have a permeability of less than one to the  
14 tenth power to negative seven centimeter per  
15 second. Provisions shall be made in the  
16 specifications for demonstrating the  
17 permeability of the seal after completion of  
18 the construction and prior to filling the  
19 basin.

20 The cited rule states as follows:  
21 Section 370.930 is for waste stabilization  
22 ponds and aerated lagoons. Part D, the seal,  
23 the pond bottom and embankment shall be sealed  
24 such that seepage loss through the seal is as

1 low as possible. Seals consisting of soils,  
2 bentonite, or synthetic liners may be used  
3 provided that the permeability, durability, and  
4 integrity of the proposed material is  
5 demonstrated for the anticipated conditions.

6 The results of a testing program that  
7 substantiates the adequacy of the proposed seal  
8 shall be incorporated into or accompany the  
9 engineering report. Standard ASTM procedures  
10 or similar testing methods shall be used for  
11 all tests.

12 Part i, a seal consisting of soil  
13 materials shall have a thickness of at least  
14 24 inches and a permeability of less than one  
15 to the seventh power centimeters per second.  
16 Provisions shall be made in the specifications  
17 for the demonstrating of the permeability of  
18 the seal after completion of the construction  
19 and prior to filling the pond.

20 For a seal consisting of a synthetic  
21 liner, seepage loss through the liner shall not  
22 exceed a quantity equivalent to the seepage  
23 loss through a soil seal as described above.

24 From the face of this provision, it

1 applies to waste stabilization ponds and  
2 aerated lagoons. Neither of the terms are  
3 defined in the water pollution regulations.  
4 Section 370.110 e) references the glossary -  
5 water and wastewater control engineering to  
6 define terms used within section 370.

7 Waste stabilization is defined by this  
8 document as follows: Waste stabilization is  
9 the treatment of organic matter removed from a  
10 waste so as to make it innocuous. A copy of  
11 this definition from the glossary is included  
12 in attachment two.

13 The excess flow basin as proposed in  
14 the permit application does not provide any  
15 level of treatment of any organic matter, nor  
16 is it aerated in any form.

17 In my professional opinion, there is no  
18 way to define the proposed excess flow basin as  
19 either a waste stabilization pond or an aerated  
20 lagoon. The only association that it has with  
21 this definition is that it could possibly be  
22 considered a lagoon. Clearly section 370.930  
23 design standards do not apply to either as an  
24 excess flow basin or as a storage lagoon.



1           The second reason cited for in the  
2 IEPA's letter for denial is the appropriate  
3 groundwater monitoring system must be proposed  
4 according to Illinois Administrative Code  
5 370.930 b)4).

6           This section defines this as follows:  
7 Groundwater contamination, the requirement of  
8 the Illinois Groundwater Protection Act shall  
9 be taken into account in the siting of ponds.  
10 Ponds shall not be located proximate to water  
11 supplies and other facilities subject to  
12 contamination or location in areas of porous  
13 soils and fissured rock formations.

14           If conditions dictate using such a  
15 site, then potential for the means necessary to  
16 combat groundwater contamination shall be  
17 critically evaluated in the engineer's report.  
18 In such locations the Agency will require  
19 groundwater monitoring wells.

20           In the contract drawings sent to the  
21 IEPA as part of the construction permit  
22 application, drawing sheet C4.1 includes  
23 provisions for three additional groundwater  
24 monitoring wells 20-foot deep and eight-inch

1 diameter with flanged well caps to be installed  
2 as part of the project.

3 These wells are in addition to the  
4 three existing groundwater monitoring wells  
5 located near the southwest corner of the excess  
6 flow basin. These monitoring wells are  
7 believed to have been installed in the 1990s to  
8 monitor the groundwater management zone in that  
9 area.

10 As these monitoring wells were only  
11 shown on a single drawing, they may have been  
12 simply overlooked by the initial review.  
13 Additional specifications for the monitoring  
14 wells will be included in the final design  
15 documents.

16 The IEPA also stated that the District  
17 has not shown that the project will result in  
18 water pollution and thus they are precluded  
19 from issuing the requested construction permit.

20 While Mr. Huff will address this issue,  
21 I was present at the first meeting that was  
22 held to discuss this project with the IEPA  
23 prior to the submittal of the final  
24 application, and I prepared the summary of

1 meeting notes for the meeting.

2 Prior to summarizing -- prior to  
3 finalizing this summary, I sent it to the  
4 attendees for their comment and correction, if  
5 needed. All of the relevant information from  
6 this meeting, my draft summaries, responses to  
7 my e-mails from the EPA, and my final summary  
8 were submitted as part of the permit  
9 application. This is found in the permit  
10 record at IEPA Exhibit No. 3 to No. 9.

11 And I was not aware of any actual  
12 response to the information that Mr. Huff sent  
13 following our last meeting with the IEPA on  
14 June 28th, 2011 that responded to various  
15 points raised by Mr. Buscher as to why the  
16 project would in his belief threaten to cause  
17 water pollution.

18 The IEPA has denied this application as  
19 not fulfilling the requirement for the Illinois  
20 Recommended Standards for Sewage Works due to  
21 the lack of a liner and the lack of groundwater  
22 monitoring wells.

23 A clay or synthetic liner is not  
24 suitable for this application due to the high

1 groundwater table in this area -- in the area  
2 reclaimed by the District adjacent to the  
3 headworks of the treatment plant where the  
4 basin is proposed to be located to receive  
5 flows from the main interceptors leading into  
6 the plant.

7           A liner, if used for this application,  
8 would not only heave due to the hydraulic  
9 pressure exerted by the groundwater but would  
10 also inhibit the creation of a constructed  
11 wetland.

12           The IEPA and District each have  
13 established a green initiative to be more  
14 sustainable, yet a bias towards this project  
15 due to the potential exfiltration from the  
16 basin statistically used one day per year  
17 appears to exist.

18           The project uses all of the native  
19 materials found on site to create the basin and  
20 the wetland. This not only is the definition  
21 of a sustainable project, it also severely cuts  
22 the carbon footprint that would be associated  
23 with the project if we imported nearly  
24 24,000 cubic yards of clay to form a liner for

1 the basin.

2 Our approach lowers the overall  
3 construction cost of the project by over  
4 \$1 million due to the financial savings  
5 experienced from reusing the existing material  
6 in lieu of importing clay and thus saves the  
7 District's customers the financial burden of  
8 dealing with this seldom-seen problem.

9 The constructed wetland is an  
10 innovative sustainable approach to an age-old  
11 problem. It will cut the cost of the project  
12 by over a million dollars and would create a  
13 more natural-looking basin for storing excess  
14 flow during these storm events.

15 The District and Rockford Park District  
16 have each heavily invested in the area to  
17 reclaim the property north of the wastewater  
18 treatment plant. The area has been restored to  
19 a more natural environment and plans exist to  
20 continue a scenic bike path along the river  
21 almost immediately alongside the project area.

22 The natural habitat that is created by  
23 the wetland blends much more readily with the  
24 area than a 25-million gallon clay, synthetic,

1 or concrete lined basin.

2 Q. A couple of follow-up questions.

3 You've been involved in a number of  
4 projects that utilize storm water modeling for  
5 predicting flows?

6 A. My firm has done a lot of storm water  
7 modeling. I myself have focused primarily on  
8 wastewater treatment.

9 Q. Can you describe the level of -- strike  
10 that.

11 The modeling that was performed as part  
12 of this project, does it involve the use of  
13 conservative assumptions?

14 A. Yeah. The modeling was established  
15 using 38 years of historical data. Whenever  
16 you use a model and you use it to project -- a  
17 statistical model to project conditions, you  
18 have choices as to how that projects through  
19 limited data points. And in all cases in my  
20 opinion we projected very conservatively.

21 Q. And what is the result of being --  
22 using the conservative approach?

23 A. By using a conservative approach, we've  
24 upsized the pump station and we had trajectories

1 anywhere from 17 million gallons to 25 million  
2 gallons for a storage capacity on the basin,  
3 and we erred or chose the most conservative  
4 option of 25 million gallons.

5 Q. What would the annual average projected  
6 volume be for this project?

7 A. Based on our model, the annual use of  
8 this would happen one day per year, and that  
9 annual event would be 7.4 million gallons. And  
10 that is based on the assumption that Mr. McFall  
11 and our District staff would only run  
12 80 million gallons through their plant which is  
13 their design peak flow.

14 Q. So once per year on an annual average  
15 basis, the flows would be in excess of that  
16 80 million gallons by 7.5 million gallons?

17 A. By 7.4, correct.

18 Q. If Mr. McFall from the District was  
19 capable of running the plant at 90 million  
20 gallons per day, a rate on that day, do I  
21 understand that the basin wouldn't be used?

22 MR. PETTI: Object to speculation.

23 HEARING OFFICER HALLORAN: Overruled.

24 He can answer if he's able.

1 THE WITNESS: Potentially not. Again,  
2 when we look at flows to the plant, we're using  
3 a daily average flow. There is a possibility  
4 of an instantaneous peak where they may divert  
5 for an hour, for example, to shave off the peak  
6 flow to the plant. But again that's a  
7 case-by-case scenario, and every storm event is  
8 very different.

9 BY MR. HARSCH:

10 Q. Do you agree with the testimony of  
11 Mr. Carroll and Mr. McFall that you could  
12 expect a lessening of the flows reaching the  
13 treatment plant as a result of various  
14 improvements to the wastewater collection  
15 system Mr. Carroll testified about?

16 A. Yes.

17 MR. HARSCH: No further questions at  
18 this time.

19 HEARING OFFICER HALLORAN: Mr. Petti.

20 MR. PETTI: Thank you.

21 CROSS-EXAMINATION

22 BY MR. PETTI:

23 Q. Good morning, Mr. Droessler. If you  
24 could refer to page 4 of your written



1 testimony, please.

2 In the bottom, second-to-last  
3 paragraph, you state that this -- the excess  
4 flow basin as proposed in the permit  
5 application does not provide any level of  
6 treatment of organic matter.

7 Am I reading that correctly?

8 A. Yes.

9 Q. So any waste that were to escape this  
10 basin through, you know, infiltration of the  
11 groundwater would be untreated wastewater,  
12 correct?

13 A. As defined, we have not designed any  
14 level of treatment.

15 Q. So that would be a correct statement on  
16 my behalf, that it would be untreated  
17 wastewater?

18 A. In my opinion, yes.

19 Q. And you go to great length to state  
20 that this is not a waste stabilization pond or  
21 an aerated lagoon.

22 How would you define this pond?

23 A. In my opinion, this pond is merely a  
24 wide spot in the pipe, if you will. It's

1 basically allowing us to temporarily store this  
2 flow and then bring it back for treatment  
3 through the treatment facility.

4 Q. Does the water flow through the pipes  
5 unlined?

6 There's no pipe; it just flows through  
7 the ground?

8 A. No. Each pipe has either clay or  
9 concrete or PVC material, yet they all leak,  
10 the same as this basin would.

11 Q. So you're saying this basin would leak  
12 at the same rate as proposed as it would if it  
13 was proposed with a concrete liner?

14 A. No, sir.

15 Q. Or a PVC liner?

16 A. No. I'm simply stating that each of  
17 those would leak.

18 Q. But not at the same rates?

19 A. Correct.

20 Q. If you could prevent those pipes -- let  
21 me rephrase this.

22 If you could design a system where  
23 those pipes leaked at a lower rate or no rate,  
24 would that be preferable?

1 A. Yes.

2 Q. You stated in your testimony -- and I  
3 apologize, I don't have the specific section --  
4 that if a clay liner were required for this  
5 site -- or a clay liner is unsuitable for the  
6 location of this site; is that accurate?

7 A. I stated that basically a clay liner  
8 would heave due to the groundwater potential.

9 Q. Making the clay liner unsuitable for  
10 the site?

11 A. The clay liner, while we could compact  
12 it initially, because of the groundwater  
13 uplift, it would leak over time.

14 Q. But there are ways to prevent that?

15 A. By raising the entire basin  
16 potentially.

17 Q. Go ahead.

18 A. But by raising an entire basin, we also  
19 could not provide a green product.

20 Q. How does raising the basin preclude you  
21 from providing a green product?

22 A. We're creating a constructed wetland.  
23 Mr. Huff will expand further on that and what  
24 that includes. But by creating that wetland,

1 we need the natural groundwater there for the  
2 wetland plantings to survive.

3 If we raise the entire basin the three  
4 to four feet that we would be required to to  
5 minimize the potential uplift, no deep-rooted  
6 plants are going to be able to survive in that  
7 environment nor would they survive necessarily  
8 in clay.

9 Q. Have you designed systems like this  
10 before or been a part of a team that designed  
11 systems like this before?

12 A. No, I have not.

13 Q. In your professional opinion, which is  
14 more important to you as a professional,  
15 facilitating the roots for the deep-rooted  
16 plants or protecting the groundwater?

17 A. As I look at it, we are doing both. We  
18 are protecting the groundwater, yet we are also  
19 providing a green product.

20 Q. What steps are taken in this project to  
21 protect the groundwater?

22 A. Mr. Huff has shown and will testify  
23 later along the lines that we're able to meet  
24 the groundwater standards established by the

1 State at the 25-foot setback mark.

2 Q. Okay. But I'm asking a different  
3 question. I understand that.

4 But what design measures, what methods  
5 are being implemented to protect the  
6 groundwater?

7 A. The selection of the plantings  
8 themselves have a high level of nitrate uptake.  
9 They need certain nutrients that are provided  
10 by wastewater, if you will, same as you would  
11 put fertilizer on your lawn.

12 If we were to look at putting grass out  
13 there and fertilized it to keep it green, we  
14 would have the same environmental impact as we  
15 would providing a wet water or a storage basin.

16 Q. Outside of your written testimony, you  
17 testified a little bit about the parameters  
18 that were selected for the model, correct?

19 A. Correct.

20 Q. And were those parameters selected by  
21 your firm or part of the project team or were  
22 those parameters given to you by Illinois EPA?

23 A. The modeling parameters?

24 Q. Yes.

1           A.     Those were selected by my firm in  
2 conjunction with our sub-consultant partner.

3           Q.     And the results of that modeling  
4 selected by your firm were the ones presented  
5 to the Illinois EPA, correct?

6           A.     Yes, sir.

7           Q.     And those assumed the 80 million  
8 gallons a day of treatment, correct?

9           A.     Correct.

10          Q.     And under that modeling, there was a  
11 potential for a one-day event of 7.4 million  
12 gallons exceeding the 80 million?

13          A.     Correct.

14                 MR. PETTI:   That's all I have.   Thank  
15 you.

16                 HEARING OFFICER HALLORAN:   Mr. Harsch,  
17 any redirect?

18                         REDIRECT EXAMINATION

19           BY MR. HARSCH:

20           Q.     Your experience that the use of the  
21 design, the permitted values like the designed  
22 maximum full rate specified in the permit are  
23 normally used in designs that are presented to  
24 Illinois EPA?

1 MR. GRANT: Can we ask him to speak up?

2 BY MR. HARSCH:

3 Q. Strike that. I'll restate it.

4 Is it your experience that the use of  
5 the design maximum flow rate, in this case  
6 80 million gallons, is a parameter that  
7 normally would be used in designs presented to  
8 the Illinois EPA?

9 A. Yes, sir.

10 MR. HARSCH: That's it.

11 HEARING OFFICER HALLORAN: Mr. Petti.

12 MR. PETTI: I'm good. Thank you.

13 HEARING OFFICER HALLORAN: You may step  
14 down. Thank you.

15 (Whereupon, the witness was  
16 excused.)

17 HEARING OFFICER HALLORAN: Let's go off  
18 the record for a second.

19 (Whereupon, a discussion was  
20 had off the record.)

21 (Whereupon, the witness was  
22 duly sworn.)

23

24





1 University and was awarded a master of science  
2 in engineering from the environmental  
3 engineering department at Purdue University in  
4 1971.

5 I'm a registered professional engineer  
6 in Illinois. My work experience includes two  
7 years with Mobil Oil as an advanced  
8 environmental engineer during the construction  
9 and start up of the Joliet Refinery.

10 After leaving Mobil in the fall of  
11 1973, I was employed for three years at IIT  
12 Research Institute in the chemical engineering  
13 department working on advanced wastewater  
14 treatment projects. I then spent four years  
15 with the ArmaK Company, now called Akzo Nobel  
16 Chemicals, where I was the corporate manager of  
17 environmental affairs responsible for  
18 regulatory compliance and engineering design of  
19 environmental systems at nine chemical plants  
20 in the United States and Canada.

21 For the last 33 years at Huff & Huff,  
22 Inc., I have been involved in a significant  
23 number of wastewater and storm water projects,  
24 including environmental impact studies

1 associated with the impact of wastewater  
2 discharges on receiving streams,  
3 anti-degradation assessments, wastewater  
4 treatment designs, and NPDES permit  
5 negotiations. Much of my work for the past  
6 decade has focused on sustainable wastewater  
7 and storm water management. A copy of my  
8 resume was included in attachment one.

9 I am part of the Clark Dietz team  
10 retained by the Rock River Water Reclamation  
11 District to design a wet weather retention  
12 basin at the head end of the wastewater  
13 treatment plant. The District desired to take  
14 a greener approach to wet weather management  
15 than the traditional concrete-lined basin.

16 The design team proposed that a wetland  
17 floor with prairie grasses on the banks  
18 employed successfully would not only be a  
19 greener approach but protective of the  
20 environment.

21 I will summarize herein the background  
22 on the design, the project impact on  
23 groundwater, the Agency's representation of the  
24 regulatory requirements, and why this design is

1 protective of human health and the environment  
2 and will not cause water pollution as defined  
3 in the Environmental Protection Act.

4 Background: In the summer of 2010, I  
5 had an informal discussion with Al Keller,  
6 permit manager of the Bureau of Water at the  
7 Illinois EPA regarding the use of wetland-type  
8 basin for excess flow and temporary storage.  
9 Mr. Keller indicated the Agency had permitted  
10 wetland previously for wastewater treatment and  
11 thought this type of concept could be  
12 permitted.

13 In the fall of 2010, the Rock River  
14 Water Reclamation District solicited proposals  
15 for design of the excess flow basin. The Clark  
16 Dietz team proposed a dual function wetland  
17 system, first as a polishing wetland during  
18 most of the year or part of the secondary  
19 effluent and, second, a short-term excess flow  
20 temporary storage basin during the most intense  
21 storm events. The District liked the approach,  
22 and our team was awarded a contract to fast  
23 track the design.

24 The District had been acquiring lots

1 adjacent to the treatment plant which are also  
2 adjacent to the Rock River that was to be used  
3 for the basin. Under an agreement with the  
4 Agency, the excess flow basin is to prevent  
5 backups in the sewer system for up to a 10-year  
6 storm event.

7           While the hydrologic modeling was being  
8 developed by others on our team, Huff & Huff  
9 installed a datalogger in a monitoring well in  
10 the vicinity of the proposed basin to monitor  
11 the groundwater elevation.

12           Not surprisingly, the groundwater  
13 elevation tracked very closely to the Rock  
14 River elevation. There is no question that the  
15 groundwater is hydraulically connected to the  
16 river.

