

ML - Chester Twp  
Caputo v. Chester

11/29/77

Transcript of Trial, Vol II, witnesses  
- Lloyd  
- Ashmun

- list of exhibits

ML0006918

P 148

A-813-78  
A 150 SEP 1979

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SUPERIOR COURT OF NEW JERSEY  
LAW DIVISION - MORRIS COUNTY  
DOCKET NO. L-42857-74 P.W.

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JOSEPH CAPUTO and  
ALDO CAPUTO, **FILED** ESTERGRAPHIC TRANSCRIPT  
OF TRIAL

Plaintiffs, JAN 14 1980

VOLUME II

vs.

*Stephen W. Townsend*  
CLERK

TOWNSHIP OF CHESTER )  
and PLANNING BOARD )  
of TOWNSHIP OF CHESTER, )

MORRIS COUNTY COURTHOUSE  
MORRISTOWN, NEW JERSEY  
NOVEMBER 29, 1977

APPELLATE DIVISION

APR 5 1979

AG  
*Elizabet M. Douglas*

Defendants. )

BEFORE: HON. ROBERT MUIR, JR., AJSC

TRANSCRIPT ORDERED BY: PHILIP LINDEMAN, II, ESQ.

APPEARANCES:

MESSRS. AMBROSE & MONICA  
BY: PHILIP LINDEMAN, II, ESQ.,  
COUNSEL FOR PLAINTIFFS

**FILED**  
APPELLATE DIVISION

APR 5 1979

CM  
*Elizabet M. Douglas*  
CLERK

MESSRS. MC CARTER & ENGLISH  
BY: ALFRED L. FERGUSON, ESQ.,  
NICHOLAS C. ENGLISH, ESQ.,  
COUNSEL FOR DEFENDANTS.

*CLM*

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I N D E X

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1 MR. ENGLISH: I am Nicholas Conover  
2 English, if it please the Court, and I will  
3 be presenting the testimony of Thomas Lloyd,  
4 and we expect that his testimony will cover  
5 the following areas: He will identify the  
6 natural resource inventory of the Upper Rari-  
7 tan Watershed, both the text and the maps, which  
8 he prepared. I believe the maps and the docu-  
9 ment comprising the natural resource inventory  
10 have already been marked for identification.  
11 He will describe his participation in the  
12 water quality study which the Academy of Natural  
13 Sciences in Philadelphia made a few years ago  
14 for the Upper Raritan Watershed Association,  
15 and I believe those studies have been marked  
16 for identification. He will also describe  
17 the study he made of the Peapack Brook in 1977,  
18 and we have the report which he prepared, which  
19 will be offered in Evidence. Now, in the course  
20 of that study, he utilized not only his own  
21 research in 1977, but also these earlier stud-  
22 ies prepared by the Academy of Natural Sciences  
23 for the Upper Raritan Watershed Association,  
24 certain studies made by the Watershed Association  
25 itself, and I believe Mrs. Ashmun testified with

1 respect to those and certain studies mady by  
2 Jason M. Cortell & Associates, which I believe  
3 have also been the subject of testimony in  
4 this proceeding.

5 Now, based on all that, Mr. Lloyd will  
6 express his opinions, first that the growth,  
7 population and development around the headwaters  
8 of Peapack Brook over the last decade has ad-  
9 versely affected the water quality in the  
10 upper reaches of Peapack Brook; secondly,  
11 that the middle reach of Peapack Brook, which  
12 is the part of the stream flowing through the  
13 Caputo tract, functions as a water quality  
14 recovery zone; thirdly, that the lower reach,  
15 which extends from approximately the county  
16 line down to Peapack Village, is heavily  
17 enriched with nutrients, but the stream is  
18 healthy; fourthly, that below the Peapack,  
19 Peapack Brook is semi-healthy.

20 By way of his ultimate conclusion, Mr.  
21 Lloyd's analysis of the natural features of the  
22 Peapack Brook watershed, together with his  
23 aquatic biological studies will support his  
24 conclusions that any further intensive develop-  
25 ment in the Peapack Brook watershed will probably

1 result in serious degradation of water quality.

2 THE COURT: Okay. Fine. Mr.--

3 MR. LINDEMAN: I would like to make a  
4 statement addressed to that before Mr. Lloyd  
5 is examined on his qualifications.

6 THE COURT: All right.

7 MR. LINDEMAN: With regard to the first  
8 part of Mr. English's statement, to wit: that  
9 the witness will identify the inventory, natu-  
10 ral resources inventory in the area, I submit  
11 that, that testimony would, if heard, be irre-  
12 levant and have no place in this proceeding of  
13 any kind. As I understand it, I think just  
14 from the references made by counsel, the testi-  
15 mony will show what was in the streams and in  
16 the water sources of the area at varying times.  
17 I think some of them may be '68, '67. Mr.  
18 English now refers to 1977. We did not know  
19 of any study of any of the aquatic or other  
20 life in the stream as of 1977, until the presen-  
21 tation to us first of a preliminary report  
22 prepared by Mr. Lloyd, and then, finally, his  
23 final report which does not vary too greatly  
24 from it. Those two reports that were presented  
25 to us after the proceeding had commenced in

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1 its final stage, the trial. I will object  
2 further to any reference by Mr. Lloyd to a  
3 study by Jayson Cortell to which, I may state,  
4 very substantial reference is made in his  
5 report. The report of Mr. Cortell, of the  
6 Cortell Company, whatever that may be, is not  
7 a company of Mr. Lloyd's, at least so far as  
8 I can see, and any reference to that, as well  
9 as to many other statements in a report, would  
10 be hearsay, which we will submit would be in-  
11 admissible. Finally, with regard to any  
12 opinions that Mr. Lloyd may express, I have the  
13 following to say, that without regard to what-  
14 ever his qualifications may support, the pre-  
15 trial examination of Mr. Lloyd indicated to  
16 us and not really didn't just indicate it,  
17 stated pretty unequivocally that the man was  
18 not retained for the purpose of giving any  
19 opinions, nor in fact so far as his depositions  
20 show is he qualified to make any opinions on  
21 anything. For example, at page 6 of his  
22 transcript, and I won't--

23 THE COURT: You know I have asked for  
24 these statements, Mr. Lindeman. Excuse me. I  
25 shouldn't interrupt you, but I'm going to be-

1 cause it seems to me what you're doing is  
2 you're getting to a facet of arguing about  
3 what the proposal is before the witness testi-  
4 fies, and all I wanted to do was to get an  
5 idea; normally, you would not have that state-  
6 ment, but what I wanted to do was get an idea  
7 of what the witness was being offered for, not  
8 for the purpose of your objecting, but for the  
9 purpose of my knowing where he fits in the over-  
10 all scheme of things. I think that insofar as  
11 your objections are concerned, you know, your  
12 hearsay and other objections, pretrial dis-  
13 covery, et cetera, I think they're going to  
14 have to come up as the witness testifies.

15 MR. LINDEMAN: Well, your Honor, I  
16 think the Court's purpose in asking for the  
17 reason for testimony is a very good one, and  
18 it has already served a purpose for everybody,  
19 not just the Court. It served a purpose for  
20 everybody in respect of the testimony of Mr.  
21 Smith of Jaman Engineering, when we indicated  
22 that he was going to testify on the environ-  
23 mental impact statement for the Caputo tract,  
24 and when the Court heard that, it said that  
25 it did not want to hear it at this time, that





1 Patrick as a professor? A Yes. I took two  
2 courses under Dr. Patrick, one course entitled "General  
3 Limnology," which lasted one year, and another course on  
4 aquatic eco-systems with her.

5 Q Some of us may not be sure what the science  
6 of limnology is. Could you define or explain that, please?

7 A Limnology is the study of water, mainly the study of  
8 the aquatic biology in lakes and streams.

9 Q What's the difference between limnology and  
10 oceanography? A Primarily, the main dif-  
11 ference is oceanography generally is more physically  
12 oriented in terms of chemistry and depth and currents;  
13 limnology is more associated with aquatic biology and water  
14 chemistry in fresh water.

15 Q Well, oceanography deals with essentially salt  
16 water in the ocean? A That's true.

17 Q And, are you saying that limnology is primarily  
18 focused on inland fresh waters? A That's  
19 correct.

20 Q And, who is Dr. Ruth Patrick? A Dr.  
21 Ruth Patrick was formerly Chairman of the Department of  
22 Limnology of the Academy of Natural Sciences of Philadelphia.  
23 She was also a professor at the University of Pennsylvania.

24 Q Now, following your receipt of a degree of  
25 master in regional planning from the University of Pennsyl-

Lloyd - direct

10

1 vania in 1968, what did you do? A I was,  
2 I became a member of the Academy of Natural Sciences,  
3 Department of Limnology. I was a member there from 1968  
4 until 1973.

5 Q What sort of work did you do while you were  
6 at the Academy of Natural Sciences? A I con-  
7 ducted water quality studies, studies that were based on  
8 analysis of biological conditions as well as water chemistry.  
9 I also completed an environmental inventory of the Upper Raritan  
10 Watershed Association.

11 Q When you say you completed the natural re-  
12 source inventory for the Upper Raritan Watershed Association,  
13 sounds like an implication something had been started be-  
14 fore your association with the Academy of Natural Sciences.  
15 Can you enlighten me on that point? A In  
16 the summer of 1963, I had worked there as a summer employee.

17 Q "There" being the Academy? A "There"  
18 being the Academy of Natural Sciences, also performing field  
19 surveys, and I had been associated with the Academy really  
20 since that time. In May of 1968, while I was still in the  
21 University of Pennsylvania, I began this study of the Upper  
22 Raritan Watershed, which will be described later on.

23 Q In other words, you began work on the natural  
24 resources inventory before your association with the Academy,  
25 and you completed it after you joined the Academy?

1 A That's correct.

2 Q Now, what have you done since 1973, when you  
3 say you terminated your membership in the Academy of Natural  
4 Sciences?

5 A In the Spring of 1973, for a  
6 period of approximately six months actually, I worked for a  
7 small company called Natural and Historic Resource Associ-  
8 ates, and then from approximately September, 1973, through  
9 the present, I have been working at Betz Environmental  
10 Engineering, Incorporated. Presently, I'm on a leave of  
11 absence from Betz while completing a degree for master's  
12 in biology at Rutgers University.

13 Q What kind of work have you done since you  
14 became associated with Environmental Engineers?

15 A Nearly all my work at Betz has been related to aqua-  
16 tic biological studies, and assessing the impact of, potential  
17 impacts of waste water management plans, industrial complexes,  
18 almost all of the work has been field biology and associating  
19 the impacts of land use on water quality. I have also pre-  
20 pared a number of environmental assessment statements and  
21 participated in others as well.

22 MR. ENGLISH: If the Court please, I  
23 tender Mr. Lloyd as an expert for the purposes  
24 indicated in my opening statement.

25 THE COURT: Mr. Lindeman.

BY MR. LINDEMAN:

1 Q Mr. Lloyd, your degree at, as Bachelor of  
2 Arts in Trinity was in history, was it not?

3 A That's correct.

4 Q Did you have any technical or scientific  
5 courses at Trinity? A I did.

6 Q What were they? A Biology,  
7 chemistry, inorganic chemistry. That's about it.

8 Q Had you ever taken any other technical or  
9 scientific courses than those at Trinity?

10 A In high school I had taken some.

11 Q What were they? A A course  
12 entitled, "Physiography," which was a course that combined  
13 geology and astronomy. Probably what today would be called  
14 a course in earth science.

15 Q When, in your course at the University of  
16 Pennsylvania in Landscape Architecture and Regional Plan-  
17 ning? A That's the title of the department.

18 Q Right. It is that department of which Dr.  
19 McHarg is the head; is that correct, or was the head when  
20 you were there? A That's correct.

21 Q You took your master's, was that a one year  
22 course? A No. It took me two and a half  
23 years. Normally, it takes two years, but because I was de-  
24 ficient in some science courses, I had to take some extra  
25 ones at the University of Pennsylvania to make up for that.

1 Q Were you there full time?

2 A Yes.

3 Q During the day? A During the  
4 day.

5 Q Now, you state that one-third of your courses  
6 were in aquatic biology? A That's correct.

7 Q Will you tell us, please, what aquatic  
8 biology is; by that, I mean what actually is involved in  
9 the course of study by way of theoretical study and labora-  
10 tory or other field training? A The courses  
11 that I took were General Limnology, Aquatic Ecology, a  
12 course in algae, which are aquatic plants, a course in aqua-  
13 tic insects. These courses were a mixture of laboratory  
14 exercises as well as field exercises.

15 Q In the field, what kind of work did you do  
16 during the course of your study? A I would  
17 collect aquatic organisms. If we were studying algae, I  
18 would collect algae, bring it back to the laboratory and  
19 identify them. If we were collecting insects, I would do  
20 the same for them.

21 Q Would you say, then, that this course of study  
22 involved the identification and the characteristics of the  
23 living organisms in water as well as the flora or the plant  
24 life that may exist in water systems? A Yes.

25 Q Is that what aquatic biology is?

1 A Yes.

2 Q Now, in the process of examining the life in  
3 the streams, what, if any, connection did you have with the  
4 character of the bed of the stream and the banks of the  
5 stream which form the particular body of water?

6 A A great deal, mainly because the condition of the  
7 stream beds, by that I mean the nature of the substrate,  
8 by that I mean the rock, sand or silt or whatever, largely  
9 determines what kinds of aquatic plants and animals would  
10 grow there.

11 Q Did you study the soils and the condition of  
12 the soils around the streams that you examined?

13 A In school? Are you--

14 Q First in school. We're still in school.

15 A Still in school. Generally not. Mainly because  
16 these were one-day field trips, and you had a very limited  
17 time to collect your plants and animals.

18 Q You did have no courses then in geology and  
19 the study of soils? A I did have a course in

20 geology. In fact, I had two courses in geology, three.

21 Q What were they, please? A Physi-  
22 cal geology, historical geology, and minerology.

23 Q What was involved in the course on physical  
24 geology? A Physical geology was a general  
25 survey-type course in geology, where the student is taught

1 the basic different kinds of rocks, how to identify them;  
2 also exposed to geological processes such as sedimentation,  
3 so forth.

4 Q Historical geology? A Historical  
5 geology is simply as the name implies, an overview of what  
6 has occurred in the past.

7 Q And, minerology? A Minerology.  
8 It's a study of the crystal forms. It was a course that was  
9 meant to be taken as background for later courses which I  
10 didn't take.

11 Q Did you have any experience with the seeping  
12 or the seepage characteristics of any of the soil and any  
13 of the streams that you studied, or the water bodies that  
14 you studied during the time that you were taking your master's  
15 degree? A At the time I was taking my  
16 master's degree?

17 Q Yes.

18 THE COURT: You say "seepage?" You mean  
19 the porosity of the soil?

20 MR. LINDEMAN: Porosity, yes.

21 A Yes.

22 Q You did study that? A I did.

23 Q Can you tell us in what courses, under what  
24 circumstances you studied it? A Mainly through  
25 courses entitled, "Studies." These were practical environ-

1 mental planning studio exercises whereby the student was  
2 assigned an area for one reason or other, selected a geogra-  
3 phic region, and performed environmental inventories which  
4 included studies of the soils, geology, climate, vegetation,  
5 hydrology.

6 Q Now, it is important, is it not, in the assess-  
7 ment of any area as to the impact of construction, residen-  
8 tial or other development, on water streams or water bodies  
9 of any kind to know about the characteristics of soil and the  
10 seepage, porosity characteristics of the soil, is it not?

11 A I believe it is.

12 Q And, unless you do know that and have some  
13 real knowledge of the particular site that you may be  
14 studying, it would really be impossible to render any opinion  
15 on the impact of any such development upon the nature, health  
16 of the streams and water bodies; is that not so?

17 A I think you can gain knowledge by utilizing the Soil  
18 Conservation Service manuals for particular sites.

19 Q Well, that isn't precisely an answer to the  
20 question, Mr. Lloyd. What I'm driving at is not that you  
21 can gain the knowledge, but is it simply this abstract  
22 question: Is it not essential or at least extremely import-  
23 ant to know those characteristics in order to evaluate the  
24 impact of any such construction upon the health and character-  
25 istics of a fresh water body? A Yes.