17           Under normal conditions, groundwater  
18 flows towards the river, but at high river  
19 levels, the groundwater flows from the river.  
20 This was important to verify, as any liner,  
21 synthetic or clay, would be in jeopardy of  
22 serious damage when the river elevation  
23 increases rapidly and the basin does not have  
24 water near the same level or higher than the

1 river.

2 A clay liner would not be conducive to  
3 the establishment of a viable wetland community  
4 because of the inability of the roots to  
5 penetrate a compacted clay soil. In addition,  
6 clay is not available in the Rockford area, so  
7 the cost of securing clay adds significantly to  
8 the cost.

9 When the river elevation is higher than  
10 the level in the excess flow basin, the  
11 hydraulic pressure on the low permeable soils  
12 across the 7.27 acre floor would cause the  
13 floor to literally float and eventually buckle.  
14 To avoid this potential, a series of pressure  
15 relief valves to allow groundwater to enter the  
16 basin would be necessary across the floor of  
17 the basin.

18 Based on the hydraulic modeling which  
19 modeled the last 50 years of storm events,  
20 excess flow would be diverted an average of  
21 only once per year and from 50 years of storm  
22 events, an average diversion would be  
23 7.4 million gallons per event.

24 A 10-year event would result in the

1 diversion of 25 million gallons, and this value  
2 was selected for the design capacity. The  
3 floor elevation was set at 690.0 feet above  
4 mean sea level, three feet above the normal  
5 level in the Rock River and two feet above the  
6 normal groundwater elevation.

7 Based on nine soil borings, the soil  
8 encountered were fine grained sand consisting  
9 of silt and clay with 35 percent sand ranging  
10 from 1.5 to nine feet in thickness.

11 Below this initial zone, sandy soils  
12 were encountered. After excavation for the  
13 basin, the predominant soil type would be the  
14 sandy soils. 12 inches of topsoil would be  
15 placed on the floor of the basin for supporting  
16 the wetland plants. This topsoil and the leaf  
17 litter that will rapidly develop will be the  
18 limiting layer for infiltration.

19 From the hydraulic modeling and  
20 assuming a very conservative average wet  
21 weather biochemical oxygen demand, BOD5, of  
22 125 milligrams per liter in the diverted  
23 influent flow, the organic loading on the  
24 diverted water would be an average of

1 7,700 pounds per event which would occur once  
2 per year. The 125 milligram per liter BOD five  
3 assumption for the excess flow concentration is  
4 a conservative assumption. My experience with  
5 excess flow BOD five concentrations is  
6 typically in the 30 to 50 milligram per liter  
7 range.

8 The basin floor will occupy 7.27 acres.  
9 So a single diversion will load the wetland  
10 with 1,060 pounds of BOD five per acre per  
11 event or effectively 1,060 pounds per acre per  
12 year.

13 The excess flow was also assumed to  
14 have a conservative eight milligrams per liter  
15 of ammonia nitrogen plus organic nitrogen.  
16 There will be no measurable nitrites or  
17 nitrates in the diverted flow. The nitrogen  
18 loading translates into 493 pounds per event or  
19 68 pounds per acre per year, a very low  
20 loading.

21 However, the District's desire to also  
22 utilize the wetlands for tertiary treatment was  
23 also an important design consideration.  
24 Applying an average two inches per week to the

1 7.27 acres is equivalent 56,000 gallons per day  
2 containing an average BOD five of 15 milligrams  
3 per liter equates to a loading of one pound of  
4 BOD five per acre per day and total nitrogen  
5 loading of 239 pounds per acre per year.

6 Organic loadings is measured by BOD  
7 five in excess of 500 pounds per acre per day  
8 are common for land application systems while  
9 achieving 95 percent removal efficiency, and I  
10 provide a reference for that.

11 The nitrogen loading is within  
12 agronomic loading rates and can be adjusted by  
13 reducing the dry water application rate in the  
14 unlikely event the nitrates in the groundwater  
15 approach 10 milligrams per liter, class one  
16 standard.

17 On March 10, 2011, the District and its  
18 design team met with the Illinois EPA to  
19 present the preliminary engineering report.  
20 The Agency's initial response to the design  
21 seemed positive based on the initial meeting.

22 Al Keller asked about nitrates and  
23 suggested that these be specifically addressed  
24 in the engineering report as the Agency's



1 groundwater section will be reviewing any  
2 construction permit application.

3 The District indicated the ammonia  
4 concentration during these high-flow events is  
5 in the five to eight-milligram per liter range  
6 and no nitrates are present. So even if all of  
7 the ammonia is oxidized to nitrates, the  
8 concentration of the infiltrated water would be  
9 below 10 milligrams per liter.

10 Mr. Keller was not concerned about  
11 fecal coliform because there is no groundwater  
12 standard. Francis Burba, the permit engineer,  
13 verbally simplified the project at the initial  
14 meeting as just an equalization basin.

15 After our meeting, the groundwater  
16 section was asked by the permit section to  
17 review and comment on the preliminary  
18 engineering report. An April 2011 draft memo  
19 from Bill Buscher to Al Keller was provided to  
20 the District. A copy of this memo is attached  
21 as attachment two and also is in the record  
22 Bates stamped 168. This memo contains a number  
23 of problematic comments as summarized below.

24 One, the plan did not include any

1 consideration of wetland design criteria for  
2 meeting the non-degradation requirements of 35  
3 IL Adm. Code Part 620.301 at a distance of  
4 25 feet from the edge of the impoundment. It's  
5 noted in 35 IL Adm. Code Part 620.505;

6 Two, based upon the information that is  
7 provided, it is expected that a liner to the  
8 wetland may be necessary in order to not exceed  
9 existing background concentrations in  
10 groundwater;

11 And, three, six rounds of sampling from  
12 the proposed monitoring wells would be required  
13 for a list of inorganic parameters prior to  
14 putting the wetlands in service.

15 A subsequent meeting requested by the  
16 District was held with the Agency on June 6th,  
17 2011 to discuss the April 2011 draft memo from  
18 Mr. Buscher. At that meeting Bill Buscher  
19 explained that this project would have to  
20 demonstrate it meets the groundwater standards  
21 for more than nitrates and fecal coliform. It  
22 would have to show the down gradient monitoring  
23 wells achieve background, or non-degradation.  
24 This would apply to all 620 parameters

1 including chlorides, sulfates, and total  
2 dissolved solids.

3 Mr. Buscher provided a copy of Richard  
4 Cobb's testimony and R08-18 from May 2008 and  
5 explained that this testimony would provide an  
6 understanding of the non-degradation standard  
7 the District would be held to on this project.

8 A copy of what was provided by  
9 Mr. Buscher is included in attachment three.  
10 Mr. Buscher did not offer that the Board  
11 rejected this same argument in R89-14 or that  
12 this was still a pending regulation before the  
13 Board.

14 The District asked whether a  
15 groundwater management zone could be  
16 established, and Mr. Buscher explained the  
17 Agency would never allow such a classification  
18 prior to discovering impacts.

19 At this meeting I provided the  
20 attendees with a 2006 permit issued by the  
21 Illinois EPA that was similar to what the  
22 District was hoping to secure and have included  
23 as attachment four. This is in the record at  
24 Bates stamped pages 299 and 300.

1           This Agency-issued construction and  
2 operating permit for a truck washing facility  
3 utilizing percolation ponds for the treatment  
4 of truck washing water and storm water and the  
5 permit required installation of monitoring  
6 wells after the operation began and limits the  
7 parameters to be tested to the pollutants  
8 associated with the operation which were only  
9 three parameters.

10           More interesting, this permit goes on  
11 to state, quote, should groundwater quality  
12 standards be exceeded in the down gradient  
13 wells due to percolation pond discharge, the  
14 permit team must pursue one or a combination of  
15 the following choices:

16           One, provide treatment prior to the  
17 percolation pond discharge or perform in-house  
18 reductions prior to the wastewater generation  
19 to reduce groundwater impacts below groundwater  
20 quality criteria;

21           Two, apply to the Agency for a  
22 groundwater management zone or class four  
23 groundwater designation pursuant to 35 Il Adm.  
24 Code Section 620.240(e) or 620.250;

1           And, three, petition the Board for an  
2 adjusted standard as provided in 35 Il Adm.  
3 Code Section 620.260 or section 28.1 of the  
4 Illinois Environmental Protection Act.

5           The above permit conditions are what I  
6 expected the District permit would contain for  
7 the proposed wetlands prior -- wetlands  
8 approach based upon my experience in working  
9 with the Agency.

10           There were no permit conditions  
11 regarding non-degradation, and the Agency  
12 provided reasonable options should the  
13 groundwater become impacted.

14           The denial of the District's  
15 application and the record in these proceedings  
16 are clearly inconsistent with the Agency's  
17 historical approach.

18           The non-degradation stance that the  
19 groundwater section is taking is particularly  
20 troublesome. No storm water basin, cattle  
21 grazing area, fertilizer application,  
22 wastewater spray irrigation, or sludge  
23 application can meet the non-degradation  
24 standard that was being imposed on the

1 District.

2 On June 28th, 2011, I submitted a memo  
3 to the Agency responding to the six comments in  
4 the draft April 2011 memo from Bill Buscher  
5 Bates stamped 168 as promised in our meeting  
6 with the Agency in June.

7 A number of key elements from the  
8 June 28, 2011 letter are summarized below:

9 One, fecal coliform upstream on the  
10 Rock River exceeds the water quality standard  
11 during wet weather. The river's recharge under  
12 high flow is contributing fecal coliform to the  
13 groundwater;

14 Two, the proposed wetland basin is  
15 located within the southeast Rockford  
16 contaminated plume for chlorinated solvents, so  
17 groundwater is not suitable for water supply;

18 Three, the annual BOD five loading from  
19 this wetland basin is equivalent to the amount  
20 of BOD five excreted by one cow in Illinois  
21 onto the ground;

22 Four, the requested expensive testing  
23 is far more excessive than the District  
24 monitors for on its effluent, and most of the

1 parameters are not associated with domestic  
2 wastewater. Monitoring six times prior to  
3 placing the basin into service is not  
4 practical.

5 Development of a statistical approach  
6 for establishing background was requested by  
7 the Agency to allow it to apply its  
8 non-degradation interpretation. It is clear  
9 from Mr. Cobb's testimony in R08-18 that he  
10 disagrees with the Board's interpretation on  
11 non-degradation.

12 However, if Mr. Cobb's interpretation  
13 would be uniformly applied in Illinois, then  
14 all storm water detention basins would be  
15 prohibited if they contributed chlorides to the  
16 groundwater. All agricultural practices in  
17 Illinois would be prohibited, contributing  
18 nitrates to the groundwater along with the  
19 herbicides such as Alachlor and Atrazine.  
20 Cattle and poultry would not be allowed, and  
21 land application of wastewater would be  
22 prohibited. In the footnote to that, the  
23 Illinois EPA last month held a series of public  
24 meetings to present its --

1 MR. PETTI: I'm going to object. Last  
2 month. That's not possibly something that  
3 could have been considered as part of the --

4 HEARING OFFICER HALLORAN: We'll grant  
5 it, but this is already let in.

6 MR. PETTI: Yeah, I know. I think we  
7 forgot about this.

8 HEARING OFFICER HALLORAN: We'll note  
9 your objection. There was also something in  
10 there as recent as September as well. In any  
11 event, your objection is noted.

12 You may proceed, Mr. Huff.

13 THE WITNESS: The Illinois EPA last  
14 month held a series of public meetings to  
15 present its concept of requiring the  
16 infiltration from the first 1.3 inches of  
17 precipitation without surface discharge for all  
18 construction activities greater than one acre.  
19 This requirement would then apply to the  
20 operation phase after construction is  
21 completed.

22 Storm water from urban development  
23 contains many pollutants. The impact this will  
24 have on the chloride level in our groundwater



1 will be significant, and how the Agency can  
2 support this while raising the non-degradation  
3 issue on this matter seems totally  
4 inconsistent. See attachment six.

5 HEARING OFFICER HALLORAN: I do want to  
6 note for the record that, yeah, this was  
7 post-permit appeal denial letter to the Board.

8 You may proceed.

9 THE WITNESS: As noted in the June 28,  
10 2011 letter, groundwater standards will be  
11 achieved and no use impairment will occur. The  
12 key issue is the Agency's interpretation of the  
13 Board's non-degradation regulations;

14 Wetland plants by their nature have  
15 long roots. And requiring a two-foot clay  
16 liner, the plants will not penetrate this  
17 layer. There is no clay in the Rockford area,  
18 so importing clay will result in considerable  
19 greenhouse gas emissions from the trucks.

20 As the groundwater and the Rock River  
21 are hydraulically connected, when the river  
22 rises and no excess flow is being diverted, the  
23 hydraulic pressure on the 7.27-acre floor will  
24 be very significant. To prevent this, massive

1 groundwater pumps and/or relief valves across  
2 the floor will be needed to prevent the floor  
3 from literally floating.

4 Simple modeling was completed that  
5 showed that a monitoring well 25 feet down  
6 gradient will see an increase in chloride  
7 concentration but not above the groundwater  
8 standard.

9 And finally, the Agency requested a  
10 contingency plan in case groundwater impacts  
11 occur. The June 28, 2011 letter proposes a  
12 groundwater management zone as the contingency,  
13 noting that the Agency routinely grants  
14 groundwater use restrictions in both the Site  
15 Remediation Program and the Leaking Underground  
16 Storage Tank Programs.

17 The District never received the written  
18 response from the Agency, so the District  
19 verbally informed the Agency that it would  
20 formally apply for a permit which the Agency  
21 would have to formally act upon.

22 The District completed the detailed  
23 design and applied for a construction permit in  
24 April 2012, which included all the previously

1 provided documents submitted as part of the  
2 preliminary engineering discussions and  
3 meetings.

4 The Agency issued a denial letter,  
5 Bates stamped 846, on August 1st, 2012, citing  
6 sections 12 and 39 of the Environmental  
7 Protection Act and 415 ILCS 5/12 and 39, which  
8 prohibit the Agency from issuing a permit for  
9 any facility which would threaten, cause, or  
10 allow discharge of contaminants which might  
11 cause or tend to cause water pollution.

12 Specifically, the denial letter notes,  
13 one, a seal in accordance with section  
14 370.932(d)(2)(D) of the Illinois Recommended  
15 Standards; and, two, an appropriate groundwater  
16 monitoring system for 35 Il Adm. Code  
17 370.930(b)(4). This permit denial is the  
18 subject of the permit appeal before the Board.

19 Discussion: There are a number of  
20 technical points that I would like to make with  
21 respect to the permit denial and the Agency's  
22 position. First, a specific comment citing the  
23 Illinois Recommended Standard For Sewage Work.  
24 Those specific comments are from section

1 370.930 which is entitled waste stabilization  
2 ponds and aerated lagoons.

3 The proposed wetland basin is certainly  
4 not an aerated lagoon. There is no aeration  
5 devices proposed, and the intent is not to  
6 reduce the biochemical oxygen demand which the  
7 Agency presumably readily understood.

8 Therefore, the Agency must have  
9 concluded that the proposed wetland basin fixed  
10 the definition of a waste stabilization pond.  
11 The definition of waste stabilization pond from  
12 the USEPA is as follows: Stabilization pond,  
13 quote, receive raw, untreated wastes and  
14 usually consists of two or more cells. Most  
15 stabilization and oxidation ponds stabilize  
16 organic waste through a complex natural process  
17 involving sunlight, oxygen, water currents,  
18 algae, and bacteria action, end quote. And  
19 this is from the operations manual  
20 stabilization ponds USEPA document  
21 430-9-77-012.

22 As Mr. Burba noted in one of our  
23 meetings, the wetland basin is an equalization  
24 basin. It clearly does not have two or more

1 cells, and it's not intended to treat the  
2 wastewater.

3 Under section 390.930(c)(2), criteria  
4 for stabilization ponds, the ponds must have a  
5 minimum of two feet of liquid and a maximum of  
6 five feet of liquid. The proposed wetland  
7 basin will have a normal liquid level of zero  
8 feet and on an average once per ten years it  
9 will have a maximum of ten feet for less than  
10 48 hours.

11 It's not clear why the Agency did not  
12 cite this apparent inconsistently unless the  
13 Agency fully understood this requirement makes  
14 no sense for the proposed wetland basin.

15 As to the groundwater monitoring  
16 requirements, such monitoring was included in  
17 the design, see preliminary engineering report  
18 page 16, Bates stamped 41. And as Mr. Carroll  
19 noted, it's on the design drawings as well.

20 The Agency is apparently referring to  
21 the sentence, quote, if conditions dictate  
22 using such a site, then the potential for and  
23 the means necessary to combat groundwater  
24 contamination shall be critically evaluated in

1 the engineering report, end quote.

2 The preliminary engineering report, the  
3 June 28th, 2011 letter, and the permit  
4 submitted did address these issues with respect  
5 to achieving the groundwater numerical  
6 standards, but also noted that the  
7 non-degradation requirement the Agency believes  
8 is necessary could not be achieved here or at  
9 any other basin in the state.

10 When Illinois adopted the Recommended  
11 Standards for Sewage Works, it recognized that  
12 emerging technologies would be developed after  
13 the document was prepared. Section 370.110  
14 notes that the standards contained in this  
15 document apply to conventional design concepts  
16 for wastewater treatment facilities.

17 Section 370.110(b) goes on to say that  
18 for new processes the Agency will consider the  
19 specific information submitted in accordance  
20 with Section 370.520(b). Section 520(b) notes  
21 that the Agency policy is to, quote, encourage  
22 rather than obstruct the development of any  
23 methods for treatment of wastewater. The lack  
24 of inclusion in these standards of some types

1 of wastewater treatment processes should not be  
2 construed as precluding their use, emphasis  
3 added in quotes. Unfortunately, this section  
4 was not relied upon by the Agency based on its  
5 denial letter.

6 Because the two cited regulatory  
7 requirements are clearly in error, the only  
8 remaining basis for the denial is the  
9 recitation of failure to show that the project  
10 will not result in water pollution.

11 This sole underlying issue in this  
12 permit denial appears to be based on the  
13 non-degradation position of the groundwater  
14 section at the Illinois EPA presented by  
15 Mr. Buscher in the June 2011 meeting and set  
16 forth in the Agency's draft letter dated  
17 April 2011, attachment two and Bates stamped  
18 pages 168 to 174.

19 Any increase in concentration above  
20 background under the Agency's interpretation of  
21 non-degradation is water pollution. Water  
22 pollution, however, is defined under the Act  
23 as, quote, is such alteration of a physical,  
24 thermal, chemical, biological, or radioactive

1 properties of any waters of the State or such  
2 discharge of any contaminant into the water of  
3 the State as will or is likely to create a  
4 nuisance or render such water harmful or  
5 detrimental or injurious to public health,  
6 safety, or welfare or to domestic, commercial,  
7 industrial, agricultural, recreational, or  
8 other legitimate uses or to livestock, wild  
9 animals, birds, fish, or other aquatic life,  
10 end quote.

11 MR. GRANT: Excuse me. Can I interpret  
12 and ask him to give us a citation for that,  
13 please?

14 THE WITNESS: That's right out of the  
15 Environment Protection definition.

16 MR. GRANT: Can you read it again,  
17 please?

18 THE WITNESS: Is such alteration of a  
19 physical, thermal, chemical, biological, or  
20 radioactive properties of any waters of the  
21 State or such discharge of any contaminant into  
22 any waters of the State as will or is likely to  
23 create a nuisance or render such waters harmful  
24 or detrimental or injurious to public health,



1 safety, or welfare or to domestic, commercial,  
2 industrial, agricultural, recreational, or  
3 other legitimate uses or to livestock, wild  
4 animals, birds, fish, or other aquatic life.

5 HEARING OFFICER HALLORAN: Mr. Grant,  
6 next time you can ask me, and I'll decide  
7 whether or not the witness will read it back.

8 MR. GRANT: Okay.

9 HEARING OFFICER HALLORAN: Mr. Harsh.

10 MR. HARSCH: If you want the specific  
11 cite, it's in my reply to your motion of  
12 section 3.545.

13 MR. GRANT: Okay. I have it. Thank  
14 you.

15 THE WITNESS: What the Act does not say  
16 is that any increase in pollutant is deemed  
17 water pollution. The Agency's position on this  
18 permit application seems to be consistent with  
19 its desire to define non-degradation as any  
20 increase in pollutant concentration independent  
21 of whether this will create a nuisance or  
22 render such waters harmful or detrimental or  
23 injurious.

24 The Agency's groundwater section

1 disagrees with the current Board's groundwater  
2 regulation. See attachment three. What is  
3 interesting is that this same Agency  
4 groundwater section took a very different  
5 approach when proposing the groundwater  
6 monitoring and compliance in the Clean  
7 Construction or Demolition Debris or CCDD fill  
8 operation proceedings in R2012-09 which was  
9 ongoing at the exact same time the District was  
10 trying to secure a construction permit.

11 In R2012-09 the Agency proposed that  
12 CCDD facilities would have to meet either the  
13 class one groundwater standards or the  
14 background groundwater quality, whichever is  
15 higher, noting that the CCDD material would be  
16 placed directly in contact with the  
17 groundwater.

18 The Agency then proposed that the  
19 non-degradation provisions of Part 620 would  
20 only apply beyond the fill operation's  
21 boundaries. See R2012-009 hearing transcript  
22 from September 26, 2011, Exhibit 1 prefiled  
23 testimony of Steven F. Nightingale, Illinois  
24 EPA.

1           However, with only monitoring wells  
2 required on the CCDD properties, the  
3 non-degradation provisions would never kick in  
4 under the Agency's proposal.

5           And then footnote two just notes the  
6 Board elected not to require the CCDD  
7 facilities to install monitoring wells in the  
8 final rule. However, the Board has opened up  
9 an additional docket to review this issue in  
10 R2012-009b.

11           The District committed to achieving the  
12 class one groundwater standards 25 feet from  
13 the wetland basin on the District's property.  
14 See my June 28, 2011 letter to IEPA, page 4,  
15 Bates stamped 268 which is totally consistent  
16 with what the Agency proposed in the CCDD  
17 proceeding, but the Agency's position of  
18 achieving non-degradation made this commitment  
19 moot.

20           Focusing on the creating a nuisance or  
21 rendering such waters harmful or detrimental or  
22 injurious section specifically related to this  
23 permit application, the Agency is fully aware  
24 that the groundwater beneath the proposed

1 wetland basin is impacted with chlorinated  
2 solvents by the southeast Rockford Superfund  
3 sites, and the water is not usable for potable  
4 use. See attachment five.

5 This area was proposed for a  
6 groundwater management zone under the selected  
7 remedy in the record of decision. To the  
8 extent the proposed wetland basin will have any  
9 impact on groundwater, the groundwater will be  
10 limited to the RRWRD property adjacent to the  
11 Rock River, and no drinking water supplies are  
12 located in this area.

13 There will be no nuisance or render  
14 such waters harmful or detrimental or injurious  
15 from this project. It should be further noted  
16 the City of Rockford has routinely adopted  
17 groundwater use restriction ordinances under  
18 the Leaking Underground Storage Tank and Site  
19 Remediation Program. And footnote three notes  
20 that the Illinois EPA website lists  
21 15 groundwater use restrictions approved  
22 ordinances in the City of Rockford.

23 Closing: The Illinois EPA denied this  
24 construction permit based on criteria in the

1 Illinois Recommended Standards for Sewage Works  
2 that is clearly inappropriate for the proposed  
3 wetland basin.

4 The only document in the record that  
5 cites any reason for denial is the draft  
6 Buscher memo of April 2011, which is attachment  
7 two to my testimony and Bates stamped 168.

8 The permit application adequately  
9 addressed the concern over impacted groundwater  
10 using very conservative assumptions and  
11 concluded that the class one groundwater  
12 standards will be achieved 25 feet from the  
13 proposed excess flow basin.

14 The Agency's decision to deny the  
15 application based upon alleged failure to show  
16 that the project will not result in -- will  
17 result in water pollution is based on the  
18 groundwater section's belief that this project  
19 should be denied because it cannot demonstrate  
20 it will achieve of non-degradation criteria of  
21 no net increase in any pollutant, the criteria  
22 that the same Agency groundwater section  
23 elected not to apply to the CCDD facilities in  
24 the Agency's proposed regulations and certainly

1 the Agency does not apply consistently on other  
2 projects.

3 Agriculture including crops, cattle,  
4 and poultry operate septic systems, land  
5 application systems, storm water retention and  
6 infiltration systems, constructed wetlands used  
7 for wastewater effluent polishing, and sanitary  
8 sewers all contribute pollutants to the  
9 groundwater and are routinely permitted by the  
10 Illinois EPA.

11 For example, the District has  
12 1,000 miles of sanitary lateral mains which are  
13 installed relatively shallow in elevation. For  
14 new pipe the Illinois Recommended Standards for  
15 Sewage Works specifies the acceptable leakage  
16 rate of 240 gallons per mile per day per inch  
17 diameter. Assuming an average lateral diameter  
18 in Rockford is 10 inches, this equates to an  
19 acceptable leakage rate from these sewers of  
20 2,400 gallons per day per mile. With 1,000  
21 miles of such laterals, again assuming an  
22 ex-filtration rate of new pipe, this equates to  
23 a leakage rate of 2.4 million gallons per day  
24 or 876 million gallons per year. This can be

1 compared to the expected infiltration rate from  
2 the wetland basin from the excess water  
3 diversion infiltration of 2.4 million gallons  
4 per year.

5 And I footnote that. That's assuming  
6 six inches per day for two days or one foot of  
7 infiltration over 7.67 acres which yields  
8 2.4 million gallons. Of course, the  
9 infiltration rate is a function of the  
10 hydraulic head, and in this case that will be  
11 the difference between the Rock River elevation  
12 and the level in the basin.

13 If the basin empties, the Rock River  
14 will become higher than the elevation and the  
15 basin, and a significant fraction of the water  
16 infiltrated out of the basin will reverse  
17 direction and leach back into the basin or  
18 basically the 2.4 million gallons, the same as  
19 what leaks out of the sewers in one day in the  
20 City of Rockford.

21 This concludes my prepared testimony.  
22 I will be happy to answer any questions.

23 HEARING OFFICER HALLORAN: Thank you,  
24 Mr. Huff. I think at this time we're going to

1 take a lunch break. What we're going to do is  
2 be back at 1:20 sharp. It will take us a few  
3 minutes to move over to conference room B when  
4 we return.

5 (Whereupon, a recess was had.)

6 HEARING OFFICER HALLORAN: We're back  
7 on the record. It's approximately 1:25,  
8 November 28th, 2012. Mr. Harsch is continuing  
9 his direct with Mr. Huff, his fourth witness.

10 You may proceed, Mr. Harsch.

11 MR. HARSCH: Thank you.

12 BY MR. HARSCH:

13 Q. Mr. Huff, can you explain in a little  
14 more detail and maybe less technical terms how  
15 the introduction of the pumped flow from the  
16 interceptor to the basin will occur relative to  
17 the -- that portion that you've estimated will  
18 infiltrate and how that relates to the  
19 elevation in the Rock River?

20 A. I'd be happy to. So there's -- the  
21 flow comes into an influent sump, and complete  
22 treatment is provided for everything up to  
23 whatever the maximum flow is that they can  
24 handle on that day.



1           There's then going to be, as part of  
2 the design, an overflow, so if the level rises  
3 above what they can pump through the treatment  
4 plan, that will overflow into a second sump  
5 that will then have pumps that will pump to the  
6 wetland equalization basin.

7           As soon as that overflow subsides that  
8 was going to the second lift station and the  
9 flows begin to subside in the incoming flow,  
10 then they would gravity drain backflow to work  
11 the basin back.

12           During the time that the water's in the  
13 basin, there will be some infiltration and that  
14 infiltration is a function of one -- the most  
15 confining layer which will be the first foot of  
16 topsoil which is a silty loam soil with some  
17 clay in there, and it's also a function of the  
18 elevation in the Rock River.

19           When the Rock River is down at normal  
20 elevations, groundwater flow is toward the  
21 river. But when this basin is going to be  
22 used, you're truly talking these  
23 once-a-year-type events, then that Rock River's  
24 going to quickly come up in elevation.

1           And so the infiltration rate is a  
2 function, as I said, of the most -- the  
3 restrictive layer which would be the top foot  
4 of soil and also the relative head which is the  
5 difference between what's in the Rock River and  
6 what's in the basin.

7           And so when you -- my belief is that  
8 the basin is likely to respond sooner so that  
9 water would go into this basin ahead of when we  
10 see the elevation in the Rock River, but within  
11 hours that Rock River will come up in  
12 elevation. And so that infiltration rate will  
13 begin to wean as that river elevation comes up.

14           And if the river elevation gets higher  
15 than what's in the basin which will happen on a  
16 fairly regular basis, then basically instead of  
17 infiltrating into the groundwater, the  
18 groundwater is going to basically reverse  
19 direction and come back up into that basin.

20           And then that would all be worked back  
21 through the treatment plant where it will be  
22 given complete treatment through the wastewater  
23 treatment plant.

24           Q.    The bottom of the proposed basin, how

1 does that relate to the -- some assumed  
2 elevation in the Rock River?

3 A. Well, that's a good question. So the  
4 Rock River under normal flows approximately  
5 three feet below the Rock River. And so until  
6 that Rock River comes up at least three feet,  
7 they're not dependent on one another.

8 The top of the operating level in that  
9 basin, which is at approximately 700 feet mean  
10 sea level, is basically at the 100-year flood  
11 off the Rock River. So the highest we'd get in  
12 that basin is equivalent to the 100-year flood.

13 I'll point out there's also a  
14 three-foot curb or dike above the flood stage  
15 so that the Rock River is not going to overflow  
16 back into this basin unless you have probably a  
17 once in 500-year type of integrator.

18 Q. And these -- this elevation is an  
19 interrelationship in the data and reports that  
20 you submitted to the Agency?

21 A. Yes, sir, it was.

22 Q. So for those periods of time when the  
23 Rock River elevation is below the bottom of the  
24 basin, is that when it would be -- the basin

1 through infiltration would drain some portion  
2 of its contents?

3 A. Into the groundwater, that's correct,  
4 assuming that the basin had freestanding water  
5 in it.

6 Q. And if the Rock River level then  
7 increases and you've used the basin and you've  
8 had infiltration of so many inches that you've  
9 calculated and presented, where is that --  
10 where does that infiltrated water go?

11 A. So the water is going to go down in  
12 what's called a plug-flow fashion toward the  
13 groundwater. It's going to go down as a block.

14 And then as that elevation comes up,  
15 it's basically going to be to a large extent  
16 that same water that's going to come -- that  
17 infiltrated that would come back into that  
18 basin.

19 The only mixing that you're going to  
20 get as it goes down to the groundwater is  
21 through diffusion. And then once it's hit the  
22 groundwater, there would be also whatever  
23 lateral velocity. Both of those, in a short  
24 term period of a day or two, would be

1 negligible compared to the hydraulic pushback.

2 Q. And once that water had gotten back  
3 into the basin, is there -- why would the  
4 District continue to pump or drain that back  
5 into the treatment plant?

6 A. The design calls for wetland plants,  
7 and we specified wetland plants that can stand  
8 a short-term 48 hours of submergence.

9 So the design concept would be that to  
10 the extent when that Rock River is at flood  
11 stage condition where you have infiltration  
12 coming into the basin, they will need to drain  
13 that water out to basically maintain the  
14 viability of the wetland plants.

15 Q. It's your opinion that there's no doubt  
16 this basin would function in a manner that the  
17 groundwater quality standards would always be  
18 met through the monitoring wells 25 feet from  
19 the basin?

20 A. The groundwater standards, yes, that is  
21 my opinion.

22 Q. You're familiar with the e-mail that  
23 Marcia Wilhite sent to me in May regarding the  
24 recitation of their concerns over this project?

1 A. I've read that e-mail, yes.

2 Q. I'll show you what's in the Agency  
3 record as 179. That's that e-mail.

4 A. Yes.

5 Q. That e-mail refers to the Agency's  
6 concerns over degrading the groundwater,  
7 correct?

8 A. Yes.

9 Q. And can you explain -- they list a --  
10 Marcia lists a number of parameters where the  
11 Agency has concerns.

12 Did you address those specific  
13 parameters in your written submittals to the  
14 Agency?

15 A. Yes, I did. And those specific  
16 parameters that are referenced in here  
17 specifically are nitrates and chlorides, which  
18 were specifically addressed in both the  
19 preliminary engineering report and in the  
20 permit application and the June 11th memo.

21 Q. And can you summarize briefly what the  
22 response was to the nitrates?

23 A. Sure. So under high-flow conditions,  
24 the influent to the wastewater treatment plant,

1 the nitrogen is in a reduced form. So that  
2 would be either ammonia nitrogen or organic  
3 nitrogen.

4 So -- and our estimate, again,  
5 conservative is that the concentration of the  
6 total nitrogen would be on the order of five to  
7 eight milligrams per liter. That would be in  
8 that basin for up to two days until it drained  
9 back.

10 There's going to be no change in the  
11 state of those nitrogen compounds in that short  
12 period of time. So to the extent that it  
13 infiltrated into the ground, it would be in the  
14 form of ammonia and organic nitrogen. But even  
15 if it all converted to nitrates, if you only  
16 start with five to eight milligrams per liter,  
17 that's what you would end up with from a  
18 complete conversion.

19 So Marcia noted that the -- these  
20 sewage constituents may act differently than  
21 the volatile organic compound contamination  
22 from the Superfund site, and she's exactly  
23 right.

24 The volatile organic compounds migrate

1 at a much higher velocity. There's no  
2 retardation, and the degradation of those  
3 compounds is a fraction of the degradation  
4 rates on the ammonia compounds.

5 Q. And the other parameter of concerns was  
6 chlorides?

7 A. Chlorides. Chlorides are what you  
8 would call a conservative pollutant. There is  
9 basically no degradation. They're for all  
10 practical purposes, no retardation.

11 So if you put 100 pounds of chlorides  
12 into the groundwater, it would be diluted, but  
13 those 100 pounds are then going to migrate to  
14 wherever the outlet is for that groundwater  
15 whether -- in this case the Rock River or it  
16 would come back up.

17 Q. And that would be true whether it was  
18 chlorides in this dilute wastewater stream at  
19 the time of high rainfall events or storm water  
20 in an urban area?

21 A. Well, any highway project, sodium  
22 chloride is the primary deicing compound. And  
23 so you always have elevated chlorides in storm  
24 water runoff that starts out frankly in the



1 winter months, and then that actually will  
2 continue to contribute significant chlorides  
3 based on recent work done on the DuPage River  
4 and Salt Creek through much of the summer.

5 So, yeah, chlorides is an issue  
6 statewide. It's an issue nationally because  
7 we're going to have safe roads, and we don't  
8 really have a viable alternative to the sodium  
9 chloride use.

10 And just -- and to add to that, the  
11 chlorides that we identified here are those  
12 exact same chlorides during the winter deicing.  
13 To the extent that that's infiltrating into the  
14 sewers, there is a potential in the heavy  
15 spring rain that there could be higher  
16 chlorides than what the background levels would  
17 be.

18 I don't think that would be an issue at  
19 all under a rain in the summer or the fall, but  
20 in the spring where there's a lot of salt  
21 that's been deposited before that rain, it  
22 could be an issue.

23 Q. Do you agree with the previous  
24 responses by the witnesses that the basin was

1 not designed to provide any treatment?

2 A. If I could expound on that, it's just  
3 like the maximum wet weather flow. The  
4 facility was designed for maximum wet weather  
5 flow of 80 million gallons a day, but that  
6 doesn't mean that's the maximum they can put  
7 through the plant. That was the design.

8 And Mr. Droessler was exactly right  
9 when he said that this equalization basin was  
10 not designed for treatment. It was designed as  
11 an equalization basin.

12 If your question is will there be  
13 treatment associated with the water that's put  
14 in there, then there is, indeed, treatment  
15 that's associated with it. It was just not  
16 contemplated as part of the design.

17 Q. And that treatment would -- is it  
18 treatment or is it simply that less pollutants  
19 reach the groundwater because of the natural  
20 conditions?

21 A. Well, it would be treatment in my mind.  
22 I mean, we need to get pollutant specific. As  
23 I said, chlorides, there really would be no  
24 treatment there.

1           Ammonia nitrogen would be taken up  
2 originally by the cationic exchange capacity of  
3 the soils, and, ultimately, it would be either  
4 taken up by the plants, possibly nitrified, the  
5 nitrates under dry conditions only.

6           Typically, with wetlands you have a lot  
7 of saturated groundwater. And so to the extent  
8 that you have nitrates present, they denitrify  
9 and produce nitrogen gas. So you'd get a very  
10 high degree reduction of nitrogen.

11           And then if you talk about fecal  
12 coliform, the fecal coliform -- wetland plants'  
13 efficiency in removing bacteria and reducing  
14 bacteria is very high and then the ground  
15 itself.

16           And this is why we have so many --  
17 septic systems are very effective in reducing  
18 fecal coliform matter primarily, initially  
19 through filtration phenomenas [sic]. The  
20 bacteria tend to grow in clumps, and they're  
21 filtered out. But then they have a pretty  
22 short half life actually in the groundwater.  
23 So you get a very dramatic reduction just  
24 through the death of fecal coliform in

1 groundwater as well.

2 Q. Is it -- when you're sending a design  
3 to the Illinois EPA, is it normal to present  
4 worst case assumptions?

5 A. Absolutely. And that's exactly what I  
6 believe we did here. If we go back to the  
7 recommended design standards on the  
8 specifications in their example, the identifier  
9 surface overflow rate, those are very  
10 conservative designed standards by the Illinois  
11 EPA.

12 And I believe any practitioner will  
13 tell you -- and Rockford is a case in point --  
14 they can successfully operate under most  
15 conditions at considerably higher rates than  
16 what's in the recommended design standard.  
17 They're conservative by nature.

18 Q. Do you -- so was the infiltration rate  
19 that you used a conservative rate?

20 A. We assumed, for calculation purposes,  
21 six inches per day for 48 hours. So that would  
22 be the maximum that water would be in the  
23 basin.