1 Q Now, when you were associated with the Academy  
2 of Sciences in Philadelphia, was it there that you were  
3 connected with the Upper Raritan Watershed Association in-  
4 ventory? A Yes, it was.

5 Q Did you actually come on to the field to per-  
6 form services at that time? A Many times.

7 Q Did you study the geology and the nature of the  
8 soil in the area? A A geology specialist  
9 studied it, and I also went out in the field with him, and  
10 checked rock outcrops and so forth, to make sure that what  
11 we found using geology maps and aerial photographs was  
12 reasonably accurate.

13 Q When you left the Academy, and you went with  
14 the Natural Historical Resources--

15 THE WITNESS: Natural Historic Re-  
16 source Associates.

17 Q Did you perform any of this work?

18 A It was mainly estuary work.

19 Q What does that mean? A Estu-  
20 ary is the lower limit of a river where it meets the sea.  
21 It's the area where the water is brackish as a result of  
22 sea water coming in. It's associated with coastal zones.

23 Q What did you do? Did you study the marine  
24 and plant life? A I studied the algae, the  
25 macro-invertebra, vertebra animals, fish, marsh vegetation.

1 This was done to assess the potential impact of a 4,000-  
2 acre area that was proposed for development.

3 Q What kind of development was that?

4 A Residential.

5 Q Did you make any study of the character of the  
6 soil, geology, in the area? A Yes, we did.

7 Q What did you do, or what studies were made of  
8 which you had knowledge respecting the nature and character  
9 of the geology, soil? A We mapped the  
10 geology and the soils within this 4,000-acre study area.

11 Q Did you do that personally?

12 A As I recall, I prepared the rough map, and the actual  
13 drafting was done by a draftsman, but I essentially prepared  
14 an outline of the map for him to copy.

15 Q Did you make any test of the soil there?

16 A We asked the, I did not personally. However, the  
17 local Soil Conservation Service agent came out and did test  
18 the soils, looked at it, walked the tracts.

19 Q Did you examine his reports? A Yes.

20 Q Are you familiar with test borings and logs  
21 on test pits, the general procedure that is involved in  
22 studying subsurface soil conditions? A Just  
23 very generally. I'm not an expert in that field.

24 Q What do you mean by "just generally?"

25 A I know roughly how they do it. They hire someone to

Lloyd-direct

19

1 drive a back hoe in, go down to a certain depth and look at  
2 the soil profile that they see in the hole.

3 Q Have you ever done that? Have you ever looked  
4 at that-- A No.

5 Q You have never done that? A No.

6 Q You have seen boring reports, boring logs,  
7 however? A Yes, I have.

8 Q Now, in your experience with Betz Engineer-  
9 ing, Inc., is it? A Right.

10 Q What have you done with some particularity with  
11 respect to the examination of soil conditions, porosity,  
12 percolation aspects of soil respecting the impact of develop-  
13 ment on water in nearby streams or ponds?

14 A I prepared several environmental assessment state-  
15 ments that included geology and soils in the inventory  
16 section, and assessment of their capability, porosity, and  
17 so forth.

18 Q What was--excuse me. What was your connection  
19 with the assessment of the soils as such? What did you do?

20 A Mainly to utilize data that were prepared by the Soil  
21 Conservation Service, or in one instance prepared by a, I  
22 guess you would call it a soils consultant, soils engineer-  
23 ing consultant, firm called Ramco Associates, in New Jersey.

24 Q Now, that information that you obtained from  
25 Ramco, whatever other source gave information about the

1 seepage, leaching quality of soil, is that a correct--

2 A Well, Ramco was more directed towards the stability  
3 of the soils. It was associated with a study that  
4 was performing on expanding the waste water treatment  
5 facilities in Hamilton Township.

6 Q The stability for what purpose?

7 A Boring strength of the, whether or not the facilities  
8 that were being proposed would sink into the ground if they  
9 were built.

10 Q Well, passing that, that kind of thing, tell us,  
11 please, what experience you had with Betz on the subject of  
12 the porosity or the percolation, leaching quality of the  
13 soil, and the impact that development in the form of con-  
14 struction would have had on that soil with regard to nearby  
15 streams or ponds? A As I said, I performed  
16 four, five environmental assessment statements that incor-  
17 porate analysis of erodibility of soils as part of the  
18 inventory, and assessment of the project.

19 Q It's correct to say, is it not, Mr. Lloyd, that  
20 in the preparation or the rendering of any opinion or assess-  
21 ment of construction upon the health or condition of a fresh  
22 pond or stream, it is essential to know about the nature  
23 and quality of the soil and geology where the construction  
24 is taking place? A I think that's true, if  
25 you don't have the opportunity to get in the stream and look

1 and see actually what has happened.

2 Q If you can't make an empirical study of the  
3 quality of the stream prior to the construction, and then a  
4 study after the construction has been completed, then you  
5 must know beforehand what the condition or--

6 A No. I think by going into a stream and looking at  
7 it and also looking at the same time at the surrounding  
8 land use and getting a rough idea as to how much develop-  
9 ment has occurred in the past, and examining the stream  
10 to see how much settlement and bank erosion has occurred as  
11 a result of that development, one can get a reasonably good  
12 idea about the amount of settlement that might be generated.

13 Q How can one tell what the extent of bank ero-  
14 sion was, to use, I think these are your words, was the  
15 result of development? Did you say that? I don't want to  
16 misquote you.

17 A Yes. You simply go into  
18 the stream and look, and some streams the banks will be  
19 soured because of vegetation.

20 Q What I'm asking is how can you know by seeing  
21 the erosion and seeing that there's development around it,  
22 that that erosion is caused by the development?

23 A By examining the land use and, also, very often it's  
24 helpful to look at other similar streams that have different  
25 degrees of development on them, and typically in a watershed  
study you do this. You examine a number of different tri-

1 butaries that have different degrees of development on them,  
2 and have roughly the same types of soils and geology, and  
3 topography, and so forth.

4 Q What do you mean by development on them? Do  
5 you mean that erosion occurs where there's development imme-  
6 diately adjacent to the banks or is the development sometimes  
7 some distance from the banks, or what? A Either  
8 way. It depends on if the development is some distance from  
9 the banks, it depends on how the storm water runoff is  
10 collected. In some cases where it is collected and shunted  
11 into a stream, no matter how far a development is, the run-  
12 off can have a serious impact on streams.

13 Q What do you mean by run-off? A Simply  
14 the amount of precipitation that runs off from impermeable  
15 surfaces.

16 Q When run-off occurs and results in erosion,  
17 is there physical evidence of streams or rivulets of water  
18 that rush over the side of a stream thus causing the ero-  
19 sion? Does that exist? A Between the source  
20 of the run-off and the stream, or within the stream itself?

21 Q I mean the source of the run-off and the  
22 stream. A Very often, if the storm water  
23 is not properly handled, you will find a gully and accumu-  
24 lations of sediment in the stream at the, below the point of  
25 storm water run-off.

1           Q           Isn't it possible erosion may occur in some  
2 forms of soil without regard to construction nearby, and  
3 other kinds of soil would be less susceptible to erosion  
4 where there may be construction around it?

5           A           That's true. I mean erosion occurs as a result of  
6 many factors, but as a result of the structure and texture  
7 of the soil, as a result of vegetation cover, as a result of  
8 length of slope, as a result of the amount of precipitation.  
9 There are a great many factors involved, both natural and  
10 man made.

11           Q           So that in addition to the physical examination  
12 of a body of water and the process of erosion around it, it  
13 is important to know what the character of the soil is in  
14 order to know what its erodibility characteristics would  
15 be; is that not correct?           A           Yes.

16           Q           Would you say, is it possible for you to say  
17 that it's very important, or perhaps more important than  
18 just observing the physical situation itself, is it not  
19 more important to know what the characteristics of that  
20 soil may be?           A           I would say it's more important  
21 to see the end product. In other words, what has happened  
22 in the stream because, the reason why I say that is because  
23 there are so many factors that can affect the amount of  
24 erosion, sediment that gets into streams.

25           Q           You have never testified in any proceeding, at

1 least in the State of New Jersey, except one in--

2 A Wetlands.

3 Q Wetlands. What is that, Ocean County, or is

4 that in Burlington County? A It was Ocean County.

5 Q What did that have to do with?

6 A A developer wished to fill in approximately one and  
7 three-quarter acres of marsh so as to gain access to a  
8 larger area that had been previously filled. The overall  
9 purpose was to construct additional houses in that previously  
10 filled area.

11 Q Before what kind of a body was this that you  
12 were testifying? A Wetlands Hearing Board.

13 Q Is that a board of the State of New Jersey?

14 A Yes.

15 Q Was your testimony taken down in any recordable,  
16 recording fashion? A I think it was.

17 Q Had you ever testified in any other proceedings  
18 in any other state? A I had testified in, after  
19 that, my deposition. I testified in a New Jersey case.

20 Q Just in pretrial discovery? A No,  
21 it was in Court.

22 Q You said deposition? A After my  
23 deposition, which I assume you determine that I have only--

24 THE COURT: You mean in this case, after  
25 your deposition in this case, you testified in

1 another case?

2 THE WITNESS: Yes.

3 MR. LINDEMAN: I see.

4 Q What was that that you testified in?

5 A It had to do with a, evaluation that I made of a lake  
6 called Etra Lake in Hightstown, New Jersey.

7 Q For what purpose was that? A The  
8 owner of the lake wished to receive higher compensation  
9 for the lake because it had been condemned for, by the  
10 township for a park, and my job in that case was to establish  
11 the natural and other values of the lake.

12 Q Did it have anything to do with the impact of  
13 construction or development on the quality of the lake?

14 A No.

15 Q Did you have any occasion to examine the soil  
16 characteristics around the lake? A No.

17 Q Had you ever testified in any other proceeding  
18 than the two that you just referred to? A No.

19 Q The courses that you are now taking at Rutgers,  
20 are what? Is it aquatic biology studies? Is that what it is?

21 A Yes.

22 Q Is that the same kind of course that you took  
23 in Pennsylvania? A I would like to correct

24 that. It's more general biology, really, although I am

25 taking some aquatic biology courses, general in the sense

1 of genetics, for example.

2 Q You are, you described yourself in one of your  
3 fields of knowledge or professional functions as a regional  
4 planner; is that correct, Mr. Lloyd? A I would say  
5 more accurately an environmental planner.

6 Q You are not licensed in New Jersey, are you?

7 A No.

8 Q Nor are you in any other state?

9 A No.

10 Q Is there any licensing body to which your  
11 field of expertise applies? A No.

12 Q Are there people who have studied the same  
13 kinds of things, do the same things as you, who are licensed  
14 planners, to your knowledge? A Not exactly  
15 the things that I do, no.

16 Q Is the major part of your time and study de-  
17 voted to the impact of development, of real estate develop-  
18 ment upon the quality and condition of fresh water bodies?

19 A The impact of all different types of development,  
20 not specifically residential development.

21 MR. LINDEMAN: Just one final question.

22 Q Did you make a study, generally, of the entire  
23 area of the township of Chester with regard to the effects  
24 of development upon the water systems which exist in the  
25 municipality? A Nothing other than the

1 environmental inventory that was completed in '68, and water  
2 quality studies that were completed in 1970.

3 Q '70? A Yes.

4 Q Didn't you do something in 1977?

5 A I did, but that was specifically for the Peapack  
6 watershed, which is contained within Chester Township, but  
7 does not cover the whole township.

8 Q Studies of '68 and '70, apply to the entire  
9 municipality? A There were streams, for

10 example, in the 1970 study that were investigated and report-  
11 ed on that are within, that are scattered throughout the  
12 township.

13 Q But, my question is whether or not you made  
14 a study of the, pretty much the entire township, and the  
15 effect of development in it upon its bodies of water?

16 A I would say, no.

17 Q You understand that your testimony today will  
18 be limited pretty much to the effect of construction on the  
19 Peapack Brook, its upper and lower reaches?

20 A Yes.

21 MR. LINDEMAN: No further questions,  
22 your Honor. But I will object to the testi-  
23 mony first, not--

24 THE COURT: You're only dealing with  
25 his qualifications.

1 MR. LINDEMAN: The last question  
2 relates to the witness himself, virtually has  
3 not to do with what he may have said or may  
4 not have said about his capacity to testi-  
5 fy, competence or qualifications, but rather  
6 the general scope of his testimony. As I,  
7 the reasons for my objection to the testimony  
8 generally are these, that I have read recently  
9 and I dare say the Court has as well, the  
10 answer of the defendant to the complaint, and  
11 the expansion upon that answer as it is con-  
12 tained in pretrial orders, and both of them  
13 state that the municipality had the right  
14 pretty much, and the capacity, indeed the duty,  
15 to zone and plan for the development of the  
16 township as it did because the environmental  
17 considerations were such that it had to be done  
18 the way that it did it. I think that that's  
19 pretty broadly stating it, but in effect what  
20 it says is that we are right, we provided for  
21 two-acre zoning, five-acre zoning, the extent  
22 of the one-acre zoning as we did, and we limited  
23 the number of multi-family dwellings as we  
24 did because the environmental considerations  
25 of the municipality and of the region generally

1 require it, and if we didn't do it that way,  
2 there would be damage ecologically to the  
3 watershed, and the system which is served by  
4 the entire township. Now, the testimony of  
5 Mr. Lloyd pretty explicitly states it, that  
6 he's going to testify, and I know that he's  
7 going to testify to that because I have seen  
8 his report, and I can represent this to the  
9 Court, he's going to testify something general-  
10 ly about the Peapack Brook, and the effect of  
11 something, I'm not sure what, but something,  
12 some kind of development around the Peapack  
13 Brook, and that area is limited to some sec-  
14 tion which surrounds it, but not very widely.  
15 He has not made a study of the entire township.

16 Now, that testimony is related to and  
17 perhaps is even identical in many respects to  
18 the testimony that we offered of Mr. Smith of  
19 Jaman Engineering, where we were going to show  
20 that the effect on the environment of construc-  
21 tion of the number of houses that the plaintiffs  
22 have in mind would not be a bad one, and the  
23 Court decided at that time the testimony was  
24 not appropriate in the proceeding. The Court  
25 was not going to sit as a site plan review

1 committee, and it would make no determination,  
2 nor would it even hear the testimony.

3 Mr. Lloyd is going to be offered to show  
4 that some kind of development along the Pea-  
5 pack Brook, and I suppose particularly the  
6 Caputo tract, would be inimical to the ecolo-  
7 gical system. I assume it's going to be that.  
8 If it is that, then it is just as faulty and  
9 inappropriate as the testimony that would have  
10 been offered by Mr. Smith.

11 THE COURT: Well, let me say this, as  
12 I understand it the township is attempting to  
13 defend its zoning in that area. You're right.  
14 I did rule against an environmental impact  
15 study because it was made for a specific pur-  
16 pose under the ordinance, defined under the  
17 ordinance. This is not what's being offered  
18 here. What's being offered here is to prove why  
19 you have two and five-acre zoning in the area,  
20 which as I recall the map, I may be mistaken,  
21 but goes beyond your client's property. So  
22 that's one thing. Second thing is you have the  
23 advantage of rebuttal, if it becomes necessary  
24 at a later time, but the purpose for which  
25 you were offering it was an environmental impact

1 study, a site plan requirement under the  
2 zoning ordinance. It was on that basis that  
3 I excluded it, not on the basis of support-  
4 ing or challenging the zoning of the entire  
5 area. You offered it as an environmental  
6 impact study.

7 MR. LINDEMAN: Your Honor, I don't think  
8 it would be right to engage in a semantic  
9 argument. It was called an environmental  
10 impact study. What the document was, or what  
11 the testimony would have been is the import-  
12 ant thing, at least as we saw it, not what  
13 label it bore on its cover. So I hope that  
14 I made at least myself clear that we were going  
15 to offer testimony that this kind of develop-  
16 ment would not damage the environment, whether  
17 you call it an environmental impact study or  
18 not.