24 And, again, it's the -- once that river

1 had -- exceeds what's in that basin, that  
2 infiltration rate would go to zero. And as I  
3 indicated earlier, typically, the infiltration  
4 rate is controlled by the least permeable zone.

5 In this case, that topsoil will be the  
6 topsoil that's on the site. And there's enough  
7 clay in there and enough silt that if you go  
8 back and design this as septic systems are,  
9 this would be classified as what's called a  
10 class five or six soil. And the percolation  
11 rate that would be used on a septic field with  
12 this type soil would be 1.2 inches per day.

13 And so I think my six inches was a very  
14 liberal estimate, which I did intentionally  
15 just so that we didn't get in a question of  
16 what that number should be.

17 Q. And the result of using that larger  
18 more liberal number versus what you actually  
19 think will occur would result in what?

20 A. Well, there would be approximately only  
21 20 percent of what we have predicted in the way  
22 of infiltration would be infiltrated into the  
23 groundwater.

24 Q. And the soil types in this information

1 was provided in the documentation provided to  
2 the Agency?

3 A. Yes, sir. The design and also the  
4 preliminary engineering report and the filed  
5 one all included the boring logs that showed  
6 the types of soil that were there and the  
7 topsoil, and the description indicated we were  
8 going to use that topsoil in the wetland basin  
9 as the topsoil bore in there.

10 Q. Is it normal, in your opinion based on  
11 your experience, to meet with the Agency and  
12 seek their comments on projects before you  
13 submit applications?

14 A. Well, before today I would have said  
15 absolutely yes, but then when I heard that the  
16 only thing that counts is their final letter,  
17 I'm sitting here, frankly, in shock.

18 Clearly, what we were proposing was a  
19 new technology. I would never propose a new  
20 technology without getting early concurrence  
21 from the Agency.

22 And I think here it was particularly  
23 important because we were trying to avoid  
24 incurring the cost for the detailed engineering

1 and trying to get approval or a denial which,  
2 frankly, we never got. And we had to go  
3 through the cost of putting together the  
4 detailed design to force the Agency to give us  
5 the denial that was apparently coming.

6 MR. HARSCH: At this point in time, I  
7 don't have any further questions.

8 HEARING OFFICER HALLORAN: Thank you.

9 Mr. Petti?

10 CROSS-EXAMINATION

11 BY MR. PETTI:

12 Q. The six inches per day, the 48 hours  
13 that you were discussing, that's the leakage  
14 rate of the basin, for lack of a better term,  
15 correct?

16 A. Worst case.

17 Q. Yeah.

18 A. Yes, sir.

19 Q. Well, it's also the case that you  
20 presented at your June -- the June 28th, 2011  
21 letter; is that correct?

22 A. Yes, sir.

23 Q. Okay.

24 A. So, again, a design type of number.

1 Q. Yeah. Well, that's the number you  
2 presented to the Agency as your -- as you said,  
3 the worst case estimate of what the leakage  
4 rate would be, correct?

5 A. Yes, sir.

6 Q. Okay. And that led to or based on the  
7 estimation would lead to, according to your  
8 letter, two million gallons of wastewater from  
9 the basin entering the groundwater, correct?

10 A. Two million gallons of wastewater that  
11 also includes a high percentage of storm waters  
12 that's in there. Okay. That's not pure  
13 domestic sewage.

14 Q. Well, it's the wastewater that was  
15 pumped to the facility and then up into the  
16 overflow basin, correct?

17 A. Gravity flows into the wastewater  
18 treatment plant and -- but what comes in also  
19 includes a significant amount of infiltration  
20 and likely some sources of inflow that's  
21 directly attributed to a significant storm  
22 event.

23 Q. Sure. But once it's entered the stream  
24 of wastewater, it's wastewater; it's no



1 longer -- it's not -- you don't have two  
2 separate pipes feeding the basin, correct?

3 There's not a wastewater pipe and a  
4 storm water pipe?

5 A. There is not two separate pipes.

6 Q. Okay. Thank you.

7 And that two million gallons receives  
8 no treatment from that -- that doesn't receive  
9 pretreatment from the facility of any form,  
10 correct?

11 A. No, sir, you're not correct.

12 Q. I'm not correct?

13 A. You're not correct.

14 Q. Please correct me.

15 A. It goes through a bar screen as  
16 pretreatment ahead of the wetland basin.

17 Q. And I believe that's the bar screen  
18 that we discussed earlier today with, I think,  
19 it was Mr. Droessler?

20 A. Correct.

21 Q. Okay. And that's the only treatment  
22 that is received by the water before it enters  
23 the basin?

24 A. Before it enters the basin, you are

1 correct.

2 Q. Yes. And then your testimony now, I  
3 just want to try to understand it a little bit  
4 more while it's fresh in my mind.

5 You're saying that the wastewater that  
6 is held in the basin for up to 48 hours, it  
7 will also be treated by the basin through  
8 natural --

9 A. No, that's not accurate.

10 Q. Yeah. I may have misunderstood that  
11 then.

12 A. So the rain events will typically last  
13 about a 24-hour period of time.

14 Q. Uh-huh.

15 A. So the second 24 hours is really  
16 dewatering of that basin, meaning that you're  
17 gravity flowing that water back into the  
18 headworks of the plant to provide complete  
19 treatment.

20 So that then says that you have this  
21 leakage rate theoretically of a million gallons  
22 that is basically infiltrated into the top part  
23 of the topsoil where the wetland plants are,  
24 and that will receive significant treatment.

1 Q. How?

2 A. Well, a variety of things. You have a  
3 lot of root zones of all these plants. They  
4 have a pretty good root zone. So you have a  
5 lot of uptake in the nitrogen compounds.

6 There's some indication that wetland  
7 plants, they don't fully understand the biology  
8 behind it, but they clearly get a very  
9 significant die off of fecal coliform through  
10 any kind of wetland area.

11 And then you get very significant  
12 filtration by the soil itself. And a  
13 significant component of the BOD is in a  
14 particulate form. You have both soluble and  
15 particulate, and you've got a very viable  
16 bacterial population that exists on the base of  
17 that wetland that's going to continue to reduce  
18 the BOD as well.

19 Q. So you don't agree with the  
20 testimony -- and I think I may be repeating  
21 what we just went over.

22 But you don't agree with the testimony  
23 earlier from Mr. Carroll that there's no  
24 treatment that will go on in the basin?

1           A.    I think the testimony, the intent was  
2           that we didn't design this wetland equalization  
3           basin to provide treatment. Our intent was to  
4           bring back that water through and get complete  
5           treatment through the wastewater treatment  
6           facility.

7                        So you'd have to read me the transcript  
8           where Mr. Carroll said that there was no  
9           treatment in the wetland. I don't believe he  
10          said that. We didn't design it for that. We  
11          designed it as an equalization basin.

12          Q.    On page four of Mr. Droessler's  
13          testimony -- and I'll show you -- it says, "The  
14          excess flow basin as proposed in the permit  
15          application does not provide any level of  
16          treatment of organic material nor is it aerated  
17          in any form."

18          A.    I agree with that statement with  
19          respect to the intent was to put the water in  
20          there, hold it until the flow subsides, and to  
21          then bring it back into the basin.

22          Q.    So this does not provide any treatment?

23          A.    Well, the basin will clearly provide  
24          treatment of the water that was infiltrated.

1 Q. You asked me to show you the testimony,  
2 and I --

3 A. Fine. So then I don't agree with that  
4 blanket statement. I was trying to clarify  
5 what he was referring to.

6 Q. Okay. In your own testimony -- and  
7 this may be just because it's written and I  
8 need to understand it better -- on page 9 right  
9 in the middle before -- right after the part  
10 you've pulled out of stabilization, it says,  
11 "As Mr. Burba noted in one of our meetings, the  
12 wetland basin is an equalization basin. It  
13 clearly does not have two or more cells, and it  
14 is not intended to treat wastewater."

15 Was that a statement you attributed to  
16 Mr. Burba or is that your statement, that it is  
17 not intended to treat wastewater?

18 A. That was mine. The --

19 Q. Okay.

20 A. Mr. Burba's -- I attributed that he  
21 simplified after our meeting that, well,  
22 basically what you're proposing is an  
23 equalization.

24 Q. Okay. Thank you. Now, you're -- I've

1 asked this question of pretty much everybody,  
2 and I'll ask it of you.

3 You're aware that the treatment  
4 facility operates under an NPDES permit,  
5 correct?

6 A. The Rockford wastewater treatment  
7 plant, yes, sir.

8 Q. Yes. That's -- and have you reviewed  
9 that permit in your preparation of materials  
10 for the application and the discussions you had  
11 with Illinois EPA prior to the application --

12 A. No, sir, on both accounts.

13 Q. Were you involved at all in the  
14 discussions for the cost of the overall plan  
15 for implementation of the basin and  
16 installation of the basin and the wetland?

17 A. To the extent we provided the cost for  
18 the wetland planting, that would be the sum  
19 extent of our involvement.

20 Q. Okay. When you set out to put together  
21 the overall plan for the overflow basin, was  
22 the goal at the outset to create the overflow  
23 basin or was it to create the wetland?

24 Which was the ultimate goal?

1           A.     Well, I think that's really a question  
2 more appropriate for the client.

3           Q.     What was your goal?

4           A.     Our goal was to design what we felt was  
5 a greener sustainable approach to the  
6 traditional equalization basin by maximum use  
7 of a wetland as part of that.

8           Q.     Thank you. In doing that -- and  
9 there's been a lot of discussion already about  
10 the installation of a liner and how that was  
11 not really feasible according to some of the  
12 testimony because the hydrologic pressure would  
13 push it up or bow it, and I think it was in  
14 your testimony as well that it would damage any  
15 liner that may be put in; is that accurate?

16          A.     Yes, sir.

17          Q.     And it's your belief that a liner of  
18 any kind that would be placed under this basin  
19 is not feasible for this location; is that  
20 correct?

21          A.     Not feasible, I'm not sure I agree with  
22 that statement.

23          Q.     Could you explain?

24          A.     Well, sure. I think it's a question of

1 how one would do that and the associated cost  
2 for that versus the benefits that you get. I  
3 mean, could we put a clay liner in there?

4 Absolutely. Would it fail? That's a second  
5 question. What would be the life of that?

6 But we may have to put in massive  
7 dewatering pumps underneath that to keep that  
8 groundwater from heaving that -- the floor on  
9 there which would just absolutely make this  
10 project cost prohibitive.

11 Q. Was that ever -- was a cost analysis of  
12 a system like that ever performed, to your  
13 knowledge?

14 A. My understanding is that Mr. Droessler  
15 looked at what it would cost to add in a clay  
16 liner of two feet in here. So it's my  
17 understanding he did look at that.

18 Q. And to your understanding, that's --  
19 have you seen that number or heard that number  
20 in any of the testimony today to be 800,000 to  
21 \$1 million for a clay liner?

22 A. I believe around \$1 million from what I  
23 recall.

24 Q. And if you were to put just a basin out



1     there with a clay liner in it assuming one that  
2     would function, as, you know, the two-foot clay  
3     liner that's been proposed by Illinois EPA, if  
4     you were to eliminate the wetland qualities of  
5     this proposed facility, would that  
6     significantly reduce the costs?

7         A.     To put in a clay liner --

8         Q.     But eliminate --

9         A.     -- but eliminate the plants.  So you're  
10        looking at --

11        Q.     Eliminate the plants and eliminate the  
12        need to reroute some of the effluent to water  
13        the plants.

14        A.     You know, rerouting that water, the  
15        effluent is a very green positive thing.  
16        That's an environmental good.  We're taking  
17        water out --

18        Q.     That's not my question, though.  I'm  
19        asking --

20        A.     Well, I just want to make sure that you  
21        understand it.

22        Q.     I understand.  I understand.  I'm  
23        asking about costs.

24        A.     I don't believe those costs are

1 significant. And the overall -- the -- your  
2 other question on the wetland plants, I believe  
3 we had a budget on the order of \$30,000 per  
4 acre.

5 Q. And I understand that about the plants.

6 A. Okay. So I think that answers your  
7 question.

8 Q. Yes.

9 A. Okay. If I could just clarify that as  
10 well. If you don't have plants in there, are  
11 you just going to have a bare earthen clay  
12 liner? And if you are going to do that, how  
13 are you going to keep it from cracking during  
14 dry period?

15 Q. That question is better asked to people  
16 smarter than me.

17 A. Well, my point is that it's not as  
18 simple as what you're alluding to, that you  
19 just put in a clay liner.

20 Q. Well, okay. Okay. Obviously, this  
21 facility is a wastewater treatment facility,  
22 correct?

23 A. This facility, again, is the Rock  
24 River --

1 Q. Yes.

2 A. -- wastewater treatment plant.

3 Q. Yes. And it's the District that runs  
4 that facility --

5 A. Yes.

6 Q. -- that's seeking to install this  
7 overflow basin and the constructed wetland?

8 A. Correct.

9 Q. And it's not a CCDD disposal site,  
10 correct?

11 A. It's not a CCDD?

12 Q. Disposal site, correct?

13 A. Disposal site, it is not.

14 Q. And it's not a truck wash?

15 A. It is not.

16 Q. And it's not a leaking underground  
17 storage tank property?

18 A. It is not.

19 Q. Not a feed lot?

20 A. Nope.

21 Q. Okay. You know, and I just wanted to  
22 briefly touch on the permit that you cited in  
23 your testimony for the truck wash.

24 You're familiar with what I'm talking

1 about?

2 A. Yes, sir.

3 Q. Okay. Was that -- that truck wash was  
4 an existing facility, was it not?

5 Before that permit -- the permit  
6 section that you cited in your testimony was  
7 included in the facility's permit?

8 That facility already existed, correct?

9 A. I can't answer that question. I don't  
10 know.

11 Q. You don't know? Okay.

12 A. I don't know.

13 Q. Clearly, the overflow basin here is not  
14 an already existing site; this would be a new  
15 construction?

16 A. The overflow basin?

17 Q. The overflow basin that we're talking  
18 about for the Districts.

19 A. But not the existing excess flow that  
20 they're trying to remediate.

21 Q. Well, no.

22 A. That exists today.

23 Q. Yeah. I understand that.

24 A. Okay.

1 Q. I'm talking about the construction of  
2 the facility, the basin; that would be new  
3 construction?

4 A. Right.

5 Q. Okay. So am I correct?

6 A. Yes.

7 Q. Okay. And you talked a little bit in  
8 your testimony about livestock waste, correct?

9 A. Yes.

10 Q. That was discussed.

11 And those lagoons are lined pursuant to  
12 regulations, correct?

13 A. Which lagoons? I'm talking about the  
14 cattle that are just out grazing.

15 Q. You're not talking about the waste  
16 lagoons?

17 A. Nope. I'm talking about the cattle  
18 themselves.

19 Q. Okay. Then I think possibly we're  
20 talking about different things.

21 You testified that the facility -- and  
22 there's been other testimony on this -- that  
23 the facility already leaks 2.4 million gallons  
24 a day of untreated wastewater, correct?

1 A. The facility, no.

2 Q. The District itself, the entire system.

3 A. The sewer system of the laterals, not  
4 the mains, but just the laterals.

5 Q. Okay.

6 A. I just -- I put that in to give you a  
7 relative perspective of the volume we're  
8 talking about.

9 Q. Okay. And would you say that the  
10 maintenance goal of the District on all the  
11 sewer lines are to reduce the amount of  
12 leakage?

13 A. That leakage rate I gave you is what  
14 IEPA expects from new pipe. So they would be  
15 thrilled if they could probably get down to  
16 that level throughout their system. That's new  
17 piping.

18 Q. Is the goal to increase leakage?

19 A. No.

20 Q. Okay.

21 A. So if they can get down to that level,  
22 they would be better off.

23 Q. Also, in your testimony you discussed  
24 or expressed disappointment that section

1 370.520 (b), it's on page 9 of 10 of your  
2 testimony, you were critical that the Agency  
3 did not rely on this section. But that section  
4 addresses treatment.

5 And am I wrong in the reading of that?

6 I mean, I assume you've quoted it  
7 accurately here. I don't have it in front of  
8 me, but I'm assuming you quoted it accurately  
9 saying that "It encourages rather than  
10 obstructs the development of any methods for  
11 treatment of wastewaters."

12 That's accurate, correct?

13 A. To my knowledge, that's accurate, yes,  
14 sir.

15 Q. But there is -- this basin isn't for  
16 treatment, correct?

17 A. I think you're dead wrong on that, sir.

18 Q. Well, there's testimony from yourself  
19 in here that says it wasn't treatment, and  
20 there's testimony that we heard earlier today  
21 that says it -- treatment -- this isn't part of  
22 treatment.

23 A. I'd be happy to clarify.

24 Q. Please.

1           A.     So what you're citing here are the  
2     Illinois Recommended Standards for treatment,  
3     correct?

4           Q.     I'm citing what you're citing.

5           A.     Well, that's what this is from.

6           Q.     Okay.

7           A.     And what you're implying is that if I  
8     put in an equalization basin I don't need to  
9     get a construction permit from EPA because it's  
10    not treatment and I'm not -- with all due  
11    respect, you can ask the Agency permit group  
12    whether they concur that we could put in an  
13    equalization basin at the front end and that  
14    not be deemed treatment under the Illinois  
15    Recommended Standards.

16                    It's absolutely treatment under the  
17    Illinois Recommended Design Standards.

18           Q.     The overflow basin is considered --

19           A.     It's part of a wastewater treatment  
20    system. It has to be permitted and the same  
21    regulations on the Illinois Recommended Design  
22    Standards.

23           Q.     So as part of the treatment process,  
24    does this basin fall under the NPDES standards?



1           A.     So NPDES relates to the discharge and  
2     the limits on that.  What you're really talking  
3     about -- in Illinois, we have a separate set  
4     where you have to get a construction permit.

5           Q.     Sure.

6           A.     And this absolutely falls, I believe,  
7     under a construction permit or we wouldn't be  
8     here.

9           Q.     You also have in your testimony -- and  
10    I apologize, I don't know where it was, and if  
11    I misstate, feel free to correct me, of  
12    course -- that there were three components that  
13    you -- this may have been in your June  
14    letter -- that you were looking to monitor, and  
15    they were based on the effluent that's  
16    monitored from the facility, correct, the BOD,  
17    fecal coliform, and pH, I believe?

18          A.     I'm having trouble.

19          Q.     All right.

20          A.     I'm sorry.

21          Q.     That's fine.  Just so we're looking at  
22    the same thing.

23                     It says, "Bates 187."  It's the  
24    June 28th, 2011 letter, is that accurate, your

1 letter to --

2 A. Yes, that's my letter.

3 Q. Okay. The letter to Alan Keller.

4 On page 3 of that letter, Bates 189  
5 under section two, test for host of inorganics  
6 and for six times before start up, in that  
7 paragraph, you discuss that the Rock River  
8 Water Reclamation District discharges about  
9 30 million gallons a day to the Rock River, and  
10 it is not required to monitor this intensively  
11 for any of these parameters except BOD, fecal  
12 coliform, pH.

13 And you're referring back to parameters  
14 that were listed in a draft memo from  
15 Mr. Buscher?

16 A. That's absolutely correct.

17 Q. Okay. And later on in here, it says --  
18 Okay. I'm confusing this with the testimony at  
19 this point.

20 How did -- let me ask it this way: How  
21 did you determine that those three parameters  
22 you did not have a problem testing for?

23 A. Well, I think you're misreading that  
24 statement. There was a list from Mr. Buscher,

1 and those were the only three that are even  
2 remotely related to municipal wastewater.

3 Q. At the end you state that the -- "has  
4 no problem monitoring for the parameters  
5 associated with municipal wastewater but  
6 believe this requested list is excessive."

7 In your testimony you also stated that  
8 there -- I believe the number was 620 --  
9 additional -- on page 5 right near the middle.

10 A. That was referring to section 620 of  
11 the 35 Il Adm. Code.

12 Q. Got it. All 620 parameters, not 600  
13 and --

14 A. Correct.

15 Q. Section 620 parameters, not 620  
16 parameters?

17 A. Correct.

18 Q. Okay. That's what I needed to clarify.  
19 Have you reviewed the denial letter in  
20 this matter?

21 A. Yes, sir.

22 Q. And can you show me where -- can you  
23 point out where in the denial letter you  
24 believe that the non-degradation is discussed

1 where there is a mention of the 620 regs?

2 A. I think that was covered in my  
3 testimony. If you want to give me a copy of  
4 that letter or show me, I'll walk you through.

5 Q. Sure. It's number one, under tab  
6 number one. It's Bates number 846 of the  
7 record, August 1, 2012 letter to Steve  
8 G-r-a-c-e-f-f-a, District director.

9 A. Well, I believe it's in the second  
10 paragraph. Sections 12 and 39 of the  
11 Environmental Protection Act 415 ILCS 5/12 and  
12 39 prohibit the Agency from issuing a permit  
13 from a facility which would threaten, cause, or  
14 allow the discharge of contaminants which might  
15 cause or tend to cause water pollution in  
16 Illinois.

17 I believe that is the issue right there  
18 on the non-degradation.

19 Q. So it's your testimony that that's  
20 referring to the 620 regs?

21 A. I think that's a key part of it.

22 MR. PETTI: Thank you. I don't have  
23 anything further.

24 HEARING OFFICER HALLORAN: Mr. Harsch?

REDIRECT EXAMINATION

BY MR. HARSCH:

Q. Mr. Huff, throughout this project that you've been involved in, you understand that you do not -- that the District is striving to comply with the Compliance Commitment Agreement and eliminate existing sanitary sewer overflows?

A. Yes, sir.

Q. Where do those sanitary sewer overflows occur now; do you know?

A. Only in general terms. My understanding is that they have adequate transport capacity to the wastewater treatment plant.

So when the pumps can't keep up, they have two choices. They can allow it to back up through the main interceptor resulting in street flooding as well as basement backups, and they also have the capabilities to bypass the plant in order to protect it.

And so they would have raw sewage basically bypassing the treatment plant discharging to the Rock River under those

1 extreme conditions.

2 Q. Or an overflow from a manhole --

3 A. Right.

4 Q. -- an interceptor at the treatment  
5 plant?

6 A. Right.

7 Q. And the use of an interceptor to --  
8 excuse me.

9 The use of a basin, full equalization  
10 basin to temporarily store excess flows, is  
11 that a common means of addressing overflows,  
12 sewer overflows?

13 A. Both in sanitary and combined sewer  
14 communities, yes.

15 Q. And the purpose of that is to hold the  
16 material so that you can get it to the  
17 treatment plant for treatment?

18 A. Your alternative would be to greatly  
19 increase the size, the capacity of each of the  
20 unit operations at the treatment plant that you  
21 would use one or two days a year in the case of  
22 Rockford.

23 So it's a much more cost effective way  
24 than to try to expand the treatment plant to a

1 145 or 155-million-gallon-a-day capacity.

2 MR. HARSCH: I have no further  
3 questions.

4 HEARING OFFICER HALLORAN: Mr. Petti?

5 MR. PETTI: Briefly.

6 RE-CROSS-EXAMINATION

7 BY MR. PETTI:

8 Q. In holding that wastewater before it  
9 gets to the treatment plant, you're not trying  
10 to discharge that material that's being held  
11 though; you want it to all get to the treatment  
12 plant, don't you?

13 A. You're talking specifically about our  
14 proposed wetland?

15 Q. I'm talking about in an overflow basin,  
16 the goal is to still get all of the wastewater  
17 treated by the treatment plant?

18 A. I guess I would say your goal is to  
19 maximize how much you can get treated through  
20 the treatment plant.

21 Q. And minimize the amount of wastewater  
22 that's lost to groundwater or backup overflow,  
23 correct?

24 A. Or bypass, sure.

1 MR. PETTI: Okay. Nothing further.

2 HEARING OFFICER HALLORAN: Any

3 reredirect, Mr. Harsch?

4 MR. HARSCH: Nope.

5 HEARING OFFICER HALLORAN: Thank you,

6 Mr. Huff.

7 THE WITNESS: Thank you.

8 (Whereupon, the witness was

9 excused.)

10 (Whereupon, the witness was

11 duly sworn.)

12 FRANCIS ROBERT BURBA,

13 called as a witness herein, having been first

14 duly sworn, was examined and testified as follows:

15 DIRECT EXAMINATION

16 BY MR. HARSCH:

17 Q. Mr. Burba, would you please state your

18 full name for the record?

19 A. My name is Francis Robert Burba.

20 Q. Can you explain your role with regard

21 to the application that was submitted by the

22 Rock River Water Reclamation District and the

23 ultimate denial by the Agency of that

24 application?



1           A.     I was assigned as the permit review  
2 engineer for the construction permit.

3           Q.     And what does a permit review engineer  
4 do when they review a permit?

5           A.     Basically, we review the project  
6 against the standards -- the Illinois  
7 standards, recommended standards for sewage  
8 works.

9           Q.     And when you -- do you have a work  
10 product or something that -- when you review  
11 it, do you prepare anything?

12          A.     No. I review what's been submitted to  
13 me. I don't try to do anything independent of  
14 that.

15          Q.     How do you communicate the results of  
16 your review?

17          A.     If there's no deviations found, I draft  
18 a permit. It's later reviewed and approved  
19 through my unit manager to our permit section  
20 manager. Anything to do with sewage treatment  
21 plants requires the permit section manager.

22          Q.     You participated in the initial  
23 meetings between the District and the Agency  
24 before the permit was filed; is that correct?

1 A. One meeting, yes.

2 Q. The very first one?

3 A. I don't know that. All I know is the  
4 one that I attended.

5 Q. You were here when Mr. Huff testified  
6 earlier. I believe that you had characterized  
7 this as a flow equalization basin?

8 A. Correct.

9 Q. Do you agree with that, his  
10 recollection of your statement?

11 A. Correct.

12 Q. In your mind, what's a flow  
13 equalization basin?

14 A. Flow equalization means that you take  
15 above the maximum flow that the treatment plant  
16 can handle, divert it, and later bring it back  
17 online to the treatment plant for full  
18 treatment.

19 Q. Did you prepare the denial letter?

20 A. Correct.

21 Q. When did you determine that this  
22 project as proposed was either an extended  
23 aeration basin or a waste stabilization  
24 project?

1           A.     I didn't.  The project is not designed  
2     as that.

3           Q.     So in your opinion it's neither one of  
4     those two?

5           A.     Correct.

6           Q.     This is Respondent's Exhibit 1.  That's  
7     the denial letter?

8           A.     Uh-huh.

9           Q.     In the denial letter, what is cited as  
10    being the deficiency in terms of what  
11    provisions of the design standards are not  
12    being met?

13          A.     Part 370.930(d)(2)(D) of the Illinois  
14    Recommended Standards for Sewage Works, and it  
15    specifically indicates the seal shall have a  
16    permeability less than one times ten to the  
17    minus seventh power centimeters per second.

18          Q.     Do you know what this -- offhand  
19    without looking what this -- what portion of  
20    the rules that citation is to?

21          A.     Rules?  This is in our standards.

22          Q.     Yes.  What portion of the standards,  
23    what type of unit it applies to?

24          A.     It's under sewage works.  The heading

1 probably -- the broad heading is waste  
2 stabilization aerated lagoons. I think that's  
3 the broad topic. I can see it.

4 Q. I can show you a copy.

5 A. Yeah.

6 Q. Is that the rule that's basically  
7 cited?

8 A. Right. That's out of that section.

9 Q. If I understand your prior answer, this  
10 is not a waste stabilization pond or an aerated  
11 lagoon; is that correct?

12 A. That is correct.

13 Q. In your opinion, is what is proposed  
14 actually subject to this rule?

15 A. Yes. That's the most ample technology  
16 for this basin.

17 Q. Can you explain that?

18 A. The purpose is to build a basin large  
19 enough for the hydraulic flow and to contain  
20 that flow.

21 Q. So you're applying this rule by  
22 analogy?

23 A. By direct examination. I looked at the  
24 plans, and they don't provide for a seal.

1 Q. And it's your opinion that despite the  
2 rule being entitled waste stabilization pond or  
3 aerated lagoons and it's neither of those that  
4 this rule is applicable?

5 A. Correct.

6 MR. HARSCH: I'd like to mark a copy of  
7 the rule as Petitioner's Exhibit 6, I believe,  
8 since we've referred to it and have it  
9 introduced into evidence.

10 HEARING OFFICER HALLORAN: Thank you.  
11 Any objection?

12 MR. GRANT: None.

13 HEARING OFFICER HALLORAN: Petitioner's  
14 Exhibit 6 is admitted into evidence.

15 BY MR. HARSCH:

16 Q. If this would have been a project for a  
17 clarifier, for example, and it was proposed  
18 with an overflow rate double the rate in the  
19 rule --

20 A. I wouldn't approve it.

21 Q. -- how would the denial letter read?

22 A. It exceeded the standards.

23 Q. Would the denial letter also reference  
24 the other provisions that are contained in this

1 denial letter in terms of the Act?

2 A. Those are pretty much stock language.

3 Q. So, again, if we're looking at  
4 Exhibit 1, this is potentially a form in which  
5 you'd fill in then where the specific  
6 provisions does not meet or fulfill the  
7 requirements of 309.241 and then you'd list the  
8 specific rule that you believe was not being  
9 met?

10 A. That's correct.

11 Q. Did you attend any of the meetings with  
12 Marcia Wilhite and Sanjay Sofat where this  
13 permit application was discussed?

14 A. No.

15 Q. Would you normally have seen all of the  
16 materials that the Agency relied upon in making  
17 its decision at some point, you know, during  
18 your review of the application?

19 A. Anything that probably took place prior  
20 to the actual construction permit I probably  
21 would have.

22 Q. I'm going to show you what has been put  
23 in the Agency's permit record at Bates stamped  
24 848.

1 Can you tell me what this document is?

2 A. This page or this page (indicating)?

3 Q. All of them. The subsequent pages.

4 A. Okay. The top page says, "Washington,  
5 Indiana combined sewer overflow (CSO) system  
6 using green technology to stay green," and then  
7 four dollar signs.

8 Q. Mr. Burba, are you -- you've seen that  
9 document before?

10 A. No.

11 Q. So you clearly didn't rely on it in  
12 writing the denial?

13 A. Correct.

14 Q. Besides yourself, was anybody else  
15 involved in the Agency determination to rely  
16 upon the cited sections from the Illinois  
17 standards?

18 A. The second page, the first paragraph  
19 reads, "Also an appropriate groundwater  
20 monitoring system must be proposed according to  
21 Illinois administrative code 370.930(b)(4)."  
22 That comes right out of the same section in the  
23 standards.

24 Q. And who else at the Agency, if anyone,

1 was involved in that determination that this --  
2 that the cited rules apply?

3 A. The groundwater section.

4 Q. Is it your opinion that a liner is  
5 necessary for this project?

6 A. Can you say it again?

7 Q. Was it your opinion that a liner is  
8 necessary to be installed for this project?

9 A. I qualify it as a seal because there's  
10 a synthetic liner, that's another way, or a  
11 clay seal. So you have your options.

12 Q. In the permit unit, what concerns does  
13 the Agency have -- feel that were not addressed  
14 in terms of the project's impact to the  
15 environment in terms of constituting -- causing  
16 water pollution?

17 A. I can't speak about the overall concept  
18 other than the fact that it doesn't meet the  
19 standard.

20 Q. So as far as you're concerned, you  
21 don't believe -- you don't have an opinion as  
22 to whether it constitutes water pollution or  
23 causes a nuisance other than not meeting the  
24 standard?





1 A. I report to Amy Dragovich.

2 Q. Okay. And before you send out a denial  
3 letter, do you consult with her?

4 A. Correct.

5 Q. Okay. Do you know if Ms. Dragovich saw  
6 that PowerPoint presentation printed out  
7 regarding Washington, Indiana?

8 A. I don't know. I've heard, but that's  
9 hearsay.

10 Q. Okay.

11 A. I mean, she didn't directly tell me  
12 that.

13 Q. Okay. That's fine. All right.

14 If the Agency -- based on your  
15 knowledge of the Agency -- well, first off, let  
16 me say is it your understanding that the Agency  
17 can't grant a permit if it constitutes a  
18 violation of the Act or the regulations?

19 A. That is correct.

20 Q. Okay. If the Agency was denying a  
21 permit that -- based simply on water pollution,  
22 somebody was seeking a permit that would result  
23 in water pollution, would they need to say  
24 anything more than section 12 of the Act?

1           In other words, if the liner standards  
2 weren't implicated, but it simply -- the denial  
3 was based just on that it was going to cause  
4 water pollution, would it be necessary to put  
5 anything besides section 12 and 39 of the Act?

6           A.    I don't think so.

7           MR. GRANT:   That's all I've got.

8           HEARING OFFICER HALLORAN:   Mr. Harsch,  
9 anything further?

10          MR. HARSCH:   No.

11          HEARING OFFICER HALLORAN:   Thank you.

12                               (Whereupon, the witness was  
13                               excused.)

14                               (Whereupon, the witness was  
15                               duly sworn.)

16                               AMY DRAGOVICH,

17 called as a witness herein, having been first  
18 duly sworn, was examined and testified as follows:

19                               DIRECT EXAMINATION

20          BY MR. HARSCH:

21           Q.    Would you please state your entire name  
22 for the record?

23           A.    Amy Louise Dragovich,  
24 D-r-a-g-o-v-i-c-h.

1 Q. And since we all know what your  
2 position is at the Agency, would you very  
3 briefly explain what involvement you had with  
4 this permit application?

5 A. I am Francis's supervisor, so I oversaw  
6 the -- his review of the permit application and  
7 the denial letter.

8 Q. Did you participate in the series of  
9 meetings that the District had with the Agency?

10 A. I did.

11 Q. And that participation and e-mails were  
12 shown throughout the permit, right?

13 A. Right.

14 Q. How would you characterize the project  
15 that the District proposed -- excuse me.  
16 Strike that.

17 Mr. Burba testified that he  
18 characterized this project as a, quote,  
19 equalization basin.

20 Do you agree with that assessment?

21 A. It is, but it is also untreated  
22 wastewater that is going to infiltrate into the  
23 groundwater.

24 Q. And was the Agency's concerns about

1 that untreated wastewater which Marcia Wilhite  
2 put in a memo to me, e-mail to me that gave  
3 rise to the June 2011 meeting; do you recall?

4 A. What was the question?

5 Q. Is that concern from the water that  
6 would leak out, as you put it, was the basis  
7 for her concern that she expressed to me in  
8 that e-mail?

9 You met with Marcia Wilhite before  
10 that -- she sent that e-mail to me, did you  
11 not?

12 A. I was included in discussions with --  
13 HEARING OFFICER HALLORAN: Could you  
14 speak up, please? Thank you.

15 THE WITNESS: I was included in  
16 discussions, but I don't know if I actually met  
17 with Marcia.

18 BY MR. HARSCH:

19 Q. Those were discussions with the  
20 groundwater folks, Bill Buscher and --

21 A. And Al.

22 Q. So when you reference the Agency's  
23 concerns over the leaking, that's the concern  
24 she's addressing here?

1 A. It is.

2 Q. Do you agree with the previous  
3 testimony that this is not a -- as proposed, it  
4 is not a waste stabilization pond or aerated  
5 lagoon?

6 A. I do.

7 Q. Who made the determination that that  
8 section of the Agency's design standards apply?

9 A. I think it was a group decision.

10 Q. I'll ask you the same question.

11 Are you familiar with what was included  
12 in the Agency record starting at Bates stamped  
13 480 -- 440?

14 A. I am.

15 Q. And can you explain what it is?

16 A. It was a webinar that USEPA put  
17 together for green infrastructure showing how a  
18 wetland could have a liner system.

19 Q. And did you attend that webinar or  
20 watch it?

21 A. I did.

22 Q. And when was that webinar?

23 A. I think in June.

24 Q. Of this year?

1 A. Yes.

2 Q. I don't mean to put you on the spot,  
3 but you watched the webinar and you had this  
4 document.

5 Is the design and use of the wetland by  
6 Washington, Indiana the same as the intended  
7 use of the wetland in this proposed project?

8 A. The wetland for Washington, Indiana was  
9 for a combined sewer overflow system capturing  
10 combined sewer overflows.

11 Q. Does it function in the same manner?

12 A. It would be similar.

13 Q. Again, looking at Respondent's  
14 Exhibit 1, Mr. Burba, I think, testified in my  
15 hypothetical, we're talking about building a --  
16 proposing to a build a clarifier that would  
17 double the allowable overflow rate.

18 The letter would look just the same  
19 except instead of citing the two provisions  
20 that it cites, it would cite the rule for --  
21 the appropriate section for clarifier  
22 overflows?

23 A. Correct.

24 Q. So that is basically the boilerplate

1 denial?

2 A. Right.

3 MR. HARSCH: Thank you.

4 Mr. Grant?

5 CROSS-EXAMINATION

6 BY MR. GRANT:

7 Q. If the basis for denial was water  
8 pollution, just water pollution, just putting  
9 in contaminated water and causing water  
10 pollution, would it be necessary to put  
11 anything besides section 12 and 39 in the  
12 denial letter?

13 A. No.

14 Q. Okay. And why don't you turn to the  
15 last exhibit? This is the webinar.

16 A. Uh-huh.

17 Q. Is it your understanding this was an  
18 overflow capture system that was actually  
19 constructed?

20 A. Yes.

21 Q. Okay. And was it built with a liner?

22 A. It was.

23 Q. Okay. Let me ask you to turn to page  
24 861 down at the bottom.



1           And does it also contain wetland  
2 plants?

3           A.    It does.

4           Q.    Embedded in the soil layer?

5           A.    Right.

6           Q.    Is that correct?

7           And then underneath it it mentions here  
8 a 45 mill EP -- actually, it just spells it  
9 out, ethylene propylene diene monomer liner,  
10 which I'll refer to as a EPDM liner; is that  
11 correct?

12          A.    That's correct.

13          Q.    Okay.  Would a liner like that be  
14 acceptable to Illinois EPA in a situation such  
15 as what Rockford proposed?