19 THE COURT: For the purpose of the  
20 proposed development of your client's property.

21 MR. LINDEMAN: Yes.

22 THE COURT: Yes. Okay. That's a site  
23 plan review. This is for the entire area.  
24 It seems to me there's a substantial difference.  
25 You were trying to support the proposed, what-

1 ever it was, unit, number of units, as a pro-  
2 posed plan was being suggested, and I said that  
3 I would not get into that specific subject  
4 matter because that is something that is a  
5 site plan, relates to the site. This is being  
6 offered, as I understand it, to relate to the entire,  
7 to support the entire zoning of the area.  
8 There's a difference, not a semantic differ-  
9 ence, a substantial difference it seems to me.

10 MR. LINDEMAN: I respectfully disagree.  
11 I think the particular in which I disagree  
12 is the use by the Court of the words, "entire  
13 area." That difference is, as we say, a  
14 distinction without a difference because the  
15 witness is going to be testifying simply  
16 about an area which is a little bit larger,  
17 little bit, it's larger, maybe it's more than  
18 just a little bit, but it's larger than the  
19 Caputo tract. It's only a very particular  
20 section of the municipality; that is, that  
21 part of the section through which the Peapack  
22 Brook runs, and I think it's going to concen-  
23 trate on, pretty much on our area. It will not  
24 be just our tract, it will be a few others,  
25 but that's not the township of Chester, and

1 in a sense this is very much akin to, if not  
2 precisely the same thing, as the environmental  
3 impact study because he's going to testify  
4 that this area would be affected in this  
5 particular way by residential or other develop-  
6 ment. That's not a defense by the municipality  
7 of the zoning ordinance with regard to every  
8 other part of the township. It's not affected  
9 by the Peapack Brook.

10 THE COURT: I don't see how it could be.  
11 I'm not too sure it's being offered as it  
12 relates to Chester Township, as it is down by  
13 Mendham Township or Washington Township. I'm  
14 not sure it's being offered for that purpose  
15 unless there's a stream that runs from Washing-  
16 ton Township up a hill, and then down a hill,  
17 as I understand the topography of that town-  
18 ship. I have yet to see water run up a hill  
19 as I'm told there's a place in Nevada that  
20 does.

21 MR. LINDEMAN: Perhaps it would be good  
22 of the witness to show where the Peapack Brook  
23 is to show you how--

24 THE COURT: I think I know where it is.  
25 I had the watershed described to me by the

1 lady from the Upper Raritan Watershed area.  
2 She described the streams with the map she  
3 had then. I think it boils down to this, Mr.  
4 Lindeman: At this point the witness is going  
5 to be allowed to testify, as has been suggested.  
6 I'm not saying to every question or as to the  
7 basis for everything that was proposed, but  
8 as to your objection, it's overruled. You  
9 know as you say, we respectfully disagree,  
10 and this is what makes law suits. If we  
11 agreed on everything, I wouldn't have a job,  
12 and I guess neither of you would be here  
13 either. So, okay, let's proceed.

14 I will allow him to testify. I'm not  
15 saying on everything that you proffered, but  
16 in a general area, I think he's qualified to  
17 testify as to water quality, and the studies.  
18 He certainly has a sufficient educational  
19 background to give me information on the en-  
20 vironmental impact on water, streams and water  
21 courses.

22 MR. ENGLISH: Thank you, your Honor.

23 BY MR. ENGLISH:

24 Q Mr. Lloyd, I show you a document which has  
25 been marked D-27, let's see, D-24 for Identification, in

1 this proceeding, and ask you if you can tell the Court what  
2 that document is. A It's the report of the  
3 natural resources inventory that I completed for the Upper  
4 Raritan Watershed Association.

5 Q I think you said 1968? A I  
6 began it 1968, and the report is dated July, '69.

7 Q And, are you the individual who was essentially  
8 responsible for the contents of that report?

9 A I am.

10 MR. ENGLISH: If the Court please, I  
11 offer Exhibit D-24 for Identification into  
12 Evidence.

13 MR. LINDEMAN: Mr. Lloyd, did you just  
14 say D-37--D-24 was prepared by you?

15 THE WITNESS: Yes.

16 BY MR. LINDEMAN:

17 Q Do you know whether there is, reports and  
18 information from others that are referred to in it?

19 A Certainly there are.

20 Q Can you tell me generally what they are, or at  
21 least-- A (Witness observes.) There is  
22 information that concerns the geology, climate, ground water,  
23 soils, vegetation, and aquatic biology that I obtained from  
24 published documents or from New Jersey State agencies that  
25 I did not personally collect, that data.

1 Q Are there any conclusions that are contained  
2 in this report? A There's one overall con-  
3 clusion at the very end, essentially says that because of  
4 the natural features of the 190-square mile Upper Raritan  
5 Watershed Association development can occur, but it should be  
6 done with caution.

7 Q Now, with respect to the geological data re-  
8 ferred to in it, does that talk about the quality and con-  
9 dition of the soil and its porosity and percolation and  
10 leaching characteristics? A Yes, it does.

11 Tables are presented that provide the criteria for the soil  
12 interpretations.

13 Q And, that report was made when?

14 A It was completed in July of 1969.

15 Q Now, you had the benefit of that knowledge,  
16 or whatever was contained in it when your depositions were  
17 taken on April 15, 1976, did you not? A I did.

18 Q Did you not testify at that time that you were  
19 not qualified to make any, give any evidence of any kind  
20 respecting the soils and its character?

21 MR. ENGLISH: If the Court please, could  
22 I suggest that counsel show the witness the  
23 portion of the transcript?

24 THE COURT: Yes.

25 MR. LINDEMAN: Do you have an extra copy?

1 All right. Page 52 and page 58.

2 Q Do you have that in front of you, Mr. Lloyd?

3 A I do. I'm reading it right now.

4 Q Just look at page 52 if you would please, and  
5 line 13, and the question and answer there, and I would  
6 like to read them to you, please. I'll ask you if what  
7 you say there is not correct. "QUES. With respect to the  
8 lake, first of all, what are the factors which you would  
9 have to consider in your expertise, and in your judgment  
10 upon which the water quality of the lake would depend?

11 ANS. Certainly the quality of surface water flowing in.  
12 As I understand it, there is a proposal for spray irriga-  
13 tion, some knowledge as to possible seepage, ground water  
14 seepage would be very helpful. That certainly is something  
15 that I could not provide." It was correct, then, that you  
16 could not provide any information about ground water seepage;  
17 is that not so?

18 MR. ENGLISH: If the Court please, I  
19 object to the question because it deals with  
20 a subject which I understand the Court has  
21 already ruled out as irrelevant to the issues  
22 of this case. This question is essentially  
23 directed to the plaintiff's site plan. The  
24 question immediately before the one read by  
25 Mr. Lindeman makes it clear that the lake that's

1 being talked about is the lake which Mr. Caputo  
2 proposed to create on his own property as part  
3 of his development. I think a question of  
4 seepage and a commentary by this witness as to  
5 the results of spray irrigation are outside the  
6 issues. He's limited.

7 MR. LINDEMAN: The purpose of that is to  
8 find out, of course, first, if it was correct,  
9 and then to coordinate that with additional  
10 testimony on the same general subject, which  
11 appears at page 58, and which--

12 THE COURT: Go on with your question  
13 before I rule on Mr. Conover's (sic)--

14 Q Page 58, this question, line 7, "As far as the  
15 natural inventory report, what would be your comment to the  
16 content of the answer which you just gave to the water quality  
17 report? ANS. About the advisability of the pond? QUES. Lake--

18 MR. FERGUSON: Well, Mr. Caputo's property. MR. AMBROSE: Of  
19 course. MR. FERGUSON: Well, he has already said he can't  
20 give you any testimony about the advisability of a lake on  
21 Mr. Caputo's property. QUES. In terms of the natural  
22 resource inventory? ANS. I have also testified that in  
23 terms of the geology and soils, I would not be capable of  
24 expressing an opinion. And, here, again, in particular you  
25 want to point out the advisability of very detailed specific

1 studies, and it should be done to determine exactly what the  
2 soils geology and so forth are on this lake site." Now,  
3 is that correct, Mr. Lloyd? A It's correct to  
4 the extent that I was referring specifically to this 20-acre  
5 site that is proposed for the lake. I had no specific  
6 knowledge at the time exactly what the permeability of the  
7 soils were. I could not testify on exactly how much seepage  
8 may enter into the lake.

9 Q Isn't it also true that your study of the area  
10 to the extent that you made a study was that as a technician?

11 MR. ENGLISH: May I object to the ques-  
12 tion. It isn't clear to me what the area is;  
13 if the question relates to the area of Mr.  
14 Caputo's lake, I object to it. The issue be-  
15 fore the Court is the admissibility into  
16 Evidence of the natural resource inventory of  
17 not only all of Chester Township, but 197-  
18 square mile area of the north branch of the  
19 Raritan River, which this witness prepared,  
20 and he has stated that he used published data  
21 of the kind which scientists customarily rely  
22 on, and the question related to the lake, which  
23 is already out of the case as an issue, has  
24 absolutely nothing to do with the admissibility  
25 of the natural resource inventory. I object to

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the question.

MR. LINDEMAN: Your Honor, Mr. Ambrose was not just asking about the lake. He was talking about the soils around the lake. I think there is not very much doubt but that the area around the lake is the area of the Caputo property, which borders on the stream or is near the stream, and which is not far from where any development would take place. Now, in this testimony that Mr. Lloyd gave, he said that he didn't know anything about the geology or the soils. Now, I'm asking him whether or not--

THE COURT: As it relates to the lake?

MR. LINDEMAN: Yes, as it relates to the lake. But, we're talking about the Caputo tract, and he doesn't know anything about the soils or the geology there. I mean, are we so bound by the juxtaposition of that question which involves the word, "lake," and an answer that he doesn't know about soils and geology, that it's related solely to a sole perimeter around the lake. He's talking about the soil and geology. We were talking about a particular area in the question. He said he doesn't know

1 anything about it. Now, my question is  
2 directed to a further aspect of Mr. Lloyd's  
3 function here, mainly that as a technician,  
4 and I think that, that goes along with whatever  
5 he may have said about his knowledge of the  
6 geology and the soils...

7 THE COURT: What's your objection?

8 MR. LINDEMAN: The objection is that  
9 report that refers to anything about soils is  
10 highly detrimental whatever it may say, because  
11 the witness testified in 1976 that he knew  
12 nothing about the soils and the geology, and  
13 now we're getting a report that refers to soils  
14 and geology. I submit further that there will  
15 be other reports that will be offered that will  
16 refer to geology in a very particular and  
17 highly expert way, which this witness should  
18 not be permitted to offer because he told us  
19 he didn't know anything about it, and now to  
20 have him identify a report, and for that pur-  
21 pose to have the report offered that will refer  
22 to the character and quality of the soil, and  
23 the geology, is really contrary to the rules  
24 and should not be received, particularly in  
25 the light of his previous testimony.

1 THE COURT: You know, you intrigue  
2 me, Mr. Lindeman, because oftentimes it's very  
3 easy to extricate language from the questions  
4 that are being asked of a witness after those  
5 questions have been put down on paper, and the  
6 answers have been put down on paper, and to  
7 fan them out a little bit by opening up the  
8 fan, like the traditional Japanese girl's fan,  
9 and it's often hard for someone who was not  
10 there, which neither you nor I was, to get the  
11 clear framework of the questions, but it seems  
12 to me that from what is being said here, and  
13 the answers being given, yes, Mr. Ambrose was  
14 saying as the natural inventory relates, but  
15 relates to the advisability of a pond, and  
16 then he says, that's about, a question by the  
17 witness, then the questioner says, "Lake."  
18 Mr. Ferguson says, "Well, on Mr. Caputo's pro-  
19 perty." Mr. Ambrose says, "Of course," and  
20 I'm reading from page 58, starting at line 11.  
21 Then Mr. Ferguson says, "Well, he has already  
22 said he can't give you any testimony about the  
23 advisability of a lake on Mr. Caputo's property."  
24 Question by Mr. Ambrose: "In the terms of  
25 natural resource inventory? ANS. I have also

1 testified in terms of the geology and soils.  
2 I would not be capable of expressing an opinion  
3 here again in particular. You want to point  
4 out the advisability of very detailed, speci-  
5 fic studies. It should be done to determine  
6 exactly what the soils, geology, and so forth  
7 are on this lake site." So, the framework of  
8 this question, the interjections by Mr. Fer-  
9 guson, the questions or responses by Mr.  
10 Ambrose seem to all be focusing in on the re-  
11 lationship between the natural inventory re-  
12 port, and Mr. Caputo's site. Yes, certainly  
13 it relates to the sum of the area. But, the  
14 question seems to be zeroing in.

15 Now, I'm not saying that as to all of  
16 his geology and soil reports that are con-  
17 tained in D-24, that I'm necessarily going  
18 to find that it's admissible until I perhaps  
19 can get some more foundation from it, but for  
20 you to extricate that and say that he can't  
21 testify at all about soils because of these  
22 answers, I would say no, you're wrong, as I  
23 read the questions, and, of course, I wasn't  
24 there, but the questions seem to relate to the  
25 inventory report as it relates to the specific

1 site, and as it relates back to the question  
2 of the spray irrigation, and the percolation  
3 or porosity of the soil, and he's saying he  
4 can't do that, was not capable of expressing  
5 an opinion on the geology and soils. Here,  
6 again, "in particular as it relates exactly  
7 to the area around this lake site." To suggest  
8 this is a basis for objecting to a study,  
9 doesn't, as I read it, come well-founded.  
10 However, you know, I don't know what these  
11 reports are that he relied upon. So, from the  
12 standpoint, if this is the basis of your  
13 objection, I'm going to overrule it. But, I'm  
14 not saying that the entire study is going to  
15 be admitted in because I have overruled it on  
16 the objection. All right.

17 BY MR. LINDEMAN:

18 Q The reference to soil limitations for agri-  
19 culture appearing at page 34 of D-24 for Identification, and  
20 soil limitations for homes--

21 THE COURT: Did you say for homes?

22 MR. LINDEMAN: Homes, yes.

23 Q -- is taken from what source, Mr. Lloyd?

24 A It was taken from the Soil Conservation Service manu-  
25 als that were prepared for Morris County and Somerset County.

1 Q Did you study any of the tests upon which any  
2 of those reports were based? A No.

3 Q Are those published reports?

4 A Yes, they are.

5 Q Do you have them? A I have,  
6 excuse me.

7 Q Are they available to you? A The  
8 soil survey for Morris County is now published. It wasn't  
9 at the time that I prepared the study. As I recall, the  
10 soils survey for Somerset County was published. I used  
11 kind of a preliminary report, if I recall, for Morris County.

12 Q Now, at page 40 of the report, it is stated  
13 at the bottom, that map 14 shows that most soils in the  
14 Piedmont portion of the watershed in Somerset and--

15 MR. LINDEMAN: Well, sorry, I withdraw  
16 that. It's not even this county. Withdraw  
17 it.

18 Q Is there any conclusion that is drawn in, on  
19 the subject of the soil limitation for homes with respect to  
20 the area in question in this D-24? A In Chester  
21 Township?

22 Q Well, yes. At least in the area where Chester  
23 is located. A Somewhere in the report, as I

24 recall, it does say in general that a development in the  
25 highlands portion of the watershed, which includes Chester

1 Township should be done very carefully owing to natural  
2 features, such as the soils, natural constraints such as the  
3 soils, slopes, so forth.

4 Q It is correct, is it not, that the entire  
5 section on soil limitation, both for agriculture and for home  
6 sites deals with the subject of the quality, condition and  
7 character of soils and geology, does it not?

8 A Yes.

9 MR. LINDEMAN: Well, I do renew my  
10 objection, your Honor. I submit, again, we  
11 were misled if the witness was just talking  
12 about one particular small plot of ground in  
13 his direct testimony. Any reference, therefore  
14 to the geology and its impact on the report, I  
15 submit, should not be received. So, it's really  
16 the same objection.

17 THE COURT: Well, I don't know the ex-  
18 tent to which the soil characteristic, the  
19 geology characteristics bear on the report.  
20 I know it's characterized as an inventory.  
21 I don't know precisely what the purpose of  
22 the report is.

23 MR. LINDEMAN: I don't either, really.

24 THE COURT: Without that I can't say  
25 yes or no to marking that report in. I've got

1 to know a little bit more, why he relied on  
2 these other reports, why it was necessary.  
3 Certainly, Rule 56 of Evidence permits an ex-  
4 pert to rely on some hearsay. The rule says,  
5 as I read it, and I'm looking at it, "primarily  
6 facts and evidence established by the testi-  
7 mony or by the evidence at the trial," but I  
8 don't know enough right now to know what is  
9 meant by the inventory and without sufficient  
10 identification, I won't allow it to be marked  
11 in at this time. I have to know more about it.