16          A.    Yes.

17          MR. GRANT:  Okay.  At this point I'm  
18 going to move that this -- any sort of  
19 restriction I'm using -- and it's already in  
20 the record -- any sort of restriction be  
21 removed from it.

22          MR. HARSCH:  I don't have an objection.

23          HEARING OFFICER HALLORAN:  Okay.  So to  
24 clean it up, Respondent's Exhibits 1 through 9

1 are admitted into evidence.

2 MR. GRANT: Thank you.

3 HEARING OFFICER HALLORAN: Thank you.

4 MR. GRANT: That's all I have.

5 REDIRECT EXAMINATION

6 BY MR. HARSCH:

7 Q. To the best of your knowledge, that  
8 document was never provided to Rock River Water  
9 Reclamation District, was it?

10 A. I don't know that.

11 Q. What was the date of the denial?

12 A. August 1st, 2012.

13 Q. That document did not exist at the time  
14 we met with the Agency in 2011; is that  
15 correct?

16 A. Correct.

17 MR. HARSCH: Are you intending to call  
18 this witness?

19 MR. GRANT: No. Actually, all I wanted  
20 to do was to authenticate that document and  
21 then get the fact that there was a liner and  
22 that the liner, if it was used, it would have  
23 been acceptable to Illinois EPA because it  
24 wasn't it vinyl or clay or anything we talked

1 about. It was EPDM rubber.

2 BY MR. HARSCH:

3 Q. Are you aware of any response to Rock  
4 River Water Reclamation District regarding the  
5 Agency's decision that this project would  
6 actually result in water pollution following  
7 the Agency's review of the June 2011 submittal?

8 A. The Agency denial letter is the  
9 response.

10 Q. Are you aware of any documents,  
11 memorandums, e-mails regarding the  
12 anti-degradation issue that Jim Huff has  
13 testified to that he addressed in the June --  
14 in his June 2011 submittal letter?

15 A. Are you referring to the groundwater  
16 memo?

17 Q. Anything to do with the degradation  
18 issue.

19 Are there documents back and forth at  
20 the Agency regarding --

21 A. Not that I'm aware of.

22 MR. HARSCH: No further.

23

24



1 MR. GRANT: Thanks.

2 HEARING OFFICER HALLORAN: Thank you.

3 Thank you, Ms. Dragovich.

4 Do you intend to call Mr. Buscher?

5 MR. GRANT: Yeah.

6 MR. HARSCH: I have no further.

7 HEARING OFFICER HALLORAN: Okay.

8 (Whereupon, the witness was  
9 excused.)

10 MR. GRANT: I'll call Mr. Huff back as  
11 a rebuttal witness to Amy Dragovich.

12 HEARING OFFICER HALLORAN: Sure.

13 You're still under oath, Mr. Huff.

14 THE WITNESS: Yes, sir.

15 HEARING OFFICER HALLORAN: Thank you.

16 JAMES E. HUFF,  
17 called as a witness herein, having been first  
18 duly sworn, was examined and testified as follows:

19 EXAMINATION

20 REDIRECT EXAMINATION

21 BY MR. HARSCH:

22 Q. Mr. Huff, have you reviewed the  
23 PowerPoint presentation of Washington, Indiana?

24 A. Yes, I have.

1 Q. Do you agree that it's a similar  
2 project to that proposed by Rock River?

3 A. Well, I believe it's different.

4 Q. And why?

5 A. In our case, as it's been discussed,  
6 it's really an equalization basin. That's  
7 really a treatment basin with discharge into  
8 the receiving stream. So they are discharging  
9 combined sewer overflows through that basin and  
10 then discharging that water.

11 So it's not getting complete treatment  
12 at the wastewater treatment plant. That's the  
13 only treatment that's being provided by the  
14 constructed wetland.

15 Q. And is the flow linearly through the  
16 wetland also -- is there a difference?

17 A. It is. That's correct. It flows  
18 through the wetland from the beginning and then  
19 exits at the end. It's a plug flow type  
20 wetland.

21 Q. Were you ever provided as the point  
22 person for the District with any rebuttal to  
23 your June 11th submittal?

24 A. I was not.

1 Q. Are you -- at any of the meetings, were  
2 you ever provided any information where anybody  
3 at the Agency had a basis for including that  
4 the discharge would, in fact, result in a  
5 problem in the groundwater?

6 A. I believe the June 2011 meeting was  
7 prepared as a direct response to concerns  
8 raised by the Agency regarding the  
9 non-degradation term which I've interpreted as  
10 meaning water pollution.

11 Q. Are you aware of any other instance  
12 where the Agency applies a rule by analogy?

13 A. This is the first time that I have ever  
14 experienced this.

15 MR. HARSCH: No further questions.

16 RE-CROSS-EXAMINATION

17 BY MR. GRANT:

18 Q. Mr. Huff, in your June 28th letter, you  
19 state that the outside limit based on your  
20 estimate of direct discharge to the groundwater  
21 was 2 million gallons during a 48-hour period;  
22 isn't that correct?

23 A. I believe that's correct, yes.

24 Q. And we're talking about untreated raw

1 sewage, correct?

2 A. We're talking about highly diluted raw  
3 sewage.

4 Q. Okay. When you say, "Highly diluted,"  
5 the -- let's see, I think that the normal flow  
6 is 30 million gallons per day?

7 A. Dry weather flow is about 25 million  
8 gallons a day, I believe.

9 Q. Okay. And the numbers that I heard --  
10 and correct me if I'm wrong, let's find the  
11 right one -- during periods of expected heavy  
12 flow, maybe 87 million gallons a day?

13 A. Well, north of 80 million gallons a  
14 day, potentially up to size 150 million gallons  
15 a day.

16 Q. Okay. Let's say -- let's use a number  
17 that was used, 80.

18 If it was 87 million gallons a day,  
19 we're talking about diluted maybe two to one  
20 with water; is that correct?

21 A. 25 to 87 is over three to one, sir.

22 Q. Okay. Well, I was using 30. Would you  
23 agree with 30 since that's the number that's in  
24 the permit?



1           A.     Thirty -- so if it's two to one, you'd  
2     have 60 million gallons a day. So you're still  
3     closer to three to one. 90 million gallons  
4     would be three to one though.

5           Q.     Yeah. If it was -- well, no. It would  
6     be three to one. It'd be one-third regular  
7     sewage flow and it'd be two-thirds water. That  
8     would add up to 90 million. That's correct.

9           A.     That's correct.

10          Q.     So it's a two-to-one dilution or  
11     one-third of it would be -- say 33 percent of  
12     it would be normal sewage; is that correct?

13          A.     We can agree that it's one-third sewage  
14     and two-thirds infiltration inflow.

15          Q.     Okay. Based on your knowledge of the  
16     contents of human sewage and industrial flow  
17     from the industrial discharges in this plant,  
18     does it surprise you that Illinois EPA believes  
19     that that constitutes water pollution?

20          A.     Under the definition in the  
21     Environmental Protection Act, it surprises me,  
22     yes.

23          Q.     So it's your professional opinion that  
24     the discharge of human sewage directly into

1 groundwater with groundwater flow toward the  
2 Rock River, it surprises you the Agency  
3 believes that that's water pollution?

4 A. I believe it's inconsistent with the  
5 Environmental Protection Act.

6 MR. GRANT: Okay. Thank you.

7 HEARING OFFICER HALLORAN: Mr. Harsch?

8 MR. HARSCH: No further.

9 HEARING OFFICER HALLORAN: You may step  
10 down, Mr. Huff. Thank you.

11 (Whereupon, the witness was  
12 excused.)

13 HEARING OFFICER HALLORAN: Any further  
14 witnesses then, Mr. Harsch?

15 MR. HARSCH: No, sir.

16 MR. GRANT: Okay. I'm going to -- he  
17 can -- I'll allow him latitude for outside the  
18 scope on Mr. Buscher since he's going to do  
19 that.

20 MR. HARSCH: Can you give me five  
21 minutes?

22 HEARING OFFICER HALLORAN: Yeah. Let's  
23 take five minutes, guys. Thanks.

24 (Whereupon, a recess was had.)

1 HEARING OFFICER HALLORAN: All right.  
2 We're back on the record. The petitioner has  
3 rested in his case in chief.

4 And respondent, first witness up.  
5 Please raise your hand, and she'll swear you  
6 in.

7 (Whereupon, the witness was  
8 duly sworn.)

9 WILLIAM BUSCHER,  
10 called as a witness herein, having been first  
11 duly sworn, was examined and testified as follows:

12 DIRECT EXAMINATION

13 BY MR. GRANT:

14 Q. Can you state your name for the record,  
15 please?

16 A. William Edward Buscher. That's  
17 B-u-s-c-h-e-r.

18 Q. Mr. Buscher, your CV is in the record  
19 as Exhibit No. 7, and I assume it's accurate;  
20 is that correct?

21 A. Yes.

22 Q. Okay. Just tell me a little bit about  
23 your educational experience, what your top  
24 level of education is.

1           A.     I graduated with a bachelor's of  
2 science degree in geological engineering from  
3 the University of Missouri-Rolla and since that  
4 point in time have been doing -- when I first  
5 got out of school, did geotechnical work and  
6 then went to work for the Illinois EPA doing  
7 groundwater work.

8           Q.     Okay. And can you just generally  
9 describe what your current position is?

10          A.     I'm the manager of the hydrogeology and  
11 compliance unit in the Division of Public Water  
12 Supplies. We provide groundwater expertise to  
13 the Bureau of Water programs which include the  
14 permit section and the Mine Pollution Control  
15 program.

16          Q.     Okay. And can you describe your  
17 involvement in this -- in the permit that's the  
18 basis for this case?

19          A.     Yes. Mr. Keller requested that I  
20 review the project. At that point in time, it  
21 was preliminary design documents.

22          Q.     And if you can -- well, actually if  
23 you'd open to Exhibit No. 1.

24          A.     Yes.

1 Q. And if you could review it.

2 Does this accurately represent the  
3 basis for denial of the permit application?

4 A. Yes, it does.

5 Q. Okay. And was it denied on the basis  
6 of water pollution?

7 A. Yes, it was.

8 Q. Okay. As far as -- can you describe  
9 which waters would be affected by it, by this  
10 project?

11 A. Waters that would be affected by this  
12 project include groundwater, and I suppose  
13 that's it.

14 Q. Okay. How about the river that would  
15 accept the groundwater?

16 A. The groundwater and then where it would  
17 eventually flow to, the Rock River.

18 Q. Okay. What would cause the pollution?

19 A. The deposition of raw sewage in the  
20 basin and it's not being contained in that  
21 basin.

22 Q. Okay. Is there any doubt on the behalf  
23 of Illinois EPA that the discharge of raw  
24 sewage into groundwater and into the Rock River

1 would cause water pollution?

2 A. No.

3 Q. Is there any question on the part of  
4 Illinois EPA that the deposit of sewage solids  
5 into the wetland would create a water pollution  
6 hazard?

7 A. No.

8 MR. HARSCH: I object to that question.  
9 There's been no -- absolutely no foundation for  
10 the deposit of sewage solids to that level.

11 HEARING OFFICER HALLORAN: Mr. Grant?

12 MR. GRANT: Okay. Well, I don't -- as  
13 far as if there's no basis for it -- I think  
14 that there is -- one of the things we're  
15 dealing with here more so than just the  
16 testimony we're having is all the record that's  
17 in evidence, and to save time I'm not going  
18 through each document.

19 But the denial letter was on the basis  
20 of section 12 and 39. 12 contains both 12A  
21 which is water pollution and 12D which is  
22 creating a water pollution hazard so . . .

23 HEARING OFFICER HALLORAN: Objection  
24 overruled.

1 MR. HARSCH: I might make a statement.

2 HEARING OFFICER HALLORAN: Sure. For  
3 the record.

4 MR. HARSCH: There was no response to  
5 my comment that there's nothing in this record  
6 that discusses the deposit of sewage solids in  
7 that basin, and Mr. Grant didn't respond to  
8 that.

9 MR. GRANT: Well, we disagree. I'm not  
10 going to go through the record right now. It's  
11 800 and some pages, but it's in there.

12 HEARING OFFICER HALLORAN: Mr. Who  
13 didn't respond?

14 MR. HARSCH: Mr. Grant did not.

15 HEARING OFFICER HALLORAN: Okay.

16 MR. GRANT: My response is it is in the  
17 record.

18 MR. HARSCH: When he responded to my  
19 motion.

20 MR. GRANT: And, you know, this is  
21 testimony and, you know, I will have to prove  
22 that it is in the record in my post -- if we're  
23 going to say that's the problem.

24 HEARING OFFICER HALLORAN: Okay. Your

1 objections are noted on the record, Mr. Harsch.

2 You may proceed.

3 BY MR. GRANT:

4 Q. Are you familiar with the constituents  
5 of untreated sewage?

6 A. Yes.

7 Q. What constituents in particular would  
8 threaten water pollution or cause water  
9 pollution?

10 A. Well, there's human waste, both liquid  
11 and solid and pathogens, that can potentially  
12 cause infections as well as other waste that  
13 could be in the stream from nonhuman sources.

14 Q. Okay. Let me turn to -- have you turn  
15 to Exhibit No. 2. And why don't you go to page  
16 number 4? This is in the record. You can take  
17 a look at it.

18 A. Yes, sir.

19 Q. Okay. Do you know what this is?

20 A. This is information on the water  
21 quality coming into the sewage treatment plant,  
22 I believe, influent.

23 Q. Okay. And if you look to the right  
24 where it says influent, do you see those?



1 A. Yes, sir.

2 Q. Okay. And do you see the parameters --  
3 well, first, let me ask you was this prepared  
4 by Rock River Water Reclamation District?

5 A. I believe it was and turned into the  
6 Agency.

7 Q. Okay. And do you see the constituents  
8 up at the top?

9 A. Yes, sir.

10 Q. Okay. Grease, BOD, TSS, ammonia-N.  
11 Do you recognize all those --

12 A. Yes, sir.

13 Q. -- those things in there?

14 A. Yes.

15 Q. Would you consider them to -- if  
16 discharged in the groundwater to create water  
17 pollution?

18 A. Yes.

19 Q. Okay. Can you turn to Exhibit No. 4?  
20 Exhibit No. 4 is in the record.

21 A. Yes.

22 Q. If you can take a quick look at that.

23 A. Okay. Yes, sir.

24 Q. Okay. Did you prepare this memo?

1 A. Yes, sir.

2 Q. Okay. Please look to the second page  
3 which is record page 169.

4 And you see under paragraph four?

5 A. Yes, sir.

6 Q. Okay. You proposed a liner?

7 A. Yes, sir.

8 Q. Why did you propose a liner?

9 A. To prohibit the movement of the  
10 contaminants in the basin into groundwater and  
11 into the Rock River.

12 Q. Okay. How did you come up with a  
13 two-foot-ten-to-the-minus-seven-centimeters-per  
14 -second liner?

15 A. That's in the regulations of the  
16 Agency's.

17 Q. Okay. Are those the regulations that  
18 Mr. Burba applied; do you know?

19 A. Yes, I believe so.

20 Q. Okay. Do you believe that this is the  
21 minimum required to prevent migration of the  
22 untreated sewage in the groundwater?

23 A. I agree that it's appropriate, yes.

24 Q. Okay. Did the Agency ever ask for a

1 concrete liner?

2 A. No, sir.

3 Q. And would you have asked for a concrete  
4 liner?

5 A. No, sir.

6 Q. Why not?

7 A. Because concrete is prone to crack, and  
8 it would, therefore, not sufficiently contain  
9 the material in the basin.

10 Q. Okay. Are you familiar with the  
11 District's claims that the groundwater would  
12 rise and float the liner?

13 A. I am.

14 Q. What's your reaction to this issue?

15 A. It's a concern that needs to be taken  
16 into consideration in the design of the  
17 facility.

18 Q. Okay. Do you believe based on your  
19 experience with the Agency and as an engineer  
20 that there are engineering solutions to this  
21 problem?

22 A. Yes, sir.

23 Q. Okay. Has the District refused to  
24 install a liner?

1 A. Yes, sir.

2 Q. Okay. I think you heard the testimony  
3 today.

4 There was some testimony regarding the  
5 groundwater management zone; do you recall?

6 A. Yes, sir.

7 Q. Okay. Can you explain what a  
8 groundwater management zone is?

9 A. Groundwater management zone is  
10 contained in the 620 regulations of the  
11 Agency's, and it's designed to provide an  
12 opportunity when a facility is out of  
13 compliance to mitigate the problem that they  
14 have through an approved corrective action to  
15 bring the facility back into compliance.

16 Q. Okay. Do you consider it to be part of  
17 a remedial program?

18 A. Yes, sir.

19 Q. Okay. Does Illinois EPA consider  
20 creating new groundwater management zones to be  
21 desired?

22 A. Where appropriate, you know, they -- if  
23 they're addressing an environmental problem, it  
24 would be appropriate.

1 Q. When you're talking about environmental  
2 problem, you mean a preexisting environmental  
3 problem?

4 A. A preexisting environmental problem.

5 Q. Would Illinois EPA normally consider  
6 granting a groundwater management zone as part  
7 of a new problem; in other words, as a  
8 condition of creating new contamination and a  
9 groundwater management zone?

10 A. No, sir, it would not.

11 Q. Okay. Based on your education,  
12 experience, and review of the District's  
13 proposal, would granting the permit in question  
14 in this place have resulted in an increase in  
15 human pathogens, industrial waste, and other  
16 constituents of untreated sewage into the  
17 groundwater under the basin?

18 A. Yes, sir.

19 MR. GRANT: That's all I've got.

20 HEARING OFFICER HALLORAN: Thanks,  
21 Mr. Grant.

22 Mr. Harsch.

23

24

CROSS-EXAMINATION

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BY MR. HARSCH:

Q. Looking, again, at Exhibit 4, paragraph five on 159.

A. Yes, sir.

Q. What are you referring to in terms of the non-degradation water quality standards?

A. Groundwater when contaminated needs to be treated, and the purpose of protecting groundwater is to provide -- have it usable by the public.

And private wells have very little treatment. And the purpose of non -- of not degrading the water is to provide them the opportunity to have the water that's in the ground that has not been affected by adjacent activities.

Q. In essence, you were espousing or stating the Agency would require a demonstration that this project would not result in any increase above background; is that not correct?

A. That is correct.

Q. And in your view, is any increase above

1 background water pollution?

2 A. Well, it would have to be a  
3 statistically significant increase above  
4 background.

5 Q. What's a statistically significant  
6 increase in your opinion?

7 A. You would have to establish existing  
8 water quality of the site or any particular  
9 parameters that you might expect to show up in  
10 the basin. The area where this basin is  
11 located is known to have groundwater  
12 contamination in the vicinity.

13 It's always important when you do this  
14 type of work to make sure that you know what  
15 the existing conditions are before you begin  
16 the operation of your basin as to make certain  
17 that if an environmental problem arises you can  
18 positively identify whether it came from the  
19 operation of the facility or whether it may  
20 have been previously existing.

21 Q. Again, how large -- what is a  
22 statistically significant increase?

23 A. A statistically significant increase,  
24 there are many methods by which that is

1 determined, but in very general terms you would  
2 determine water quality at a -- over a period  
3 of one year taking six samples at each monitor  
4 well.