12 MR. ENGLISH: Perhaps I can ask further  
13 questions which may clear up these matters.

14 THE COURT: Sure.

15 BY MR. ENGLISH:

16 Q Mr. Lloyd, is it correct to say that the natu-  
17 ral resource inventory, at least the text of it which is em-  
18 bodied in D-24 for Identification, is to some extent a com-  
19 pilation of published and other forms of standard information?

20 A That's correct.

21 Q And, you have stated, I believe, that with  
22 respect to the soils and geology, you, at least with the  
23 soils, you relied on the materials prepared by the Soils  
24 Conservation Service? A I did.

25 Q To the extent of your knowledge is, are the

1 reports of the Soils Conservation Service, such as those  
2 that you used in preparing D-24 for Identification, commonly  
3 relied upon by developers and people studying the environment,  
4 and the environmental impact of development?

5 A They're the standard source of soils information for  
6 planners, for developers, for engineering firms, very wide-  
7 spread use.

8 Q I think you also stated earlier that with  
9 respect to the geology, you relied on some publications of  
10 the State of New Jersey? A The map itself was  
11 prepared from the State of New Jersey Geological Map, that  
12 was the most detailed at the time the inventory was prepared,  
13 most detailed map.

14 Q To your knowledge is that a standard source of  
15 information for those who were interested in the matters  
16 shown by those maps? A Yes.

17 Q Mr. Lloyd, I direct your attention to the  
18 bibliography appearing at pages 45 and 46 of D-24 for Identi-  
19 fication, and ask you what is the relationship of the  
20 materials cited in that bibliography to the text of the re-  
21 port which is D-24 for Identification? A The  
22 text was based on information contained within these re-  
23 ferences.

24 Q And, are the references listed in the biblio-  
25 graphy regarded as standard sources for planners and engineers

1 and developers and so on? A Yes.

2 Q Mr. Lloyd, to what extent is the text of the  
3 report which is D-24 for Identification based on material  
4 that is not reflected in the sources listed in the biblio-  
5 graphy?

A Very little.

6 MR. ENGLISH: If the Court please, I  
7 now renew my offer of Exhibit D-24 for Identifi-  
8 cation.

9 MR. LINDEMAN: As a result of that  
10 last colloquy, I have another question or  
11 two on the report, if your Honor please.

12 THE COURT: Read that last question back.

13 (REPORTER COMPLIES.)

14 THE COURT: All right. Go ahead.

15 MR. LINDEMAN: Your Honor, if I'm not  
16 mistaken, I think Mr. English asked the witness  
17 if, whether the function of the report was to  
18 determine the effect--

19 THE COURT: You want something read  
20 back?

21 MR. LINDEMAN: I think he can help me,  
22 I know. I don't think that will be necessary--  
23 the effect of construction on the site in  
24 question, or on the area of the Peapack Brook.  
25 Is that not correct?

1 MR. ENGLISH: I don't recall asking  
2 any question of the witness with respect to  
3 D-24 for Identification insofar as it bore upon  
4 the plaintiff's property. I do recall object-  
5 ing to some of your questions, Mr. Lindeman,  
6 which seemed to me to get into that area.

7 MR. LINDEMAN: Your Honor, this makes my  
8 argument a little bit disjointed, but at page  
9 6 there is another, page 6 of Mr. Lloyd's  
10 deposition, which fortunately for Mr. Lloyd  
11 does not involve him, which bears upon our  
12 objection and upon the offer of this docu-  
13 ment. Mr. Ambrose, at that page, line 6,  
14 says, "What I'm driving at here is to determine  
15 whether or not at a given set of circumstances,  
16 which we'll have to define naturally, Mr.  
17 Lloyd is capable of and will be used for the  
18 purpose of giving an opinion as to the quality  
19 of water at a particular site taking into ac-  
20 count a proposed project to be built on that  
21 site, and assuming all necessary information  
22 which he may require for that has been delivered  
23 to him." Mr. Ferguson states, "Mr. Lloyd has  
24 not been retained for that purpose. "All right,"  
25 says Mr. Ambrose. Then Mr. Ferguson, "He may

1 be retained for that purpose if and when we  
2 get data sufficient to enable such an evalu-  
3 ation to be made." In the light of that, and  
4 in the light of Mr. Lloyd's testimony as to  
5 his knowledge maybe just around the lake, or  
6 whatever, I submit that if that document is  
7 to be received, it should be received only  
8 for the purpose of the litany of it, existence  
9 of what is in the streams, that is the natural  
10 resources inventory, period, and if there are  
11 any conclusions that are drawn from it which  
12 must relate to all of the things, all of the  
13 scientific data such as the condition of the  
14 soils, similar reports that they should not  
15 be received, just natural resource inventory.  
16 That's what he was, that's what we were told  
17 he was going to do. The fact we received a  
18 report late in the game, I think, renders  
19 that report inadmissible, but now we ought not  
20 to have to have received technical data upon  
21 which that report really relies, and he said,  
22 that's in the very last question and answer.  
23 He said that there's very little in the report,  
24 except that which appears in the bibliography.  
25 We really ought to have the bibliography, not

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the report. I'm concerned about the conclusions, whatever they may be.

THE COURT: I don't know what the conclusions are. Either, I take it both of you have read this report. Of course, I have not, so the title of it indicates to me physical facts of what's there. The objections to it would seem to indicate there's more than physical facts, there's conclusions in it. I would consider Rule 56-2, which talks about an opinion of an expert based primarily on facts, data, or other expert opinion established by the evidence at the trial. I know the word, "primarily," does not mean all, but it certainly means something. I don't know whether this inventory is just physical facts that are there, which it would seem to imply, or there are conclusions that are very damaging to your position. If there are conclusions that relate to the soil porosity, which you seem to conclude that there is, then I think you've got a well-founded objection if this report is based primarily on bibliographies. If it's something else, then I've got to hear about it.

I think we'll take a break. Let's take

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a break for ten minutes until five after.

(RECESS TAKEN.)

BY MR. ENGLISH:

Q Mr. Lloyd, can you state, please, what is the purpose or function of a natural resource inventory such as and including specifically D-24 for Identification, and the associated maps?

A The purpose of the environmental inventory is to synthesize natural, available natural resource data. In general, natural resource inventories are prepared from published sources of information, although on occasion some field work is done.

Q Then, essentially, it's a compilation of available information which for convenience is put into a single cover?

A It's synthesized, brought together into one complete report.

MR. ENGLISH: If the Court please, I renew my offer of Exhibit D-24 for Identification.

MR. LINDEMAN: I object again for the reasons I stated.

THE COURT: All right. With respect to what, the information that I have before me, I'll allow it to be marked in Evidence, but if there are any conclusions with respect to soil porosity to any extensive degree, it will

1 be excluded, and the general single conclusion  
2 at the end will have to be more specifically  
3 dealt with in the testimony. I'll exclude  
4 that.

5           Gentlemen, I think you know I tried to  
6 do some research in the time I have had the  
7 recess in addition to other things, and it  
8 seems to me there's a particular problem here in  
9 dealing with getting into evidence from an  
10 environmental expert the information concerning  
11 the environment. I don't think he has to under-  
12 stand what I would consider a liberal point  
13 of view with respect to the rules of evidence,  
14 I don't think he has to go out and dig up every  
15 rock and take core samples throughout the  
16 entire area to be able to testify to what  
17 types of soil generally there are in the area,  
18 what types of rocks there are, and things of this  
19 nature. When it gets very specifically de-  
20 tailed, however, down to a specific area so  
21 that there's a conclusion drawn from funda-  
22 mental knowledge that is beyond his expertise  
23 or beyond his personal knowledge so that it's  
24 more than, well, so that it is primarily based  
25 on data that is outside his personal knowledge.

1 then I think I have to exclude it. If all  
2 we have here, and I'm concluding that all we  
3 have here is an inventory of environmental  
4 resources in the area so that it's more or  
5 less a factual-type thing, I think it's ac-  
6 ceptable. If they tell me the type of soil  
7 that's one thing. If they're telling me how  
8 porous the soil is, and porosity being the  
9 very important problem in this overall law  
10 suit, then I think it's another thing. If he  
11 is basing his entire opinion and corresponding  
12 it into the porosity of the soil--when I say,  
13 "his entire opinion," I don't mean on all,--  
14 strike that. What I mean is, on that type of  
15 essential evidence and there's a primary re-  
16 lationship to any conclusion he draws, but it  
17 just seems to me that there has to be a balance,  
18 evidentially, in this sort of thing, can't be  
19 expected to go out and turn over every rock,  
20 examine it, pick up every piece of soil, or  
21 study the soil extensively. He can rely on  
22 other reports, but to the extent that it at-  
23 tempts to go primarily into a specific area  
24 such as the porosity of the soil, which apparent-  
25 ly Mr. Lindeman is quite concerned about, and

1 without reading the report, I don't know, then  
2 I would say that from that standpoint there  
3 should be a greater foundation, more opportunity  
4 to cross-examine. I don't know what the re-  
5 port says. In order for me to now rule on  
6 something in the manner which I had, have done,  
7 I'm trying to guard against certain things that  
8 I think are, could be considered improper evi-  
9 dence, but to the same extent I'm trying to  
10 balance that with other considerations that I  
11 think are practical consideration. I think a  
12 liberal interpretation of the rules relating  
13 to hearsay and expert opinions justifies the  
14 way I propose it. Whether it makes sense or  
15 not, I don't know until I have seen the report.

16 MR. ENGLISH: If your Honor please, I  
17 would be glad to ask the witness whether there  
18 are any conclusions in D-24 for Identification  
19 with respect to porosity of the soil, other  
20 than what may be stated directly in the Soil  
21 Conservation Service data which he relied on.

22 Q Can you answer that question?

23 A No, there are none.

24 THE COURT: I was assuming that there  
25 was a problem, and I don't know, maybe there

1 is not a problem. All right. I'll allow it  
2 to be marked into Evidence.

3 (D-24, report, was received and  
4 marked into Evidence.)

5 (COURT OBSERVES.)

6 BY MR. ENGLISH:

7 Q Mr. Lloyd, do I understand that the natural  
8 resource inventory which you prepared for the Upper Raritan,  
9 of the Upper Raritan watershed, includes not only the writ-  
10 ten report which is just now been received in Evidence as  
11 Exhibit D-24, but also a series of maps?

12 A It does.

13 Q And, are these maps available here in the  
14 courtroom?

A Yes, they are.

15 Q And, would you be good enough to come over to  
16 the maps and explain them to the Court so that I may have  
17 them marked in Evidence?

18 MR. ENGLISH: If the Court please, I  
19 believe all of these maps have already been  
20 marked for Identification.

21 THE COURT: I think it would help. We  
22 did get a description of them from the repre-  
23 sentative of the Watershed Association. How-  
24 ever, I don't know whether my descriptions are  
25 adequate. It would be helpful if Mr. Lloyd

1 described them in a little more detail, if  
2 he could, as you show them to him.

3 Q Mr. Lloyd, may I refer you initially to a map  
4 which has been marked as D-24 for Identification--

5 THE COURT: There's nothing else it  
6 could be other than b.

7 MR. ENGLISH: According to our notes,  
8 another map was marked 24-b for Identification.

9 THE COURT: How about h?

10 MR. ENGLISH: I'll describe this as  
11 part of D-24 for Identification.

12 THE COURT: Okay.

13 Q Can you tell the Court, please, what this map  
14 we have been looking at shows? A This map  
15 is a base map, a map that simply shows the overall study area,  
16 190 square miles of the Upper Raritan watershed. It is a scale  
17 of one to two thousand, one inch equals two thousand feet,  
18 and this first map, the political boundaries within the water-  
19 shed are enhanced. Chester Township is located roughly in  
20 the center of the map, extends all the way up here. Chester  
21 Borough is located right here in the center.

22 THE COURT: Could we do this, just to  
23 avoid any confusion about what he's talking  
24 about, are there markings on the rest of the  
25 maps underneath, or is that all one marking?

1 I'm talking about this specific map. That's  
2 the only one?

3 Just so we don't have any problems with  
4 this, let's make this one 24-m. If you would  
5 write the "m" on that, I would appreciate it.

6 MR. ENGLISH: For the record, Mr. Lloyd,  
7 the map you have just discussed shows the poli-  
8 tical boundaries, and has been marked 24-m.

9 Q One question, as the map has been prepared,  
10 does it parallel with the edges of the map, or is it at an  
11 angle? A Angle.

12 Q Is the arrow indicated in the upper left-hand  
13 part of the map pointing true north? A Yes.

14 Q In terms of orientation with respect to true  
15 north, are these other maps oriented the same way?

16 A They are.

17 THE WITNESS: Perhaps, because it's very  
18 hard to read this map, perhaps some landmarks  
19 might be helpful. The extreme north area, the  
20 northern portion of the map, Denville, and Somer-  
21 ville would be at the extreme bottom. Far Hills  
22 is located right off center to the east.

23 Q What is the source of the base map?

24 A The source of the base map are the U. S. Geological  
25 Topographic Maps.

1 Q And, does that same base map underlie the  
2 other maps which are part of the natural resource inventory?

3 A It does.

4 Q Mr. Lloyd, may I direct your attention--

5 MR. ENGLISH: May I offer in Evidence  
6 map D-24-m for Identification in Evidence?

7 MR. LINDEMAN: No objection.

8 THE COURT: In Evidence. I suspect it's  
9 24-1.

10 MR. FERGUSON: We arrived at that, too.

11 THE COURT: That's the characterization,  
12 but in any event, we'll leave it at 24-m be-  
13 cause we know what that marking is, in Evi-  
14 dence.

15 (D-24-m, map, was received and marked  
16 into Evidence.)

17 Q Mr. Lloyd, I direct your attention to map D-24-a  
18 for Identification, and ask you to tell the Court what this  
19 map shows?

20 A D-24-a is a map of 1961 land use  
21 which was developed from 1961 aerial photographs that were  
22 taken by the Aerial Photo Service Corporation. The map por-  
23 trays seven different classifications. These are forest,  
24 orchard--

25 MR. LINDEMAN: Excuse me, I have no  
objection to it.

1 THE COURT: All right. It will be  
2 marked in Evidence, also.

3 (D-24-a, map, was received and marked  
4 into Evidence.)

5 THE WITNESS: Old fields, farmland,  
6 settled areas, open areas. Because of the  
7 study, I was performing, which was a natural re-  
8 source inventory, this land use map is heavily  
9 oriented towards vegetation, rather than the  
10 traditional land use categories, but if you  
11 can bear in mind where Chester Township is,  
12 this central area, you can see that the, much  
13 of the area is wooded, this area right in here.  
14 Much of the area is either wooded or in agri-  
15 culture. Chester Borough is this area that's  
16 indicated as settled right in here, settled  
17 area is indicated by white with slanted lines  
18 through it. There's very little development  
19 up here.

20 Q Can you identify on the map the location or  
21 approximate location of the Peapack Brook watershed, and  
22 characterize the land use as shown on D-24-a?

23 A Peapack Brook originates in Chester Borough and flows  
24 in a southerly direction into the north branch of the Raritan,  
25 just above Gladstone. Gladstone and Peapack is this whole

1 area here. Excuse me. That's incorrect. The Peapack Brook  
2 flows through Gladstone and Peapack, and joins the north  
3 branch of the Raritan, just above Far Hills, which is this  
4 developed area right here, so the Peapack Brook stream length  
5 extends between these two points, and the watershed is roughly  
6 contained in this area here, and it's predominantly, land use  
7 is predominantly wooded or agriculture, scattered single-  
8 family residential.

9 Q Just one general question, Mr. Lloyd,--

10 MR. ENGLISH: If I may do it this way,  
11 your Honor.

12 Q The maps over the easel which we will be dis-  
13 cussing, which are part of the natural resource inventory,  
14 were prepared by, were they prepared by a draftsman under  
15 your supervision and direction? A Yes, they  
16 were.