5 Q. The question I'm trying to -- it's  
6 fairly simple.

7 How much of an increase? If you can't  
8 address it on -- generally, then maybe we can  
9 do it on specific --

10 A. Well, it would determine -- it would be  
11 based upon the background water quality at the  
12 particular facility. So you would need to have  
13 that information to appropriately assess the  
14 situation. That's why we requested the six --

15 Q. Is one milligram per liter of chloride  
16 enough?

17 A. That would really be based upon the  
18 water quality at the site, sir.

19 Q. What level of statistic -- what level  
20 of chloride increase have you determined  
21 previously to constitute water pollution, what  
22 level of chloride increase at any other site?

23 A. I would have to look at specifically  
24 the site to make that determination.



1 Q. You can't recall any?

2 A. No.

3 Q. Mr. Huff, I believe, provided  
4 information to the Agency in response to this  
5 memo that it would not be statistically  
6 possible to show the chloride was not  
7 increased; is that correct?

8 A. I believe that's what he said, yes.

9 Q. And you agree with his statement?

10 A. I did not take issue with it.

11 Q. And that's irrespective in your opinion  
12 of what water quality standards would be met  
13 25 feet from the basin?

14 A. Could you repeat the question?

15 Q. And the increase in chlorides, they're  
16 going to constitute water pollution because you  
17 can't show there's going to be no increase  
18 in --

19 A. Well, it would depend, once again, upon  
20 what your background water quality was there,  
21 and if, indeed, based upon the statistical  
22 analysis it exceeded the value, that that would  
23 be correct, but it's a site specific call.

24 Q. What is a statistically significant

1 increase?

2 A. A statistically significant increase in  
3 groundwater is based upon having taken six  
4 samples over the period of a year which would  
5 take into consideration seasonal variation in  
6 your particular parameter.

7 Once that information has been  
8 provided -- and I'm speaking in general  
9 terms -- I don't have the methodology in front  
10 of me -- an average value for a particular well  
11 would be determined.

12 There then would be a factor provided  
13 there that would increase that value based on  
14 statistics of what you could expect to find in  
15 that well. It would be natural variation.

16 If it exceeded what is expected, the  
17 statistically significant increase would be if  
18 the value you came up with based on the  
19 information you had at the particular location  
20 was exceeded.

21 Q. And if you increase -- if your  
22 value was greater than that, in your mind  
23 that's water -- in the Agency's view, that's  
24 water pollution?

1           A.     That would be a violation of the water  
2     quality standards, yes.

3           Q.     That's a violation -- that's water  
4     pollution?

5           MR. GRANT:   Okay.  We're talking two  
6     different things.  He didn't answer your -- he  
7     didn't -- you know, he's saying groundwater  
8     monitors standards and he's saying water  
9     pollution.  I wonder if we can --

10          HEARING OFFICER HALLORAN:  Well, you  
11     can redirect if you'd like.

12          MR. GRANT:   Okay.  All right.

13     BY MR. HARSCH:

14          Q.     The statistical significant increase,  
15     if that's shown, would that be water pollution?

16          A.     Groundwater is the water of the state,  
17     yes.

18          Q.     And that's irrespective of any use  
19     other than groundwater?

20          A.     That is correct.

21          Q.     That also would be irrespective --  
22     your -- the conclusion that the statistically  
23     significant increase is water pollution is also  
24     irrespective that that increase is still below

1 the groundwater standards?

2 A. Below -- well, actually the standards  
3 include the non-degradation provision so if --  
4 yes.

5 Q. Mr. Huff testified earlier -- presented  
6 in various submittals to the Agency a whole  
7 host of activities that we carry out in  
8 Illinois routinely have resulted in an increase  
9 in pollutants going into the groundwater.

10 You were here when that testimony was  
11 presented?

12 A. Yes, sir.

13 Q. Do you agree with his conclusions that  
14 those activities do result in an increase?

15 A. I don't believe that we are here to  
16 discuss those other things. I think we're here  
17 to discuss the permit at hand.

18 Q. Do you agree with his assumption that  
19 those other activities, in fact, do result in  
20 an increase when they're carried out?

21 MR. GRANT: I'm going to object also.  
22 I don't -- I think we're getting -- this is way  
23 too far afield. There's no relevance to this  
24 permit grant at all. We're talking about a

1 permit for a permitted sewage treatment  
2 facility versus cows in a field someplace.

3 HEARING OFFICER HALLORAN: I sustain  
4 the objection.

5 Move on, please.

6 MR. HARSCH: I'd like to note for the  
7 record that the whole issue of anti-degradation  
8 was a major issue as testified to by Mr. Huff  
9 and others in the dialogue, and I think it was  
10 a reasonable question.

11 HEARING OFFICER HALLORAN: The record  
12 so notes.

13 BY MR. HARSCH:

14 Q. Do you have any training or expertise  
15 in wastewater?

16 A. I provide expertise to the permit  
17 sections of the Agency. I also work in  
18 groundwater with Public Water Supplies, what we  
19 do with bacteria and pathogens.

20 Q. Do you have any training or expertise  
21 in wells?

22 A. No.

23 Q. Do you have any reason to disagree with  
24 Mr. Huff regarding his testimony about the

1 ability of the soils under the basin, the  
2 wetland plants, root zones, etcetera, in  
3 reducing the pollutants that would be contained  
4 in the water that infiltrates?

5 A. My expectation is there's some  
6 treatment for it.

7 Q. Are you asked to review water pollution  
8 permits, approvals of land application of  
9 wastewater discharges?

10 A. My section looks at those, yes.

11 Q. Do you apply the same sort of analysis  
12 in those reviews to those land application of  
13 wastewater?

14 A. To the best of my knowledge, yes.

15 Q. Does that mean that the land  
16 application of wastewater is shown not to have  
17 a statistically significant increase in  
18 groundwater contaminants?

19 HEARING OFFICER HALLORAN: Could you  
20 speak up?

21 THE WITNESS: That would vary site to  
22 site.

23 BY MR. HARSCH:

24 Q. Have you ever given the advice to

1 permits that they should deny permit  
2 application for land application of wastewater?

3 MR. GRANT: I'm going to object because  
4 that has no relevance to this permit. This is  
5 not a case where we have land application of  
6 wastewater.

7 HEARING OFFICER HALLORAN: Do you want  
8 to read the question back, please, Sue?

9 (Whereupon, the record was read  
10 by the reporter.)

11 HEARING OFFICER HALLORAN: I overrule  
12 the objection. You may answer if you can.

13 THE WITNESS: I don't believe I have.

14 BY MR. HARSCH:

15 Q. Are you aware that the Agency permits a  
16 land application of sewage sites?

17 A. Yes, sir.

18 Q. Have you ever been asked to review the  
19 approval of the application of sewage sites at  
20 the land?

21 A. I don't believe I've been involved with  
22 that.

23 Q. Have you ever been involved in the  
24 permitting of the application of water supply

1 treatment solids in land?

2 A. I don't recall. It's not something we  
3 do on a regular basis.

4 HEARING OFFICER HALLORAN: Could you  
5 please speak up, please?

6 THE WITNESS: I don't recall. It's not  
7 something I do on a regular basis.

8 BY MR. HARSCH:

9 Q. Have you ever been asked to provide any  
10 review of permit application to construct a new  
11 wastewater collection system?

12 A. As in the piping?

13 Q. Yes.

14 A. No, sir.

15 Q. Earlier today there was testimony that  
16 those various activities that I've just asked  
17 you about all would result in some discharge to  
18 groundwater.

19 Do you agree with that?

20 A. There is that potential.

21 MR. HARSCH: No further questions.

22 HEARING OFFICER HALLORAN: Mr. Grant?

23 MR. GRANT: I think I'm fine.

24 HEARING OFFICER HALLORAN: Thank you.



1 You may step down. Thanks.

2 (Whereupon, the witness was  
3 excused.)

4 MR. GRANT: And my next witness is  
5 Francis Burba.

6 HEARING OFFICER HALLORAN: Mr. Burba,  
7 you're still under oath.

8 THE WITNESS: Yes, sir.

9 HEARING OFFICER HALLORAN: You may  
10 proceed, Mr. Grant.

11 FRANCIS BURBA,  
12 called as a witness herein, having been first  
13 duly sworn, was examined and testified as follows:

14 DIRECT EXAMINATION

15 BY MR. GRANT:

16 Q. Mr. Burba, can you state and spell your  
17 record for the record, please? You already did  
18 that.

19 A. Yes, I did.

20 Q. So I think you stated that you were a  
21 permit engineer with Illinois EPA Bureau of  
22 Water; is that correct?

23 A. Correct.

24 Q. Okay. And you're familiar with this

1 permit?

2 A. Correct.

3 Q. Okay. And I think you described your  
4 involvement with the permit.

5 You attended a meeting early on before  
6 the application?

7 A. Correct.

8 Q. Tell me a little bit about your  
9 experience with -- well, first off your  
10 education. I don't think we got that in.

11 A. I have a bachelor's of science from the  
12 School of Technology which is actually in civil  
13 engineering. It was in a transition process.

14 I'm a registered professional engineer  
15 in two different states, Illinois and  
16 Mississippi. I've been registered in eight  
17 different states.

18 Q. How long have you been with Illinois  
19 EPA?

20 A. 12 years.

21 Q. And has that been with the Bureau of  
22 Water all that time?

23 A. Correct.

24 Q. As part of your responsibilities, do

1 you review permits for wastewater treatment  
2 facilities?

3 A. Correct.

4 Q. Okay. And are you familiar with the  
5 technology and the engineering of these types  
6 of facilities?

7 A. Correct.

8 Q. And you're also familiar with the  
9 standards applicable to construction of these  
10 sorts of facility?

11 A. Correct.

12 Q. How about things like groundwater  
13 migration, based on your experience and  
14 experience, are you familiar with groundwater  
15 migration?

16 A. I guess through my hydraulics courses,  
17 I've learned a little bit, but I'm not an  
18 expert in hydraulics or groundwater migration.  
19 I mean, I understand it, but I can't speak that  
20 I was trained as a groundwater engineer.

21 Q. Okay. Are you familiar with the  
22 handling of excess flow at wastewater treatment  
23 facilities?

24 A. Yes.

1 Q. What is the purpose of excess flow  
2 facilities?

3 A. Excess flow is designed for when it  
4 exceeds the maximum flow through the treatment  
5 plant for full treatment. You can divert the  
6 flow, bring it back online such as flow  
7 equalization, which that's what this basin was  
8 intended to do.

9 In other words, as the flows reduce or  
10 go down in the treatment plant, they can bring  
11 a portion of that back online for full  
12 treatment.

13 Q. Is the purpose of an excess flow  
14 facility to capture 100 percent of the excess  
15 flow or nearly 100 percent of the excess flow  
16 and then feed it back into the treatment  
17 facility?

18 A. 100 percent.

19 Q. Without leaking?

20 A. Correct.

21 Q. And without the diversion of untreated  
22 wastewater to groundwater or surface water?

23 A. Correct.

24 Q. Are you familiar with other districts

1 in Illinois that have excess flow facilities?

2 A. Yes.

3 Q. I wonder if you could give me a couple  
4 of examples of other districts that have these  
5 sorts of facilities.

6 A. North Shore Sanitary District has three  
7 treatment plants. Two of those have excess  
8 flow basins. One in particular is called  
9 Gurnee. That treatment plant has a 50-million  
10 gallon concrete-lined basin.

11 They tell me that that basin has only  
12 filled one time, and it was an operator error.  
13 So the biggest swimming pool you could imagine,  
14 really deep and a long ways across, 50 million  
15 gallons concrete lined. It's intended to bring  
16 it back into the plant should it exceed the  
17 capacity of the treatment plant.

18 Q. It sounds like an expensive facility?

19 A. I would imagine. Long before my time.

20 Q. You mentioned a concrete basin. And  
21 earlier today in one of the testimonies, one of  
22 the witnesses for the District that we had  
23 asked them or we had suggested a concrete  
24 basin.

1           Would you recommend a concrete liner  
2           for an excess flow facility for this plant, for  
3           the Rock River plant?

4           A.     You have two options there.  You can  
5           either use a concrete basin that has been  
6           sealed or you can use a synthetic liner, and it  
7           serves the same purpose.  All you're doing is  
8           limiting the amount of leakage.

9           Q.     So in the permit denial, I think you  
10          testified about this earlier, you didn't ask  
11          for anything specific.

12          I believe that you testified that you  
13          were just looking for a seal; is that correct?

14          A.     Correct.

15          Q.     And the options, there are a number of  
16          options that could be presented?

17          A.     Correct.

18          Q.     Has the District up to today ever  
19          proposed an adequate liner for this basin?

20          A.     No.

21          Q.     Let's see.  I want to get a little bit  
22          into the alternate basis that's in -- let me  
23          take you to No. 1 to we're all dealing with the  
24          same thing.  Exhibit No. 1, it's in the record.

1 It's the denial letter.

2 Alternatively, it was denied on the  
3 basis of Section 370.930(d)(2)(D), which I  
4 think you described were the recommended  
5 standards, construction standards.

6 First question, are those recommended  
7 or mandatory?

8 A. Mandatory.

9 Q. Okay. Why do they say recommended; do  
10 you know?

11 A. Before my time. I don't know how it  
12 arrived, but -- and that document's actually  
13 promulgated by the Illinois Pollution Control  
14 Board. Now it's our standard.

15 Q. And the standard that was applied was  
16 for waste stabilization ponds or aerated  
17 lagoons; is that correct?

18 A. Correct.

19 Q. Is there a published standard for  
20 overflow basins such as what was proposed here?

21 Is there a heading that says overflow  
22 basin?

23 A. No.

24 Q. And I think you said -- and correct me

1 if I'm wrong -- that you applied this section  
2 by analogy because it was the most appropriate;  
3 is that correct?

4 A. Correct.

5 Q. Can you give me a little more  
6 explanation as to why you thought it was  
7 appropriate?

8 A. The purpose of the basin is to hold the  
9 raw sewage prior to bringing it back to the  
10 plant. The same concept holds true even though  
11 you're talking in terms of waste stabilization  
12 or aerated lagoons. The purpose there is to  
13 contain it for the treatment.

14 So based on this -- call it temporary  
15 storage. It still has to serve the same  
16 purpose. It has to contain it.

17 Q. So aside from the name of this section,  
18 you believe that it's appropriate; is that an  
19 accurate way to characterize your statement?

20 A. Correct.

21 Q. You've -- I think you've been here  
22 today.

23 Have you heard the District's  
24 statements that a liner would be problematic



1 because the groundwater flow to the -- the  
2 liner would float when groundwater increased?

3 Did you hear that?

4 A. Yes, I did.

5 Q. And what's your reaction to that?

6 A. There's other alternate constructions  
7 that will minimize that problem.

8 Q. Can you give me just a few examples of  
9 things that come to your mind?

10 A. Raising the elevation for the bottom of  
11 this basin so that you're above the normal  
12 groundwater. Groundwater will seek its own  
13 level. It will be running out of the surface  
14 around the lagoon and not into the lagoon if  
15 the lagoon is high enough.

16 Q. Okay. I wonder if could you look at  
17 Exhibit No. 3 which is in evidence.

18 Do you recognize this permit?

19 A. Yes, I do.

20 Q. Were you involved in the granting of  
21 the permit?

22 A. Yes.

23 Q. Can I direct your attention to page  
24 number 6, section C at the bottom, heading

1 monitoring requirements?

2 A. Correct.

3 Q. And there's a list of chemicals and  
4 compounds that are on page 6 and page 7.

5 Do you see those?

6 A. Correct.

7 Q. And does the permit require that the  
8 District to perform regular testing for all of  
9 these constituents?

10 A. Correct. There's 110 of them. They're  
11 required to monitor those and report them  
12 annually.

13 Q. And are we talking about the incoming  
14 sewage into the facility?

15 A. It has both influent and effluent which  
16 is the discharge as well as the sludge that's  
17 generated by the treatment plan. They're  
18 looking for the chemical composition for the  
19 metals which by our water quality standards  
20 exceed certain limits and there's very little  
21 treatment for some of these.

22 This is a pretreatment condition which  
23 means that Rock River is a pretreatment  
24 community. They have industrial complexes that

1 discharge to the domestic sanitary sewers.

2 It all shows up at the treatment plant.  
3 So they want to know what's coming in the  
4 plant, what's going out because there's very  
5 few treatment processes for some of these both  
6 metals.

7 Some of them are both dissolve. Some  
8 of them are solid. You can remove some of the  
9 solid, but you can't remove all of the  
10 dissolved unless you put in a coagulant,  
11 something that will attract that metal.

12 Q. To your knowledge, have they been in  
13 compliance with this testing requirement?

14 A. Yes. Otherwise, I wouldn't have  
15 drafted this permit for the renewal without a  
16 problem. Obviously, there was no objection to  
17 it.

18 Q. Are you familiar with their objection  
19 to performing groundwater monitoring testing  
20 for these same constituents pursuant to this  
21 permit request that's the subject matter of  
22 this hearing?

23 A. I wasn't a party to that. I'm familiar  
24 with it enough that apparently they're wanting

1 to limit what they will test for. I don't  
2 think that's acceptable.

3 Q. Does this permit allow discharge of  
4 untreated sewage from anywhere else from  
5 anywhere?

6 A. No.

7 Q. And does it allow for other discharge  
8 besides -- in other words, discharge of treated  
9 effluent into the river?

10 Is there only a single point?

11 A. There's a single discharge.

12 Q. And is the District required to  
13 disinfect prior to discharge during the summer  
14 months?

15 A. Yes.

16 Q. For at least some months of the year?

17 A. It's a seasonal disinfection.

18 Q. I don't know. You were, I believe --  
19 heard the testimony of the witnesses. We were  
20 talking about potential lining of the system to  
21 reduce infiltration and an inflow and thereby  
22 reduce the hydraulic load on the plant.

23 Did you hear that?

24 A. Yes.

1 Q. Now, if new users were added to the  
2 system, in other words, if the District was to  
3 add new users, would that actually increase the  
4 inflow?

5 A. That is correct.

6 Q. Are you aware of any current  
7 applications for people to -- for the District  
8 to take on new users?

9 A. They have a facility plan which I  
10 reviewed to pick up Winnebago.

11 Q. When you say "Winnebago," do you mean  
12 the city of Winnebago?

13 A. The city of Winnebago.

14 Q. Is that still pending with the Agency?

15 A. I've approved that. I think I'm at the  
16 very first part of the new sewer interceptors  
17 and lift station in Rock River to potentially  
18 pick this up for the future.

19 Q. And based on your experience in  
20 permits, would you expect that to increase the  
21 amount of inflow into the Rock River sewage  
22 treatment plant?

23 A. Yes. Because it's a sewer system like  
24 Rock River. It's probably aged. It's not new.

1 So I would expect I & I to be in that system as  
2 well.

3 Q. When you say I & I, do you mean  
4 infiltration and inflow?

5 A. Correct.

6 MR. GRANT: That's it.

7 HEARING OFFICER HALLORAN: Mr. Harsch.

8 CROSS-EXAMINATION

9 BY MR. HARSCH:

10 Q. You're aware that the District did  
11 propose a monitoring system as part of the  
12 permit application?

13 A. I'm aware of the location of the  
14 monitoring wells, but I never reviewed the  
15 system.

16 Q. I believe you responded that the design  
17 standards, as they're referred to as the  
18 recommended standards, are promulgated by the  
19 Pollution Control Board.

20 Do you mean that they're part of the  
21 Pollution Control Board rules or actually  
22 adopted by the Board?

23 A. We adopted those as standards from the  
24 Illinois Pollution Control Board.

1 Q. By "we," you mean the Illinois  
2 Environmental Protection Agency?

3 A. Correct. That's part of our standards.

4 Q. And they're part of the Pollution  
5 Control Board's published rules?

6 A. Correct.

7 Q. Have you reviewed permits for CSO  
8 communities, combined sewer overflow  
9 communities?

10 A. Are you talking about a construction?

11 Q. NPDES permit.

12 A. Yes.

13 Q. Are you generally familiar with the  
14 USEPA requirements on combined sewer overflows?

15 A. Correct.

16 Q. And under that USEPA policy or  
17 regulations, those communities are allowed to  
18 discharge up to four events per year?

19 A. I don't remember that specifically. I  
20 don't remember the number.

21 Q. And we're talking about a discharge  
22 here, a flow equalization basin to eliminate a  
23 sewer overflow with a frequency of probably  
24 less than once per year, correct?

1 A. That is correct.

2 Q. And the current -- without the  
3 construction of this basin, I think you heard  
4 testimony earlier today that during certain  
5 size storm events, you would get an overflow  
6 from basically the manhole at the headworks; is  
7 that correct?

8 A. That is correct.

9 Q. And that would be onto the ground  
10 adjacent to the treatment plant?

11 A. That may very well be.

12 Q. In the general vicinity of where this  
13 basin is proposed to be located?

14 A. Sanitary sewer overflows are  
15 prohibited.

16 Q. I understand. It's an existing  
17 overflow; is it not?

18 A. Then there has to be some remedial  
19 action.

20 Q. And earlier today there was testimony  
21 regarding the Compliance Commitment Agreement  
22 and the investment by the District to carry out  
23 what they'd agreed to as part of the Compliance  
24 Commitment Agreement; is that correct?



1 A. I don't know what was in the agreement.

2 Q. If the existing overflow is at the  
3 locations -- is at the headworks, then that  
4 would be an existing condition, would it not?

5 A. Correct. But it would also be a  
6 violation.

7 Q. I understand. And you understand that  
8 the project that's being proposed is a project  
9 that's being proposed to eliminate that  
10 overflow?

11 A. That very well may be.

12 Q. Is the -- I believe Mr. Huff testified  
13 that he believed the Agency utilized a  
14 five-year storm event for purposes of  
15 permitting.

16 Do you agree with that?

17 A. What?

18 Q. For design purposes.

19 A. For an excess flow basin?

20 Q. For sewage treatment plant units.

21 A. No, I'm not aware of that.

22 Q. You have to use some -- for treatment  
23 units and for sewer systems, you have to use  
24 some flow figure to project it?

1       A.     Right.  But we do it on a capacity, not  
2     on a storm event.

3       Q.     Is it possible due to rainfall events  
4     for the flows to exceed the capacity that the  
5     treatment plant can handle what it's designed  
6     for?

7       A.     Correct.

8       Q.     Is the permit -- do permits routinely  
9     contain bypass language that allows the bypass  
10    of untreated wastewater to protect the plant?

11      A.     In case of an emergency.

12      Q.     And this permit in question, special  
13    condition 15 has such a condition?

14            MR. GRANT:  Is that the CFR reference?

15            THE WITNESS:  Right.  I know the  
16    provision you're saying.

17    BY MR. HARSCH:

18      Q.     I don't know if it was Mr. Buscher's  
19    testimony or your testimony.  Someone testified  
20    that wastewater always gets treated.

21            That's not necessarily the case?

22      A.     There's a distinction between treated  
23    or untreated.  It's treated to a certain  
24    extent.

1 MR. HARSCH: No further. Thank you  
2 very much.

3 HEARING OFFICER HALLORAN: Thank you.  
4 Mr. Grant.

5 REDIRECT EXAMINATION

6 BY MR. GRANT:

7 Q. Does Illinois EPA have any objection to  
8 the concept of a basin, an overflow basin at  
9 this facility, Rock River?

10 A. No.

11 Q. Do you have any objection to the  
12 concept of a wetland?

13 A. No.

14 Q. The only objection you have is to the  
15 lack of a liner; isn't that correct?

16 A. Correct.

17 MR. GRANT: That's all.

18 HEARING OFFICER HALLORAN: Mr. Harsch?

19 MR. HARSCH: No further questions.

20 HEARING OFFICER HALLORAN: Thanks. You  
21 may step down, sir.

22 (Whereupon, the witness was  
23 excused.)

24 MR. GRANT: We're done. We rest.

1 HEARING OFFICER HALLORAN: All. Right.  
2 Terrific. Mr. Harsch, any rebuttal? Let's go  
3 off the record for two minutes.

4 (Whereupon, a discussion was  
5 had off the record.)

6 HEARING OFFICER HALLORAN: Back on the  
7 record. Mr. Harsch would like to call a  
8 rebuttal.

9 Mr. Huff, you're reminded you're still  
10 under oath.

11 THE WITNESS: Yes, sir.

12 HEARING OFFICER HALLORAN: Thank you.

13 JAMES E. HUFF,  
14 called as a witness herein, having been first  
15 duly sworn, was examined and testified as follows:

16 DIRECT EXAMINATION

17 BY MR. HARSCH:

18 Q. There was testimony put on in the  
19 Agency's case about the discharge of materials  
20 that got into the ground under the basin  
21 reaching the Rock River.

22 Do you agree with that?

23 A. I do not. Specifically, Mr. Buscher  
24 identified three pollutants in human waste that

1 he was concerned about suspended solids,  
2 grease, and ammonia. I maybe can take those  
3 one of the time. The floor of that basin will  
4 be very effective in filtering out the  
5 suspended solids. They're not going anywhere.

6 Grease is -- I think everyone knows  
7 doesn't migrate very well through very fine  
8 openings. So the grease would also be filtered  
9 out and basically help seal the bottom of that  
10 basin more than anything else.

11 And the third one was ammonia, which I  
12 had testified to earlier that ammonia exists  
13 primarily -- it is a positive charge ion in the  
14 cationic exchange capacity in the first foot  
15 below that basin would effectively remove that  
16 ammonia. So none of those pollutants would get  
17 to the Rock River.

18 He identified something called human  
19 waste which is a generic term that I assume  
20 we're identifying those three specific  
21 compounds there as well as pathogenic  
22 organisms, which the fecal coliform is an  
23 indicator of.

24 As I testified earlier, those organisms

1 are very effectively filtered out. Wetlands  
2 are very effective at reducing the  
3 concentrations of fecal coliform and other  
4 pathogenic matters. And it's no different than  
5 what comes out of a septic tank and in leach  
6 fields that are all associated with those.

7 Q. During your April -- during the meeting  
8 that you had with the Agency in June of 2011 --  
9 strike that.

10 You were provided with a copy of  
11 Mr. Buscher's 2011 draft memo; is that correct?

12 A. Yes, sir.

13 Q. And in that memo he testified and he  
14 lists a number of parameters that he wanted to  
15 be monitored?

16 A. There's actually two lists. Table A  
17 attached to his letter, there was a request  
18 that there be six rounds of sampling over a  
19 year period before we use that basin. Well,  
20 that effectively, one, adds a year to the whole  
21 compliance schedule because we can't put those  
22 wells in until after that basin's constructed  
23 because with the diking and the berming on  
24 there they'd be destroyed if we put them on

1       beforehand.

2               Second, the list is not the same list  
3       that's in the NPDES permit that Mr. Burma  
4       seemed to indicate they were the exact same  
5       list. It's a more extensive list than what is  
6       monitored on their flow which averages 25 to  
7       30 million gallons a day versus what we're  
8       going to put in at 7.4 gallons for the year.

9               I think the District's reservations was  
10       not so much in monitoring. It wasn't so much  
11       in most of the parameters on there. It was the  
12       extensiveness of this, the six times prior to  
13       the year and that list just seemed excessive  
14       relative to domestic wastewater.

15       Q.     Was the purpose of your chloride  
16       modeling, you said that you performed, to show  
17       that there would be a statistically significant  
18       increase in chloride concentrations?

19       A.     The Agency required that we model in  
20       order to show that there would be no increase  
21       25 feet downstream.

22               And the problem with any kind of model  
23       where you have a wide width on this basin, 25  
24       feet down effectively there's going to be no

1 dilution and attenuation or minimal dilution  
2 and attenuation.

3 So the intent of that was to really  
4 show -- we did the R26 equation under TACO,  
5 T-A-C-O, and then we also just did a simple box  
6 model assuming that groundwater is flowing at  
7 five feet per day and that this water  
8 infiltrated through what the net increase was.

9 And the box model is a more appropriate  
10 model because our 26 assumes an infinite source  
11 if that basin is full forever. And so the  
12 purpose of that is to show there is going to be  
13 an increase, but it's certainly going to be  
14 well below the groundwater standard contained  
15 in 620 for chlorides.

16 Q. And that would be -- that increase  
17 would be in your opinion a statistically  
18 significant increase?

19 A. Well, sure. I mean, if you monitor and  
20 you establish a background concentration, you  
21 go out shortly after one of these events, you  
22 would see an increase compared to the  
23 background. I suspect it would be  
24 statistically increased, certainly a very real



1 potential for that.

2 MR. HARSCH: No further.

3 HEARING OFFICER HALLORAN: Mr. Grant.

4 CROSS-EXAMINATION

5 BY MR. GRANT:

6 Q. Mr. Huff, fecal coliform is just an  
7 indicator?

8 A. That's what I said. Yes, sir.

9 Q. So it's just an indicator.

10 It's not -- while it may be considered  
11 a human pathogen, it's not the most dangerous  
12 human pathogen, is it?

13 A. I'm not even sure it's a human  
14 pathogen. It's an indicator of human waste.

15 Q. Right. So the pathogens that you would  
16 be worried about would be other bacteria and  
17 viruses and protozoans; isn't that correct?

18 A. Sure. But I would give you the same  
19 response on the ability to filter those out and  
20 the reduction that's achieved in very short  
21 order. And we had that in our permit  
22 application, that discussion.

23 Q. Isn't fecal coliform extraordinarily  
24 short-lived outside of a mammal's body?

1 A. Compared to these other organisms?

2 Q. Yes.

3 A. I don't believe that's a true  
4 statement. You have a range of organisms that  
5 have a longer life and viruses, others that are  
6 much shorter.

7 Q. Viruses like hepatitis A, that would be  
8 a concern, wouldn't it?

9 A. I suppose it would, yes.

10 Q. And human sewage?

11 A. Potentially, yes. Potentially.

12 Q. And protozoans like cryptosporidium and  
13 gardia, that sort of thing, that would be a big  
14 concern, right?

15 A. That would be a concern from a human  
16 health exposure point of view, yes, sir.

17 Q. Is it your testimony that these have  
18 the same life-span as coliform bacteria does?

19 A. No, that was not my testimony. My  
20 testimony was that if we -- the industry  
21 standard is to monitor fecal coliform. We do  
22 it in surface water. We do it in wastewater  
23 effluents as an indicator we use.

24 In the water supply side, they use

1 total coliform as an indicator of potential  
2 pathogenic organisms there.

3 Q. To avoid testing for all those other  
4 ones that we were just discussing, right?

5 A. Sure. It's presumed that those  
6 adequately reflect if they're not present or  
7 they're present low that there's not an  
8 unacceptable risk.

9 Q. But you couldn't just necessarily  
10 assume that the life-span in the soil  
11 underneath it was the same for the coliform  
12 bacteria as it is for the other bacteria,  
13 viruses, and protozoan, could you?

14 A. I think we answered that question.  
15 There's a range of them, so some would be  
16 shorter. Some would be longer.

17 Q. And we don't know what those are as we  
18 sit here?

19 A. I'd be more than happy to provide that  
20 information.

21 Q. Fortunately, for the purpose of the  
22 hearing --

23 A. Right. So let's take it to the second  
24 step. So let's suppose we get down to

1 groundwater. Then the second part is there's  
2 got to be an exposure to that groundwater,  
3 right.

4 There are no water supply wells in the  
5 area. There is absolutely no evidence this is  
6 ever going to get to the Rock River in my  
7 opinion.

8 Q. Your own testimony. In your letter you  
9 say -- in the famous letter from June 28th --

10 A. June 28th.

11 Q. -- you say the groundwater flow during  
12 very heavy water is away from the proposed  
13 impoundment and as soon as the water drops,  
14 it's going right to the Rock River?

15 A. Towards the Rock River, correct.

16 Q. Along with anything that's in the  
17 groundwater at that time?

18 A. But then you also have the travel time  
19 and degradation and the filtering out that's  
20 there.

21 Q. Okay. I don't want to spend too much  
22 time on this, but the monitoring list that  
23 Mr. Buscher proposed in his April -- in the  
24 memorandum that you responded to with your

1 letter really was not too dissimilar from the  
2 routine tests in the NPDES permit, is it?

3 A. There's a number of parameters -- the  
4 District's objection is really two part. Six  
5 rounds of sampling on all those wells for  
6 pollutants that aren't associated with  
7 municipal waste really seems excessive, and the  
8 year delay before we could ever put that basin  
9 into service doesn't make sense to me when  
10 we're trying to protect raw sewage, as you keep  
11 describing it, from being discharged either  
12 illegally out of manhole and basement backups  
13 or bypassing the treatment plant under these  
14 emergencies and going directly to Rock River.

15 Q. I guess -- well, I'm looking at the  
16 list in that subsection C of the NPDES permit  
17 for the facility for the inflow, in other  
18 words, for the untreated wastewater, if you  
19 prefer, coming into the plant is very similar  
20 to what he was asking you to test for -- where  
21 you were going to be taking untreated sewage  
22 into a storage basin. And I don't want to -- I  
23 understand that they're not identical.

24 A. Right.

1 Q. But, for example, a number of inorganic  
2 chemicals and metals are contained in both  
3 lists, aren't they?

4 A. They absolutely are. Again, if I were  
5 doing this as a permit writer, I would say  
6 let's go back and look at the history of what's  
7 been detected in the wastewater coming into the  
8 Rock River Water Reclamation District.

9 That should form then the basis behind  
10 which we ought to be sampling these monitoring  
11 wells instead of just blankly saying let's test  
12 for every inorganic metal known to man. But  
13 it's not just once. It's six times over a year  
14 before I can put that basin into effect.

15 So you've got to say is that money well  
16 spent in that lost year when we potentially  
17 will have basement backups because we have to  
18 do six grounds of samplings on these wells.

19 Does that make any sense in protecting  
20 the environment?

21 Q. Wasn't your response that you refused  
22 to do any sampling whatsoever?

23 A. Positively no, never.

24 Q. In the July 28th letter, it said it

1 would be a waste of time to do background  
2 sampling.

3           Isn't that essentially what it says in  
4 that June 28th, 2011?

5           A.    Could you point me to that, please?

6           Q.    Sure.  Exhibit 5, I think page 3.  It  
7 will save time.

8           A.    Item number two?  Test for a host of  
9 inorganics and for six times before start up.

10          Q.    Yes.

11          A.    It says, "The RRWRD discharges about  
12 30 million gallons a day in the Rock River and  
13 is not required to monitor this intensively for  
14 any of these parameters except BOD, fecal  
15 coliform, and pH."

16          Q.    That's treated sewage?

17          A.    That's also in the raw sewage, sir.

18          Q.    Excuse me.  The BOD, fecal coliform,  
19 and pH, are you saying that's all that they're  
20 required to test for under the permit?

21          A.    No.  Those are the primary parameters  
22 that they test for that frequently.

23          Q.    But there's a whole -- that frequently,  
24 you mean six times a year?

1           A.     Annually.  Once a year they test for  
2     this inorganic list.  That's what's in the  
3     NPDES permit.

4           Q.     I'm just going to say that the permit  
5     will speak for itself.  It was my understanding  
6     it was required more, but we can argue that  
7     later.  That's all I've got.  Are you through  
8     answering my question?  I don't want to cut you  
9     off.

10          A.     Your characterization as affecting the  
11     for sampling for background, that's not what we  
12     were doing.  I was objecting to the number of  
13     tests that we were running and the parameter  
14     list that included a number of pollutants that  
15     we aren't associated with municipal waste.

16                   HEARING OFFICER HALLORAN:  Mr. Harsch?

17                   MR. HARSCH:  I'm done.

18                   HEARING OFFICER HALLORAN:  Okay.  Thank  
19     you, Mr. Huff.  You may step down.

20                   Any closings or do you want to save it  
21     for the post-hearing brief?  You've going to  
22     save it for the post-hearing brief?

23                   MR. HARSCH:  Yes.

24                   HEARING OFFICER HALLORAN:  Let's go



1 off the record.

2 (Whereupon, a discussion was  
3 had off the record.)

4 HEARING OFFICER HALLORAN: All right.  
5 We're back on the record.

6 I do want to note for the Board there  
7 is an outstanding motion out there filed by  
8 Mr. Grant and company entitled motion to  
9 supplement the record. I think it was filed on  
10 November 2nd, and it's directed to the Board.  
11 So I assume the Board will take that up with  
12 the case.

13 We're going to talk about briefing  
14 schedules, but we're all going to get  
15 together -- Mr. Harsch, Mr. Grant, Mr. Petti  
16 and myself -- on Wednesday, December 5th via  
17 telephone and talk about the briefing schedule,  
18 and I'll get a written order out. I think  
19 that's about it.

20 I want to take a minute to thank the  
21 counselors for their professionalism. Above  
22 all I want to thank everybody for their  
23 civility and have a great upcoming holiday or  
24 holidays.

1 MR. HARSCH: On behalf of the District,  
2 I want to thank the Agency witnesses that made  
3 the trip up. Thank you very much.

4 (Which were all the proceedings  
5 had in the aforementioned  
6 cause this said date and  
7 time.)

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1 STATE OF ILLINOIS )  
2 ) SS:  
3 COUNTY OF McHENRY )  
4

5 I, SUSAN IMHOFF, a Registered  
6 Professional Reporter and a Certified Shorthand  
7 Reporter of said state do hereby certify:

8 That previous to the commencement of  
9 the examination of the witness, the witness was  
10 duly sworn to testify the whole truth  
11 concerning the matters herein;

12 That the foregoing deposition  
13 transcript was reported stenographically by me,  
14 was thereafter reduced to typewriting under my  
15 personal direction and constitutes a true  
16 record of the testimony given and the  
17 proceedings had;

18 That the said deposition was taken  
19 before me at the time and place specified;

20 That I am not a relative or employee or  
21 attorney or counsel, nor a relative or employee  
22 of such attorney or counsel for any of the  
23 parties hereto, nor interested directly or  
24 indirectly in the outcome of this action.

1                   IN WITNESS WHEREOF, I do unto set my  
2 hand of office in Illinois, this 13th day of  
3 December, 2012.

4

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Susan Imhoff, RPR

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Illinois CSR No. 84-3956

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