17 Q So, you assumed responsibility in a profession-  
18 al sense for the maps? A I do.

19 MR. LINDEMAN: Just, excuse me, your  
20 Honor. On that. That's all right. You were  
21 graduated from college in 1962; is that cor-  
22 rect?

23 THE WITNESS: That's correct.

24 BY MR. LINDEMAN:

25 Q Land use map is 1961? A That's

1 correct.

2 Q How was the map prepared under your direc-  
3 tions as of that time? A I used the, the

4 map was dated 1961, because this was the year of the aerial  
5 photographs that were taken. The--. It's very expensive to  
6 obtain aerial photographs, and so normally you use the best  
7 ones available, which happened to be '61. They were six years  
8 out of date, but this was not considered that significant  
9 for this study. We were basically interested in general  
10 land use.

11 MR. LINDEMAN: Just curious about  
12 that.

13 MR. ENGLISH: Mr. Lindeman, do you have  
14 any cross-examination particularly on the map?

15 MR. LINDEMAN: No. That's all right.

16 MR. ENGLISH: I would suggest we do  
17 that before the map then gets taken off--

18 MR. LINDEMAN: I have none.

19 BY MR. ENGLISH:

20 Q Mr. Lloyd, I now direct your attention to  
21 the map which has been marked Exhibit D-24-b for Identifi-  
22 cation, and ask you what that shows? A D-24-b

23 is a map of the surficial geology within the Upper Raritan  
24 watershed. Exhibited are 14 different geological formations.  
25 Again, Chester Township is in this area, this general area.

1 Q Can you describe verbally what the map shows  
2 with respect to the geology of Chester Township?

3 A Nearly all of Chester Township is under underlined by  
4 granitic gneiss. However, there is a fault which is  
5 displayed on the map which trends northeast, southwest through  
6 the southern end of the, of Chester Township. This fault  
7 essentially separates the Appalachian highlands from the  
8 Piedmont lowlands. Piedmont is characterized by Triassic  
9 shales, this yellow area, very extensive yellow area in the  
10 southeast, south end of the watershed, and adjacent to the Gneiss  
11 in Chester Township is a band of Martinsburg shale.

12 Q Shown in which color? A Blue area,  
13 and Kittatinny limestone, and--

14 Q Shown in which color? A Yellow,  
15 and Hardystone quartzite. Again, Peapack Brook runs diagonally  
16 across the map through this area, and, in fact, Peapack Brook  
17 traverses the band of shale and limestone. I might point out  
18 more, there is a more recent map, and the exact boundaries  
19 of this fault in these formations is somewhat different on the  
20 map although at the time I used the official State of New  
21 Jersey map in developing--

22 Q What about the map you described as a more  
23 recent map? A The New Jersey Geological Survey.  
24 It's geological map overlay, number 25, which has been used  
25 in other studies.

1 MR. LINDEMAN: I move that remark be  
2 stricken from the record. A. W. Martin was  
3 to be a party, which may--

4 MR. ENGLISH: No objection. It will  
5 be stricken.

6 THE COURT: What was the entire--

7 MR. LINDEMAN: Related to the A. W.  
8 Martin report.

9 THE COURT: All right. Okay. It will  
10 be stricken.

11 MR. ENGLISH: Will you repeat your  
12 comments?

13 I offer in Evidence the geology map  
14 which is D-24-b.

15 BY MR. LINDEMAN:

16 Q Just briefly, Mr. Lloyd, that, all of the  
17 markings on that are taken from the literature; is that  
18 correct?

19 A No, the markings here represent  
20 the State of New Jersey Geological Map. If you want to con-  
sider the map literature, yes.

21 Q What I mean is rather than your own personal  
22 data taking and investigation, this comes from other maps?

23 A In preparing this map, a rough map was developed  
24 using the State of New Jersey map, which is a very small  
25 scale, and then we went out and field checked to the extent

1 possible, rock outcrops, to make sure where we colored in  
2 gray for granitic Gneiss, in fact was, in fact, Gneiss  
3 there.

4 Q Who is the "we" who did that?

5 A The geology consultant and myself. Consultant named  
6 Paul Dahlgren.

7 MR. LINDEMAN: That's a person who  
8 will not testify in the case? I'm putting  
9 this through the Court--

10 MR. ENGLISH: We don't plan to call  
11 him.

12 MR. LINDEMAN: The point is too minimal  
13 to raise as an objection. I just wanted to  
14 know how it was done. I have no objection.

15 THE COURT: It will be marked into  
16 Evidence. D-24-b in Evidence.

17 (D-24-b, geology map, was received and  
18 marked into Evidence.)

19 BY MR. ENGLISH:

20 Q Mr. Lloyd, I now show you a map which is, has  
21 been marked for Identification as Exhibit D-24-c, and ask you  
22 if you can tell the Court what it represents?

23 A This map represents ground water resources and four  
24 different colors are portrayed, each one represents a differ-  
25 ent classification of aquifers in terms of water yield.

1 These classifications are excellent, good to excellent, fair  
2 to good, and poor. The excellent aquifers have water yields  
3 of which average 500, approximately 500 gallons per minute.

4 MR. LINDEMAN: Objection. I think  
5 before the witness testifies factually as to  
6 what the document shows, we first ought to have  
7 an identification of it, and then perhaps a  
8 ruling as to whether it's admissible. I think  
9 the last statement was a factual thing about  
10 what the--

11 MR. ENGLISH: Let me ask another ques-  
12 tion.

13 Q First, can you identify by the colors used on  
14 the map which category of ground water resources the map  
15 shows?

16 A The light blue shows the best aquifers,  
17 the most productive aquifers in terms of ground water yield.

18 Q Will you object if I characterize that as gray  
19 rather than light blue since there are some other blue colors  
20 on this?

21 A All right.

22 Q Go ahead. A The light blue  
23 area corresponds basically to the Triassic shales, is classi-  
24 fied as good to excellent in terms of water yield; and this  
25 medium dark blue is classified as fair to good, medium blue  
consists of predominantly the granitic Gneiss in Chester  
Township; and the very dark blue, rated as poor, represents the

1 Triassic basalt formations, which are very, very poor in  
2 terms of water yield.

3 Q Now, what is the source of the classifications  
4 of excellent, good to excellent, fair and poor which are dis-  
5 played on this map? A The basis for that are  
6 published ground water resource reports for Morris County and  
7 Somerset County, and Warren County, as well. And, in addi-  
8 tion I used Hunterdon County's Master Plan Report, Number 4.

9 Q Can you describe a little more fully the ground  
10 water resources as shown on Exhibit D-24-c for Identification  
11 which existed in Chester Township? A The  
12 Gneiss area which underlies much of the township is character-  
13 ized as fair to good, and by this I mean that water yields  
14 are, average water yields for domestic wells are in the range  
15 of 50 gallons per minute. In the limestone area, which I  
16 believe is this blue, light blue band, there is, the average  
17 yield of the wells is higher. For the most part, the aqua-  
18 fiers in Chester Township are rated as fair to good, or average  
19 yield of around 50 gallons per minute.

20 Q Can you indicate on this map for the benefit  
21 of the Court the approximate course of the Peapack Brook?

22 A Peapack Brook flows between these two points. The  
23 watershed is roughly this area.

24 Q Approximately where as shown on this map is the  
25 southern boundary of Chester Township? A It's

1 right here.

2 Q So that includes some of the--

3 A Triassic shale extends up here according to my map.

4 MR. ENGLISH: All right. I offer Ex-  
5 hibit D-24-c for Identification into Evidence.

6 BY MR. LINDEMAN:

7 Q Mr. Lloyd, where is the plaintiff's parcel on  
8 that map? Will you tell us? Approximately.

9 A It's right in this area, right in here.

10 Q Characterized by what indication of ground  
11 water resources?

12 MR. LINDEMAN: Part of it is in the  
13 average, and part of it is in the good to  
14 excellent; is that correct?

15 A I have never prepared an overlay of the, your  
16 client's property boundaries on this map. According to the  
17 geological, other geological maps that I've seen in a sub-  
18 sequent study, I believe that your client may have a very  
19 small area of light blue on his property.

20 Q That would be good to excellent, and the

21 balance would be what?

A Poor. As I men-

22 tioned before, the problem is that the more recent map that

23 has been used for detailed geological studies of your client's

24 property is somewhat more accurate in this area, which--. It's

25 a very complicated geological area, and has been the subject

1 of considerable study.

2 THE COURT: Is the balance of his pro-  
3 perty in the dark blue?

4 THE WITNESS: Yes, it's in the dark  
5 blue.

6 BY MR. ENGLISH:

7 Q This is the dark blue? A Medium  
8 to dark blue; it's the fair to good area.

9 THE COURT: All right.

10 MR. LINDEMAN: I object to this docu-  
11 ment on the grounds of relevance, mainly be-  
12 cause I'm curious to hear what the purpose of  
13 it is.

14 MR. ENGLISH: If the Court please, one  
15 of the issues in the case, as I understand it,  
16 is that the validity of the zoning of all of  
17 Chester Township, and the map shows the ground  
18 water resources. There's an indication of the  
19 amount of water you can expect to derive from  
20 wells. I think it's a matter of common know-  
21 ledge that a public water service is not avail-  
22 able in Chester Township, and it seems to me  
23 that this information has some bearing upon the  
24 appropriateness of what is essentially a low-  
25 density land use scheme throughout Chester

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Township.

THE COURT: Anything further, Mr. Lindeman?

MR. LINDEMAN: No, your Honor.

THE COURT: All right. I'll allow it. Before I do that, however, tell me how,-- Well, maybe I should make a statement. As I understand it, all of the yields are based upon reports that you identified before the--

THE WITNESS: The water yields were obtained from published ground water resource reports, yes.

THE COURT: All right. I'll allow it.

(D-24-c, ground water yield map, was received and marked into Evidence.)

BY MR. ENGLISH:

Q Mr. Lloyd, I next show you a map which has been marked Exhibit D-24-d for Identification, and can you tell the Court what that shows? A This map shows the watershed boundaries, which shows the entire watershed boundary, 190-square mile watershed boundary, as well as the sub-watersheds within this 190-square miles, the major sub-watersheds.

Q Specifically, can you point out to the Court the indicated boundaries of the Peapack Brook watershed?

A Peapack Brook occurs here, roughly, in the middle.

1 It's rather long and narrow.

2 THE COURT: Let the record show that it's  
3 in the upper center, perhaps a little bit to  
4 the left of the map, and it looks like an  
5 amoeba with two eyes in it.

6 THE WITNESS: Here's the county line  
7 going about, bisecting--

8 Q Perhaps for the benefit of the Court, Mr.  
9 Lloyd, you could point out what the map indicates as the  
10 location of Chester, which I assume is Chester Borough?

11 A Chester is located in the extreme northern, would  
12 be the extreme northern end of the watershed.

13 THE COURT: By the blue dot?

14 Q And, what does this dot I'm pointing to re-  
15 present?

A Gladstone and Peapack.

16 Q Where are Far Hills and Bedminster Village as  
17 shown on this map?

A Far Hills are slightly to  
18 the south, and to the east, located by a dot.

19 MR. ENGLISH: All right. I offer Exhi-  
20 bit D-24-d for Identification into Evidence.

21 MR. LINDEMAN: The information is taken  
22 from literature, is it?

23 THE WITNESS: No, that information, well,  
24 again, if you consider maps part of the litera-  
25 ture, yes. It was taken from the U. S. Geo-

1 logical topographic maps.

2 MR. LINDEMAN: No objection.

3 THE COURT: All right. D-24-d in Evi-  
4 dence.

5 (D-24-d, watershed boundaries map, was  
6 received and marked into Evidence.)

7 Q Mr. Lloyd, I now show you a map which has been  
8 marked Exhibit D-24-e for Identification, and ask you if you  
9 can tell the Court what this shows? A This  
10 is a map of slopes within the watershed, is broken down into  
11 five different slope categories, and these categories are  
12 zero to two per cent, two to six per cent, six to twelve  
13 per cent, twelve to twenty-five per cent, and greater than  
14 twenty-five per cent.

15 Q Generally speaking, does the color become  
16 darker as you move from a lesser slope to a greater slope?

17 A Yes, it does.

18 Q And, can you indicate for the benefit of the  
19 Court the general location of Chester Township?

20 A Chester Borough is right here. Chester Township would  
21 be this area roughly, which is characterized by slopes, general-  
22 ly, in excess of six per cent.

23 Q Now, what is the source of the information  
24 shown on the slopes map? A This was det

25 from the geological survey topographic maps.

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MR. ENGLISH: I offer in Evidence  
Exhibit D-24-e for Identification.

MR. LINDEMAN: I have no objection to  
the map itself. I do object to the comment  
of the witness as to whatever percentage of  
it is applicable to any slope area.

THE COURT: Well, I can look at it.

MR. LINDEMAN: It's very difficult, of  
course, to tell where Chester actually is and  
where the plaintiff's property may be, and I  
think it's impossible, really, to determine  
that from looking at the map and that is what  
it is. I think it's probably irrelevant, but  
not worth the time to argue about. So, I don't  
object.

THE COURT: It will be marked in.

MR. ENGLISH: May I say for the bene-  
fit of the Court and counsel we had expected  
to have available a transparent overlay on the  
scale of these maps, which would show the  
boundaries of Chester. That didn't happen,  
but I think an effort will be made during the  
luncheon recess to produce that. That might  
help everybody.

(D-24-e, slopes map, was received and

1 marked into Evidence.)

2 Q Mr. Lloyd, I now show you a map which has been  
3 marked Exhibit D-24-f for Identification, and ask you if you  
4 can tell the Court what this map shows?

A This  
5 is a map entitled, "Natural Features," and it is a map that  
6 portrays the features, such as woodlands, ravines, high  
7 points, location of trout streams, so forth. It was a map  
8 that was prepared more to give a general idea of recreational  
9 and scenic opportunities within the Upper Raritan watershed.

10 Q What, generally, does the green-color marking

11 on this map show? A The green shows woodlands.  
12 These wiggly lines portray ravines. The triangles represent  
13 the tops of steep, or not steep, but ridge tops, and so forth,  
14 where you, if you were there you would have a view of the sur-  
15 rounding area, the various colors of blue represent whether the  
16 stream is stocked with trout, as well as, or whether or not  
17 it supports bass and other warm-water fishes.

18 MR. ENGLISH: I offer Exhibit D-24-f  
19 for Identification into Evidence.

20 MR. LINDEMAN: I have no objection.

21 THE COURT: All right. In Evidence.

22 (D-24-f, natural features map, was re-  
23 ceived and marked into Evidence.)

24 Q Mr. Lloyd, I now show you Exhibit D-24-g for  
25 Identification, and ask you if you can tell the Court what

1 this map represents? A This map is entitled,  
2 "K-Factor," and K-Factor is a term that has been developed  
3 by the Soil Conservation Service to, in an attempt to evaluate  
4 the inherent erodibility of soils, and the classifications  
5 that are portrayed in this map are three, low, medium, and  
6 high erodibility, inherent erodibility. This inherent erodi-  
7 bility is based on the soil structure, texture, stoniness,  
8 but not slope. The way it was determined by the Soil Con-  
9 servation Service was to set up representative soils across  
10 the entire U. S. These soils were set up in trace, and left  
11 out for the period of a year, and the amount of soil that  
12 washed out of the trace was weighed, and then all soils within  
13 the U. S. were compared to these representative soils, and  
14 assigned numerical values. Now, the numerical values that  
15 are portrayed in this map, less than .24, is associated with  
16 low; medium is .24 to .37; and high is greater than .37.  
17 These values were developed by the Soil Conservation Service.  
18 They were obtained from the Soil Conservation Service Manual,  
19 appropriate manual for each of the counties.

20 Q And, generally speaking, well, can you outline  
21 the approximate location of Chester Township on this map and  
22 comment generally on the K-Factor of the soils in Chester  
23 Township as shown on this map?

24 MR. LINDEMAN: I object to any comment  
25 at the moment, but not to outlining Chester's

1 location on the map.

2 THE COURT: Locate Chester.

3 A Chester Township is this area in the center. What is  
4 shown is that there are very, there are no soils, what the  
5 Soil Conservation Service would consider a high K-Factor, and  
6 there are a few with the medium K-Factor. The major, the soils  
7 with medium and high K-Factor are associated with the Triassic  
8 shales in the southern portion of the watershed.

9 MR. ENGLISH: I offer in Evidence Exhi-  
10 bit D-24-g for Identification.

11 MR. LINDEMAN: If your Honor please, I  
12 object to the introduction and the receipt  
13 of that into Evidence, because it's purely and  
14 solely based upon geologic and, I guess, mineral-  
15 ogic expertise. Notwithstanding that, the map  
16 really is copied apparently from other docu-  
17 ments. It refers to a technical detail, namely  
18 a K-Factor. This witness, I submit, is not,  
19 has not been qualified, and, therefore, is not  
20 able to testify really to all of the aspects  
21 of K-Factor, whatever it may involve. I think  
22 that has to do with erodibility. While the  
23 map shows that most of the property of the Town-  
24 ship is good, I'm concerned about its receipt  
25 into Evidence simply because there isn't any-

1 body who can properly testify about it, and  
2 I'm speaking particularly of this witness. I  
3 object. I think that should not be received  
4 in this proceeding.

5 MR. ENGLISH: If the Court please, the  
6 witness' testimony was that this data came from  
7 information put out by the Soils Conservation  
8 Service, and the determination of the K-Factor  
9 was made by them, and not by the witness.

10 THE COURT: All right. But to the  
11 extent it's hearsay, I take it that's the  
12 objection.

13 MR. LINDEMAN: Yes, sir.

14 THE COURT: Is the Soil Conservation  
15 Service criteria available on the erodibility?  
16 How they arrived at this information? So  
17 it could be, there could be questions relating  
18 to it?

19 MR. ENGLISH: I'll have to ask the wit-  
20 ness.

21 Q Is this published data? A Yes,  
22 very definitely, and in addition these particular categories  
23 that are portrayed here were suggested by Mr. Carl Eby, who  
24 is the soils scientist from Morris County.

25 THE COURT: It's in the report. This is

1 the area that I was concerned about before.  
2 Do you know if, that less than 24 or .24, I  
3 take it that goes down to zero, so--. No?

4 MR. ENGLISH: No. I think the lowest  
5 value is around .17. At least in this area.  
6 There may be soils somewhere else in the U. S.  
7 that have even lower values, but I have never  
8 seen any.

9 THE COURT: It's not that significant  
10 as it seems to me to the extent that it's in  
11 the report, I don't find that it's that signi-  
12 ficant. I'll allow it to be marked into  
13 Evidence.

14 (D-24-g, K-Factor map, was received and  
15 marked into Evidence.)

16 THE COURT: I am concerned about this type  
17 of thing. All right, as far as admissibility  
18 is concerned from this expert.

19 Q Mr. Lloyd, does this K-Factor map, D-24-g for  
20 Identification, essentially reflect information developed  
21 by and published by the Soils Conservation Service?

22 A Yes, it does.

23 Q I now direct your attention to the map which  
24 has been marked Exhibit D-24-h for Identification, and ask you  
25 to please tell the Court what this map shows.

1 A This map is entitled, "Erodibility of Soils," and  
2 it was developed at the suggestion of Mr. Eby to better re-  
3 flect the actual erodibility of soils within the watershed.  
4 It was prepared by combining slopes, the map of slopes with  
5 the K-Factor map, the one that was just presented, and on this  
6 map three different categories are portrayed, areas in the  
7 lightest yellow, blue, excuse me, areas that are lightest  
8 yellow are classified as slight, slight erodibility. In other  
9 words, and these areas are characterized by slopes of zero to  
10 two per cent, and slopes two to six per cent with the low  
11 K-Factor, low refers to the less than .24 K-Factor in a pre-  
12 vious map.

13 MR. ENGLISH: Let me interrupt you.

14 Q Do I understand you to mean regardless of the  
15 K-Factor, any land having a slope of less than two per cent  
16 was categorized for the purpose of this map as having slight  
17 erodibility?

18 A That's correct, and it's much more  
19 apparent in the Piedmont area, which showed up as having  
20 moderate, or inferring in the previous map based on the K-Factor  
21 that the Piedmont was an area where the soils were much more  
22 erodible, and you would expect to get a great deal more sedi-  
23 mentation. On this map, because of the slopes in the Pied-  
24 mont area being more gentle, there's a great deal more of the  
25 slight erodibility area.

Q And, in your last answer, your gestures were

1 directed toward the southern part of the total watershed, which  
2 is located in Somerset County? A That's  
3 correct. The moderate classification was slopes two to six  
4 per cent with medium or high K-Factor, and slopes six to twelve  
5 per cent with low or medium K-Factor, and the areas in dark  
6 brown which correspond to severe, where you would expect to  
7 find severe erosion problems are slopes six to twelve per  
8 cent with a high K-Factor, and slopes greater than twelve  
9 per cent.

10 Q Again, could you indicate for the benefit of the  
11 Court the approximate boundaries of Chester Township on this  
12 map? A Right here. Chester Borough, again, is  
13 right here in the middle. Township is this area here.

14 Q And, how would you characterize the erodibility  
15 as shown on this map as it exists in Chester Township south  
16 of Chester Borough?

17 MR. LINDEMAN: I object, your Honor.  
18 That calls for an opinion as to erodibility.  
19 I'm not sure what it could even mean, but I  
20 think that's the way the question was framed,  
21 and I object to it.

22 THE COURT: I think it's getting into a  
23 sensitive area. I'm not too sure how, this is  
24 just based upon the physiological conditions  
25 that are, one related to the other?

1 THE WITNESS: Right.

2 THE COURT: But, it's somebody's con-  
3 clusions. Is it somebody's conclusions, is it  
4 in the form of a treatise of some sort?

5 THE WITNESS: Based on experimental  
6 evidence basically is what it is, Soil Con-  
7 servation Service experiments.

8 THE COURT: I think this gets into a  
9 sensitive area, gets into the area of something  
10 like a treatise, in trying to introduce the  
11 evidence of a treatise as evidence what is said  
12 in a treatise. I think this is objectionable  
13 along the lines I was concerned about before.  
14 If it involves some analytical conclusions by  
15 the Service, not by this gentleman here.

16 MR. ENGLISH: Well, the purpose of my  
17 question which is what the objection relates to  
18 is simply this: Your Honor has the benefit of  
19 looking at the map, and I am mindful, with all  
20 due respect, your Honor may not be the only  
21 judge who has to pass on this case, and there  
22 are practical problems of making these maps  
23 available to a multi-judge appellate court, and  
24 my thought, and frankly the only purpose of the  
25 last question, was to try to translate verbally

1 into the stenographic transcript an impression  
2 which I think would be apparent to anybody who  
3 looked at this map. It was, maybe the question  
4 was not artfully put. The identification of  
5 the relative amounts of dark, medium and light  
6 coloring would suggest something as to what the  
7 map shows.

8 MR. LINDEMAN: I do object to that even  
9 as counsel explains it. I think that even at  
10 this stage dark means heavy and severe, and  
11 lighter means less so, and I don't think any  
12 comment necessarily by the witness at this time  
13 can expand on that.

14 THE COURT: Well, to the extent that it  
15 has to be offered first, and then the ruling  
16 on the offer has to go in, and the concern that  
17 I have is the analysis made by an out-of-Court  
18 expert in the form of what I would suggest is  
19 something along the line of a treatise, and,  
20 therefore, the question of the admissibility  
21 of the map comes into play. So, you're asking  
22 a question on a map that's not into Evidence  
23 yet, and that's why I gave you that little  
24 statement that I gave you before.

25 MR. ENGLISH: Well, I will offer into

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Evidence the map which is Exhibit D-24-h  
for Identification.

MR. LINDEMAN: And, I object, your  
Honor, for the reason that this really does  
call for identification and explanation by an  
expert in soils and geology. When the witness  
even refers to something such as heavy, severe  
or light, that calls for all kinds of inter-  
pretations and I think that a searching examin-  
ation has to be made as to the meaning of those  
words, what the meaning of references to the  
slope percentages may be, and whether or not  
tests have been made of the soils actually to  
determine if they meet the, whatever the  
criteria may be involved in the various color-  
ations. This witness, I submit, does not hold  
himself out to be qualified in that field.

THE COURT: Mr. Lloyd, if I understand  
you correctly, someone has made an analysis  
of the K-Factor as it relates to the slope  
and based on his expertise has come to the  
conclusions of erodibility of the soil as re-  
flected in this map?

THE WITNESS: That's correct.

THE COURT: I think the objection is

1 sustainable. I will not allow it to be marked  
2 in Evidence without--

3 MR. FERGUSON: May I confer with Mr.  
4 English?

5 THE COURT: You may. It's lunch time.

6 MR. FERGUSON: We can put a different  
7 perspective on this after lunch.

8 (LUNCHEON RECESS OBSERVED.)

9 THE COURT: Now there was something that  
10 you were going to discuss with Mr. English--

11 MR. ENGLISH: May I ask the witness a  
12 few more questions?

13 THE COURT: Surely.

14 MR. ENGLISH: In an effort to clarify  
15 the matter.

16 Q Mr. Lloyd, is there any information shown on  
17 the erodibility of soils map, which is D-24-h for Identifi-  
18 cation, that would not be available to anybody who asked  
19 for it from the Soils Conservation Service? A No.

20 Q Is the information shown on this map that kind  
21 of a map showing the erodibility of soils the sort of thing  
22 that an environmental planner would customarily use in the  
23 course of his work?

24 MR. LINDEMAN: If your Honor please, I  
25 object because I think that the witness is not

1 an environmental planner. I'm not really  
2 sure what his exact category is, but he does  
3 not--

4 THE COURT: He testified that he was  
5 more, that--. I'll allow the question.

6 A Yes.

7 MR. ENGLISH: If the Court please, I  
8 renew the offer of Evidence. I would submit  
9 that it is admissible, not only in the light  
10 of the foundation laid by this witness, but  
11 this, if nothing else, shows what the witness  
12 did. This is a part of the natural resource  
13 inventory, would seem to me that since much of  
14 it has already been accepted into Evidence,  
15 some of it without objection, that it would be  
16 wrong to keep out one integral part of the  
17 total inventory. I submit that the question  
18 of admissibility is separate from the question  
19 of what weight the Court may want to give to  
20 the Exhibit, but it does seem to me that a  
21 proper foundation has been laid to mark it in  
22 Evidence, and I renew my offer.

23 MR. LINDEMAN: Your Honor, I stand by my  
24 objection to it. I do not concede that we have  
25 failed to object or have consented to the entry

1 of anything that would relate to any technical  
2 aspect of soils and conclusions to be drawn  
3 from it, and this map, even if it merely re-  
4 states that which other maps of which the  
5 Court might take judicial notice might say,  
6 it nevertheless has on it words such as severe,  
7 moderate and slight, and those words, I submit,  
8 without more are conclusionary and call for  
9 expert testimony. The references on the map  
10 itself to places where erodibility, whatever  
11 they may mean, appear, I think is prejudicial  
12 in the sense that without the Court's really  
13 knowing what it all means, those designations  
14 are either potentially misleading or non-  
15 enlightening, but in any event they're hearsay.

16 THE COURT: All right. You have here a  
17 map, by Mr. Lloyd's testimony, is certainly  
18 something that's based on someone else's con-  
19 clusions through analysis of data. A very sig-  
20 nificant portion of this case relates to the  
21 question that's being reflected, or the infor-  
22 mation that's being reflected by that map.  
23 As I indicated at the outset, I have the counter-  
24 balancing considerations to deal with. One,  
25 imposing a burden on any expert to go out and

1 check item by item or to rely on reports.  
2 However, it's one thing to rely on reports for  
3 factual information that does not include  
4 evaluations, subjective as they are, particu-  
5 larly when you use the words, "slight," "moderate,"  
6 and "severe," as pointed out by Mr. Lindeman.  
7 It's another to utilize information or attempt  
8 to utilize "slight," "moderate" information.  
9 It just seems to me that we're in an area here  
10 where comparable to utilizing of treatises  
11 where without the expert present we don't know  
12 how the expert arrived at these characterizations,  
13 what combinations of factors made certain areas  
14 other than just slope and K-Factor, made certain  
15 areas darker on this map, and lighter than  
16 others. I'm satisfied the ruling I made before  
17 should be continued, that it is objectionable  
18 and so is that portion of the report dealing  
19 with the K-Factor on soil erosion. It's just  
20 too important a matter in this case to allow  
21 this man to identify a map made by a soil  
22 conservation expert when he himself does not  
23 pretend to have any expertise in this area,  
24 to allow it to be marked into Evidence. I'm  
25 satisfied that in order for that map to go into

1 Evidence, you're going to have to have the  
2 expert who developed the map so that he could  
3 be properly cross-examined so the ruling will  
4 remain the same.

5 Mr. Lloyd, just so I'm clear, there are  
6 two sections on soil erosion, pages 35 and 36 of  
7 the report. It seems this map relates to what's  
8 on page 36, erodibility of soils, and it ties  
9 in that map; is that correct?

10 THE WITNESS: Yes.

11 THE COURT: As that section relates  
12 to the map, I'm not going to allow any con-  
13 clusions drawn from those sections to be con-  
14 sidered part of the Evidence. I don't know  
15 where it stands in--I have not read the entire  
16 report. I tried to follow along with Mr.  
17 Lloyd's testimony, but I think it's a highly  
18 critical problem in this case, the erodibility  
19 and porosity of soil and factors of this  
20 nature, and if the township is going to rely  
21 on information like this, they're going to have  
22 to produce the experts who developed that type  
23 of information. I don't think it's proper  
24 through Mr. Lloyd. Even though I have allowed  
25 some of it in, Mr. English, I will not allow

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that in.

MR. ENGLISH: Well, I appreciate your Honor's ruling.

THE COURT: You mean you understand it. I don't know whether you appreciate it.

MR. LINDEMAN: I appreciate it.

MR. ENGLISH: I understand what it is. I guess "appreciate," I was using it in a British meaning. I sense your Honor may be under somewhat of a misapprehension because it's my understanding that the "slight," "moderate," "severe" concepts being a combination of slopes and K-Factor as shown here is the position taken by the Soils Conservation Service.

THE COURT: I know but--

MR. ENGLISH: Now, if it's your Honor's ruling that the testimony of Mr. Eby, who was to develop this, as a prerequisite of that, I understand what your Honor is saying, but my answer to that would be since this is the same classification that would be available to Mr. Lindeman, to me, to you, or anybody else who asked the Soils Conservation Service, I think you're in essentially the same situation as you are

1 with all of their classifications of soil in  
2 their reports. The reports they issue as to the  
3 characteristics of soil are, necessarily,--  
4 involve some degree of professional judgment  
5 and expertise, and where we're in the area of  
6 a professional such as Mr. Lloyd, utilizing  
7 the published material available to everybody,  
8 commonly used by professionals in doing these  
9 kinds of things, it seems to me that this  
10 information ought to be accepted by the Court.  
11 We can't go back and re-invent the wheel for  
12 every single exhibit that comes into the case,  
13 or every single report that the Bureau of  
14 Geology, Soils Conservation Service, or any  
15 other governmental body puts out.

16 THE COURT: I realize that, but as I  
17 understand this offer, you're offering to show  
18 the erodibility of soil, and the factors to  
19 support it, to justify in part the two and  
20 five-acre zoning in that area. It plays a  
21 very substantial part in the township's case  
22 as it relates to the reasons for having two and  
23 five-acre zoning.

24 Now, you're asking me to accept that  
25 from a man who admittedly says to me there

1 are factors that went into this, somebody  
2 else's analysis that went into it subjectively,  
3 an expert that I don't know how he arrived at  
4 these characterizations. He puts the two  
5 together. There has to be some subjective  
6 analysis. Those are the answers Mr. Lloyd gave  
7 me to the questions before. If that's so, and  
8 you want me to rely on it, then Mr. Lindeman  
9 has a right of cross-examination, which he's  
10 being denied as to this man, and you say,  
11 you said initially, or at one facet, it's a  
12 difference between weight and admissibility.  
13 Well, I would agree sometimes there's a fine-  
14 line distinction, but in this case the signi-  
15 ficance of that map and its relation to the over-  
16 all position of the township, it's more than  
17 a fine-line distinction, because if I have to  
18 accept what's on that map, I'm accepting, I'm  
19 taking a giant step forward for the township's  
20 position that you've got to have two and five-  
21 acre zoning in this area, and I think in order  
22 to do that, I think Mr. Lindeman should have  
23 the man who decided how he put these two fac-  
24 tors together.

25 You know, I don't remember but whether

1 the K-Factors, I don't know the relationship  
2 between the K-Factors and the slope factors.  
3 It says there that it's a range, but as I recall  
4 one of the maps, there's an area, if I recall  
5 correctly, that seems to, and I looked at one  
6 specific area and my recollection is not pre-  
7 cisely that clear without comparing them, but  
8 there's an area where the slope is not severe  
9 on the first map, but it calls for a severe  
10 sloping on this map. I've got to know.  
11 What I'm saying is, I have to know how he put  
12 these two factors together, because this is  
13 a very substantial part of the case, and I think  
14 Mr. Lindeman has to have the opportunity for  
15 cross-examination in this area.

16 MR. ENGLISH: Well, my understanding,  
17 perhaps if your Honor doesn't object, the wit-  
18 ness can correct me if I'm wrong, maybe your  
19 Honor can correct me, but I thought the witness  
20 testified that the information shown on this  
21 map, 24-h for Identification, is essentially a  
22 combination of the data shown on two other  
23 maps that are already in Evidence. One was  
24 the slope map, and the other was the K-Factor  
25 map. Now, --

1 THE COURT: But, he told me there was,  
2 and correct me if I'm wrong, he told me it was  
3 subjective analysis that went into that to come  
4 up with these factors. Did you tell me that,  
5 Mr. Lloyd?

6 MR. ENGLISH: If I understand it, it's  
7 the combination of either slopes of less than,  
8 not more than, two per cent, or slopes of two  
9 to six per cent, plus a low K-Factor which en-  
10 tered into the labeling of "slight." The  
11 judgmental factor, if I understand it correctly,  
12 is simply on characterizing some situations  
13 as "slight," others as "moderate," others as  
14 "severe," and to repeat, my comment on that  
15 point is that this is the standard position  
16 taken by the Soils Conservation Service, and  
17 it's available to everybody asking for it  
18 just the way they will tell you that these  
19 soils have a K-Factor of thus and so, or  
20 these soils have a permeability of thus and  
21 so, any other characteristic.

22 THE COURT: Okay. Am I, was I correct  
23 in my conclusion?

24 THE WITNESS: Mr. Eby suggested these  
25 counter-courses.

1 THE COURT: He's the one who subjectively  
2 categorized the category by putting the two  
3 factors together?

4 THE WITNESS: Yes.

5 THE COURT: That's what concerns me,  
6 that aspect of it. It would seem to me that  
7 the plaintiff is being denied, I think, an  
8 adequate opportunity to cross-examine. I  
9 recognize that they're maps of the Soils  
10 Conservation people, and as I said to you be-  
11 fore, I'm torn between the logic of making, or  
12 the illogic of making a person go out and  
13 analyze all the factors so that he can person-  
14 ally testify to it, but I think the point  
15 has to be reached here. I think the point  
16 has to be reached in this category because this  
17 is a very crucial part of the case. I don't  
18 know there's just, as you suggest, taking one  
19 and the other and putting them together and  
20 coming up with the result, but he suggests,  
21 Mr. Lloyd suggests there's some subjectivity,  
22 and if there is, the expert should be here to  
23 indicate it.

24 MR. ENGLISH: I appreciate your Honor's  
25 patience--

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THE COURT: We'll leave it at that

point.

BY MR. ENGLISH:

Q Mr. Lloyd, I now show you Exhibit D-24-i for Identification, and ask you if you can tell the Court what that map shows?

A This map is entitled, "Soil Limitations for Light Buildings with Cellars." There are threecolors on the map, white, tan and a red. The white means slight; tan, moderate; and red, severe limitations. The criteria for these, again, came from the Soil Conservation Service manuals. We do have an overlay now--

Q Before we get to that, are the characterizations, "slight," "moderate," and "severe" as shown on this map determined by the, directly by the Soils Conservation Service?

A Yes.

Q And, if so, are those characterizations stated in publications of the Soil Conservation Service?

A Yes, they are. And, they're also included in Appendix A, specific criteria that went into these three categories are included on page 85 of Appendix A of my report.

Q And, is Appendix A, appendix on page 85 of your report, reproduced directly from the Soils Conservation Service publications?

A It was retyped, yes. Merely, as I recall, a copy. The categories that are evaluated in this are flood, hazard, depth to water table, soil

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1 drainage classification, bedrock depth, sheer strength,  
2 number of factors related to the engineering capability of the  
3 soils, soil permeability, slope, surface stoniness, and rock  
4 outcrops.

5 Q And, is the characterization of a particular  
6 piece of ground as having "slight," "moderate," or "severe"  
7 limitations indicated on the maps and directly in the publi-  
8 cations of the Soil Conservation Service? A Yes.

9 MR. ENGLISH: Might I offer D-24-i for  
10 Identification into Evidence?

11 MR. LINDEMAN: Exact same objection,  
12 your Honor.

13 THE COURT: We get into the same type  
14 of problem of evaluation by the Soil Conser-  
15 vation Service of putting all these factors  
16 together and making an evaluation, subjective  
17 evaluation.

18 THE WITNESS: This is somewhat different  
19 because it is an entire government agency  
20 effort as opposed to basically this, Carl Eby.  
21 In other words, these are standards that are  
22 presumably nation-wide standards, standards  
23 that have been developed by the Soil Conser-  
24 vation Service as opposed to Carl Eby's  
25 judgment as to the relative erodibility of

1 the soils.

2 THE COURT: Well, how do they, for  
3 instance, they take all the factors that are  
4 listed in this chart and they put them together,  
5 how do they arrive at, say, a red area as  
6 opposed to a brown area? Is there some kind  
7 of formulation they follow?

8 THE WITNESS: What appears on this map  
9 is simply a grouping of all the particular  
10 soil types that are rated as severe, and all  
11 the particular soil types that are related,  
12 excuse me, are classified as having moderate  
13 limitations as appears brown. If he weren't  
14 to do that, what you would have is a mass of  
15 something like a thousand different soil types  
16 all over this map, and no way to use the in-  
17 formation.

18 MR. ENGLISH: If the Court please, may  
19 I ask the witness a further question?

20 THE COURT: Surely.

21 Q Mr. Lloyd, has there been any step or process  
22 of evaluation by you or anyone else between the publications  
23 of the Soil Conservation Service and the preparation of this  
24 map? In other words, is this map simply a visual portrayal  
25 without any evaluation or interpretation of the material

Lloyd-direct 99  
1 contained in the published reports of the Soil Conservation

2 Service? A That's correct.

3 MR. LINDEMAN: May I ask some questions,  
4 your Honor?

5 THE COURT: Surely.

6 BY MR. LINDEMAN:

7 Q Mr. Lloyd, what is meant by the word, "limi-  
8 tations," with regard to D-24-i? A Soil limi-  
9 tations are characterized by or associated with flood hazard.  
10 In other words, if a soil is flooded once every year, it has  
11 a severe limitation, depth to water table, soil drainage  
12 classification, bedrock depth, this same list of criteria in-  
13 cluded in the report constitute the limitations.

14 Q Do you know whether "limitations" means that,  
15 whether it's severe or slight that light buildings with cel-  
16 lars should not be built in that area, or should be built?

17 A No, I don't think it has anything to do with that.  
18 What the purpose that the Soil Conservation Service had in  
19 preparing these criteria was just to be able to generalize  
20 under what conditions it may be least hazardous to build a  
21 house or least expensive in terms of construction costs.

22 They are, the Soil Conservation Service is not saying you can  
23 not build a house in this particular red area. All they're  
24 saying is, if you want to build a house there, then you're  
25 going to have severe limitations, soil limitations to deal

1 with, and then if you want to know exactly, you must go to  
2 your, to the soil manual and look up the particular soil and  
3 read the specifics on it to determine what limitations there  
4 are.

5 Q Are the limitations, then, equally related to  
6 the bearing capacity of the soil as to the effect of the  
7 cellar on the environment? A I don't understand  
8 your question.

9 Q Well, I'm concerned about what direction the  
10 word, "limitation," takes. Does it have to do with the  
11 capacity of the soil to support a building, light building,  
12 or does it have to do with the effect that the building may  
13 have upon the environment, or is it equal, or is it weighted  
14 more to one than to the other? A I doubt they  
15 weighted it.

16 Q Mr. Lloyd, without interrupting, I am inter-  
17 rupting, but what does it refer to? Does it refer to the  
18 bearing capacity of the soil or to something else?

19 A Well, it relates to all these factors, a particular  
20 soil relates to all the different, the different factors which  
21 include sheer strength and depth, high water table, all these  
22 things, and if a soil has a severe flood hazard, for example,  
23 in other words it's flooded, say once every year, and it,  
24 even though it might have sheer strength and some of these  
25 other characteristics that are suitable, it would be classified

1 in the severe limitation category. In preparing these maps,  
2 and when criteria are developed the general method is to work  
3 from the worst condition to the best. In other words, when you  
4 prepare a map such as this, you physically color in all the  
5 red areas, and if you're classifying something, you classify  
6 those things that have the most severe limitations first, and  
7 you end up with, what's left is the slight limitations, and so  
8 that there is, in that way you avoid the possibility whereby  
9 you have, say, nine factors which have slight limitations,  
10 and one which is severe.

11 Q So far as classifying the terrain or the area  
12 in anyone of those colors, it is necessary to know something  
13 about the--, I don't know whether it's the chemical or the  
14 geologic composition of the soil, and the topography, and the  
15 effect of the topography upon the geology, and how the geo-  
16 logy, how the soil is, reacts to water, whether it be rain-  
17 fall or flood, all those things; isn't that fair to say?

18 A This right here represents what the S.C.S. has done.  
19 I didn't do that. I certainly didn't go out and, obviously,  
20 do all these test borings, whatever. The Soil Conservation  
21 Service did it.

22 Q My question, though, is: It is necessary to  
23 know those things that I just asked about in order to arrive  
24 at the various classifications; isn't that so, you must know--

25 A The Soil Conservation Service must know that.

1           Q       Right, and you must know where, you must have  
2 some experience in other, and perhaps similar, areas where  
3 conditions such as these may have been encountered, so that  
4 one can conclude that a limitation, if that's the right  
5 word, is either severe, moderate or slight; isn't that so?

6           A       The Soil Conservation Service, yes; not me particularly,  
7 if that's what you were getting at.

8           Q       Whoever does this. I realize it's not you.

9           A       Yes.

10                           MR. LINDEMAN: I stand by my objection,  
11 your Honor. I think that it's even more apparent  
12 that while we know what the document purports  
13 to do that, it is, it really ought not properly  
14 be received at this time, with the extent of the  
15 identification that has been made.

16                           MR. ENGLISH: If the Court please, if  
17 this objection is sustained the Court is holding  
18 the reports of the Soil Conservation Service  
19 which classifies lands as having "slight,"  
20 "moderate," or "severe" limitations for light  
21 buildings, which cannot be used in Evidence in  
22 any proceeding unless you produce the scientist  
23 from the Soils Conservation Service who pre-  
24 pared those reports. Now, that goes contrary  
25 to the practice. These are standard publi-

1 cations used by builders, used by planners,  
2 The whole point of the report being issued is  
3 to make these kinds of professional judgments  
4 by the Soil Conservation Service available to  
5 people, and they are official government re-  
6 ports. They're available to anybody. They are  
7 prepared on the uniform basis, and if this ob-  
8 jection is sustained, then the Court is saying  
9 that every time anybody wants to use a Soil  
10 Conservation Service in Court, he's got to haul  
11 in a lot of scientists, some of whom may be  
12 dead, some of whom may no longer be here. It's  
13 a totally impractical rule, and it seems to me,  
14 the ruling is made unnecessary by the principal  
15 that official government reports can be re-  
16 ceived into Evidence.

17 MR. LINDEMAN: If your Honor please--

18 THE COURT: Hold it. Are you saying  
19 there's a rule of Evidence that says that every  
20 official government report, if it has the offi-  
21 cial stamp of the U. S. government, or State  
22 government, or County government is admissible  
23 into Evidence, and the Court can give, accept  
24 it into Evidence without giving the opponent to  
25 that report an opportunity to find out what

1 went into the report, and how the conclusions  
2 were arrived at in that report?

3 MR. ENGLISH: Not in every case.

4 THE COURT: You have two attorneys here,  
5 three attorneys here. I'll let you go down-  
6 stairs to the law library and show me, if you  
7 can find a case that supports your proposition,  
8 when it's a crucial point of law, as it is here,  
9 and I'll give you the guidance that I had my  
10 law clerk--. It's an evidential problem, as  
11 I read it. Rule 56 is the rule that we're  
12 dealing with. Justice Brennan wrote an opinion  
13 in Ruth vs. Fenchel, 21 N.J. 171, that dealt  
14 with the use of treatises offered as substan-  
15 tive evidence, and it's a general rule to deny  
16 that on the grounds that the offer of contents  
17 purports to employ testimonially a statement  
18 out of Court, in this particular case allowed  
19 cross-examination to weaken an expert's testi-  
20 mony, but that's not what we have here. I think  
21 governmental reports are governmental reports,  
22 in all deference to the government, because the  
23 U. S. government has put a stamp on the outside  
24 of it does not make it admissible per se into  
25 a Court of law.

1 I think there should be something to  
2 suggest how it's arrived at, and a party should  
3 have a right to cross-examine it. The reason  
4 I say that is simple, because the people who  
5 are in Washington, who are making the decisions  
6 are the same kind of people who make other  
7 expert reports. They just happen to work for  
8 the U. S. government in some instances. Now,  
9 we're not talking about surveys, census, things  
10 like that. We're talking about substantive  
11 evidence here that you're asking me to accept.  
12 I have difficulty with your overall proposition.  
13 I would be glad to be shown where I'm wrong.  
14 I'm always willing to acknowledge I'm wrong, if  
15 I'm wrong.

16 MR. FERGUSON: My recollection is Mr.  
17 Salzman testified with respect to the classi-  
18 fication of soils from the Soil Conservation  
19 Service booklet or book, which has been marked  
20 D-1 for Identification, and I believe he testi-  
21 fied that that was an accepted classification  
22 of soils, and I believe that what we're talking  
23 about on this map is a pictorial representation  
24 of what P-1 for Identification in fact says.  
25 I think the plaintiff has already, by having

1 Mr. Salzman so testify, vouch for the authen-  
2 ticity, accuracy of what the Soil Conservation  
3 Service did.

4 MR. LINDEMAN: To that I say, your Honor,  
5 if Mr. Salzman did so testify, and perhaps he  
6 did as to the classification of the soils,  
7 that is one thing. But, when you characterize  
8 the soils and you're not an expert in that  
9 area, and I submit that D-24-i is a character-  
10 ization, you're going beyond classification,  
11 and merely reprinting or restating what the  
12 Soils Conservation report may have said by way  
13 of classification.

14 MR. FERGUSON: Mr. Salzman did, on  
15 cross-examination, state he disagreed with  
16 the Soil Conservation Service, but the fact that  
17 he used their characterization of soils and  
18 data, I think indicates that it is the kind  
19 of universally recognized data source that  
20 professionals, be they geologists, environ-  
21 mental planners, or planners, look to when  
22 doing the kind of thing that Mr. Lloyd did here,  
23 which is prepare the N.R.I.

24 THE COURT: I don't like to use techni-  
25 cal rules to prevent getting evidence before

1 me. In this instance, if you're going to  
2 rely on it to the extent it seems you're going  
3 to rely, you have to show me there's some rule  
4 of law that supports your proposition that's in  
5 our cases. I remember Mr. Salzman testifying--

6 MR. FERGUSON: I believe it's on my  
7 cross-examination.

8 THE COURT: Such things as Pre-cambrian  
9 Gneiss, the bedrock, hydrology, things of that  
10 matter, and limestone.

11 MR. FERGUSON: It's when P-1 for Identifi-  
12 cation was marked, and I believe it was--  
13 D-1, rather, I believe it was on my cross-  
14 examination.

15 THE COURT: Well, recognition for a  
16 treatise for purposes of cross-examination can  
17 be different than substantively offering it.  
18 This is what Ruth vs. Fenchel holds.

19 MR. FERGUSON: It's not just a treatise,  
20 this is a, what the Soils Conservation Service  
21 did was to take a census of the soils of the  
22 U. S.

23 THE COURT: But, they're drawing con-  
24 clusions that are rather profound in this  
25 case.

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MR. FERGUSON: I don't think so. I think their conclusions, and the parameters of what they did are very specifically stated. I believe Mr. Lloyd was getting into that. He said he doesn't mean you can't build, all it means is that you have to look at these things, go back to the specific description of the soil, see what they say, and then you know what you have to deal with.

THE COURT: But, is not your objective in getting this into Evidence to show that this type of thing supports the two and five-acre zoning?

MR. FERGUSON: Yes, but there's a two-step process to get there. One is that this N.R.I. was done in 1969 from the best available evidence at that time of the physical characteristics of the township, and that the N.R.I., as a state of the art existed at that time, is the best visual and written depiction of those physical characteristics. It was done in a workmanlike manner according to the appropriate professional standards, and is an appropriately received document to describe the physical characteristics of the township.

1                   Second, the planner who in fact did most  
2 of the environmental background work on the  
3 master plan consulted these materials and veri-  
4 fied them to the extent that he saw it neces-  
5 sary. So, really, it's a two-step process.  
6 One is that the N.R.I. was, in fact, done, it  
7 existed at or around the time when the planning  
8 process was undertaken from 1972 to 1974. It  
9 was the best available state of the art at  
10 that time, and was, in fact, consulted by  
11 the planner so that in the judgment this  
12 Court must make of whether the planning pro-  
13 cess was reasonably undertaken and reasonably  
14 carried through, the Court can see what the  
15 planner looked at, and can see if, in fact, the  
16 plan is reasonably based on environmental  
17 factors.

18                   Now, the next step is whether, in fact,  
19 what the N.R.I. says is there is, in fact,  
20 there. We believe that, what the N.R.I. de-  
21 picts does in fact exist, but it's our view  
22 that it's not necessarily dependent upon whether  
23 the N.R.I. is one hundred per cent accurate  
24 because in order for this Court to make a judg-  
25 ment that the master plan and the zoning which

1 is based upon the master plan is a good-faith  
2 effort to accommodate all the different  
3 competing planning principles, provide housing,  
4 provide aesthetics, protect the environment,  
5 enhance transportation. To make that judgment,  
6 what you have to do is look at what happened  
7 and what happened was you had the N.R.I.,  
8 perhaps one of the first N.R.I.'s in the State,  
9 to come along and serve as the basis for a  
10 master plan and zone plan. The fact that the  
11 N.R.I. can be attacked, as indeed Mr. Lindeman  
12 has every right to attack it, and he may suc-  
13 ceed in showing some of it is inaccurate, in-  
14 deed Mr. Lloyd said the fault is more accurately  
15 located on later documents, but that doesn't  
16 destroy the proposition that the reasonable-  
17 ness of the master plan is based upon the best  
18 available evidence of the physical environment  
19 at the time when the planning process in fact  
20 took place as a historical fact.

21 THE COURT: Mr. Lindeman, at Mr. Fergu-  
22 son's urging I just went back through my notes  
23 from testimony of Mr. Salzman, and a question  
24 was asked of him: Do you accept the descrip-  
25 tion of the soils survey for Morris County by

1 the U. S. Department of Agriculture, Soil  
2 Conservation Service, showing accurate des-  
3 criptions of the soil on the p. q.? And, he  
4 indicated that it did. He said Edneyville  
5 soil, Parkerville soil, S.C.S. is accurate,  
6 but I disagree with the characteristics on  
7 the sites. He said the specifications would  
8 take control, that the soils are properly  
9 described. They just differ with respect  
10 to the sites found.

11 MR. LINDEMAN: I recall that, too,  
12 your Honor. That's correct.

13 THE COURT: Now, this is something  
14 that I did not recollect, so your own expert  
15 suggests that it is a source of information.  
16 I still would like to have some, an opport-  
17 unity for you gentlemen to check out the law  
18 on it. My law clerk could find nothing in the  
19 hour that I gave her to look at it. It's a  
20 very, if I'm wrong, I'll change my position.  
21 It doesn't bother me to change, if I could find  
22 justification for it. It's a very sensitive  
23 area of this case. You're right, it is a two-  
24 step process, but if as a planner I rely on  
25 errant information, even though it's s.o.p.,

1 standard operating procedure, to rely on that  
2 type of information, if I rely on errant in-  
3 formation, then your conclusions have to be  
4 wrong. You're saying that--Pardon me?

5 MR. FERGUSON: If the conclusions are  
6 wrong on the basis of correcting information,  
7 yes.

8 THE COURT: Here you're saying, as you  
9 were in the other map, there are certain--.  
10 This is a little different, Mr. Lloyd pointed  
11 out. This one is a little different, and it's  
12 for a little different purpose. If all you're  
13 saying is that we rely on that map, fine,  
14 that's one thing. It can be admitted for that  
15 purpose. I don't think he can object to that,  
16 but if you're saying these are, these accurately  
17 reflect all of the soil conditions in this  
18 190-square mile area, and how he arrived at the  
19 markings on this, then I'm not so sure you're  
20 right because it's in effect a treatise con-  
21 clusion.

22 MR. FERGUSON: Well, I think we're really  
23 in the area of presumption. What I'm saying is  
24 that we're relying on the soil Conservation  
25 Service inventory, census, and classification

1 of soils that that is a standard reference  
2 and data base to which builders, developers  
3 and planners look, and is generally accepted  
4 as far as I know in the planning profession,  
5 according to Mr. Lloyd, environmental planning  
6 field, and I think geology field as per Mr.  
7 Salzman, that that is the data base to which  
8 you look, and if we stop there, we're entitled  
9 to rely on it, and I think that, you know,  
10 with that kind of testimony and background,  
11 it's up to the person who challenges it to  
12 prove that it's not accurate.

13 MR. LINDEMAN: If your Honor please--

14 MR. FERGUSON: It's a burden--

15 THE COURT: I'll give you half an hour  
16 to find something on it. In the meantime, my  
17 law clerk will also be looking for it.

18 MR. LINDEMAN: May I make one comment  
19 about counsel's statements? If what he states  
20 is correct about the action of the municipality  
21 in adopting the 76-12 ordinance, and I suggest  
22 that it is incumbent upon the defendant to put  
23 Mr. Borman on the stand, since he's the one  
24 who prepared at least, he prepared the zoning  
25 ordinance as I understand it. I'm not sure what

1 his participation was in the master plan, not  
2 having been done by Candueb & Fleissig, but when  
3 and if he gets on the stand, he may very well  
4 testify that he relied upon thus and such. I  
5 would say to the Court now without regard to  
6 what the Court might do on my motion, I would  
7 still object to the entry into Evidence of that  
8 document. I submit that it would be sufficient  
9 for Mr. Borman to say that he looked at this  
10 document and relied upon it, and that's the  
11 beginning and the end of it. Once the document  
12 is referred to, it would have to come in only  
13 for the purpose of showing the truth of what  
14 it portrays, and that, I think, Mr. Borman  
15 could not do. In addition to all that, if your  
16 Honor please, I don't conceive there's an issue  
17 in this case of the good faith of the munici-  
18 pality. Maybe there should be.

19 MR. FERGUSON: Mr. Lindeman has made  
20 that an issue of good faith.

21 THE COURT: What he's trying to do is  
22 build it from the ground up. If he gets to  
23 the planner, and the planner says yes, he re-  
24 lied on it, they're going to want me, the town-  
25 ship is going to want me to look at this thing

1 and say that's the way it is, that's the way  
2 the facts are on the ground, and this is what  
3 they relied upon, so they're right in their  
4 conclusions for the two and five-acre zoning.

5 MR. FERGUSON: I can't make a represen-  
6 tation that Mr. Cochran will testify. Mr.  
7 Borman had no part of this. Mr. Cochran will  
8 testify he looked at the N.R.I. for Upper Rari-  
9 tan watershed data--. He went further, will  
10 testify that he verified those portions of it  
11 which he felt were significant. All right?  
12 I can't, at this point, tell you what he in  
13 fact verified, but he will tell you on the  
14 stand. He may have verified this. I suspect  
15 he did, but I haven't gone into it with him.  
16 He may not have verified it. Therefore, I can't  
17 represent now exactly what he did rely on.

18 THE COURT: All right.

19 MR. FERGUSON: I think it's admissible  
20 at this point for the sole purpose of establish-  
21 ing what the N.R.I. was, in fact, as of a point  
22 in time when it was completed.

23 THE COURT: But if you're asking me to  
24 accept the subjective conclusions that I have  
25 to draw from that map, and you're asking me then

1 to put that down underneath to support your  
2 two and five-acre zoning, and when I say,  
3 "underneath," you're building up to that point,  
4 that's where I'm concerned because Mr. Linde-  
5 man has no opportunity to cross-examine with  
6 respect to those factors even though it's a  
7 standard treatise.

8 MR. FERGUSON: Of course, he has the  
9 opportunity to put on any of his experts to  
10 disagree with the Soil Conservation Service.

11 THE COURT: But, doesn't that fall within  
12 the category of a treatise even though--

13 MR. FERGUSON: No, it's a census. It's  
14 a census. What they did is go out and inventory  
15 the U. S. soils.

16 THE COURT: Okay. They inventoried the  
17 U. S. soil, and drew conclusions with respect  
18 to it. How are those conclusions--. What stand-  
19 ards were used to reach these categories,  
20 "slight," "moderate," and "severe?"

21 MR. FERGUSON: That is in the base data,  
22 in the manual of the Soil Conservation Service.  
23 It may be in D-1 for Identification. I submit  
24 that it has the authenticity of the Soil Con-  
25 servation Service census of the soils, and

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that should be presumed valid, and Mr. Lindeman has any and all opportunity to come in and challenge it.

THE COURT: You find me something comparable, and I will be glad to consider it. I have a Grand Jury coming in at three o'clock.

MR. FERGUSON: Perhaps we could--

THE COURT: I have a suggestion. Let's leave it out at this point. Let's keep going, and then you can do your homework overnight, as can my law clerk, and we can all have a little more time on it.

MR. FERGUSON: We have a slightly different problem.

MR. ENGLISH: As a matter of timing, I have a whole area unrelated to these documents to cover with Mr. Lloyd. We won't finish today under any circumstances. Now, I have not anticipated that we'd take more than a day with Mr. Lloyd, and we have made arrangements for Dr. Ruth Patrick to be here tomorrow. She's a very difficult person to pick a date for. My suggestion would be, we expect Mr. Lloyd to return to the stand next week, Wednesday, at which time I assume all and sundry

1 will have had adequate time to study the law and  
2 be better prepared to discuss the legal ques-  
3 tions.

4 THE COURT: I'm having an aversion to  
5 this checkerboard--. The continuity that I  
6 lose is significant, but it's part of my own  
7 doing, because of the way I have to try this  
8 case. All right. That's the case, that's the  
9 case. We'll give you a little more time to  
10 research the question.

11 MR. LINDEMAN: May I just say this for  
12 housekeeping purposes, your Honor, that I note  
13 that Dr. Patrick is going to be on tomorrow.  
14 She apparently has to be, which is all right  
15 with me. My guess is that based upon her  
16 report, which is thin, and I know sometimes  
17 testimony gets expanded beyond a report, her  
18 testimony may be short. I hope you will be  
19 ready with something else tomorrow. It may not  
20 take so long.

21 THE COURT: That's their planning, the  
22 "plan ahead" sign. That has to be their prob-  
23 lem. Let's do it that way. Let's continue.  
24 Let's leave it for a later time. This standard  
25 census argument intrigues me. As I say, if

1 you can find something that indicates I'm in-  
2 correct in my ruling, I would be glad to change  
3 it. It is such a very significant part, I'm  
4 just repeating myself, of the case, and I think  
5 there are obviously certain conclusions, very  
6 substantial conclusions, that you want me to  
7 draw from the "Soil Limitations for Light Build-  
8 ings with Cellar<sup>s</sup> map, and I know what the  
9 purpose of it is. Mr. Lloyd has very clearly  
10 indicated that. Let's move on.

11 MR. FERGUSON: The next two maps are  
12 pretty much the same.

13 THE COURT: Let's go through them all,  
14 and let him describe them. We'll save that  
15 problem.

16 BY MR. ENGLISH:

17 Q Mr. Lloyd, I now show you Exhibit D-24-j for  
18 Identification, and ask you if you will please tell the Court  
19 what this map shows? A D-24-j is entitled,  
20 "Soil Limitations for Septic Tanks."

21 Q What is the source of the information reflected  
22 on this map? A Again, it's the Soil Conservation  
23 Service which provided the criteria, and the soils within the  
24 watershed are grouped together according to the Soil Con-  
25 servation Service criteria.

1 Q They're described as what?

2 A Three groups, or three classifications, "slight,"  
3 "moderate," and "severe," soil limitations for septic  
4 tanks. The white area is, are those soils with "slight"  
5 limitations, the tan areas are the soils with "moderate"  
6 limitations, and the red areas are the soils with "severe"  
7 limitations.

8 Q Now, are those classifications obtained, were  
9 they obtained directly by you from the Soils Conservation  
10 Service manuals for transposition in visual form on this  
11 map, or was there some process of interpretation by you  
12 involved?

13 A There was no process, but at the  
14 time, as I recall, the final manual had not been published,  
15 and I used interim reports and interim Soil Service criteria.  
16 The point is that the Soil Conservation Service did develop  
17 the criteria.

18 Q Well, and you just copied--

19 A Yes, copied their criteria, or the way they classified  
20 the soils.

21 MR. ENGLISH: For the record, I'll offer  
22 Exhibit D-24-j into Evidence.

23 MR. LINDEMAN: I object.

24 THE COURT: We'll deal with it in the  
25 same manner, hold it.

Q Mr. Lloyd, I show you now, I guess we're all

1 glad to characterize as the last map of this series, which  
2 is D-24-k for Identification, and ask you if you could tell  
3 the Court what that shows? A D-24-k is entitled,  
4 "Combined Soil Limitations," and all it is is a combination  
5 of maps 13 and 14.

6 Q Namely, the two previous maps we just talked  
7 about? A That's correct, these maps were  
8 developed using the Soil Conservation Service criteria, and  
9 all this map does is put the two maps, it's an overlay,  
10 product of an overlay of these two maps and the categories,  
11 there are six categories, and they are entitled, "Combined  
12 Soil Limitations for Light Buildings--Septic Tanks," lightest  
13 category is "slight--slight." In other words, the areas  
14 portrayed in the lightest category have slight limitations  
15 for buildings and slight limitations for septic tanks. The  
16 extreme other end of the scale is black, and those areas are  
17 characterized by soils with severe limitations for both  
18 septic tanks and building foundations, and the soils in between  
19 are, all the categories in between, are just various combin-  
20 ations of limitations for light buildings as well as septic  
21 tanks.

22 Q And, what you have just been saying is reflected,  
23 is it not, in the legend which appears on this map?

24 A That's correct.

25 MR. ENGLISH: For the record, I offer

1 Exhibit D-24-k for Identification into  
2 Evidence.

3 MR. LINDEMAN: I object.

4 THE COURT: All right. Same ruling.

5 MR. ENGLISH: If the Court please, the  
6 next general subject I want to cover with Mr.  
7 Lloyd is initially the foundation and lead-up  
8 to his report which has been given, and there's  
9 just one technical foundation for that to  
10 eliminate the hearsay question, if I could remove  
11 Mr. Lloyd from the stand for a moment, and put  
12 Mrs. Ashmun back on the stand, and I will have  
13 wrapped up one loose end in the report.

14 THE COURT: Okay. Mrs. Ashmun, I'll  
15 consider you still under oath from the last  
16 time you were here.

17 C A N D I C E M. A S H M U N, recalled.

18 BY MR. ENGLISH:

19 Q Mrs. Ashmun, sometime during the last year or  
20 so, did you make an observation of the effects of construction  
21 of the Chester Springs Shopping Center in the vicinity of  
22 Peapack Brook? A Yes, in the summer of  
23 '74, '75 and '76, all year, actually, in '75, '76. I was  
24 doing water quality work on Tiger Brook, and Peapack Brook,  
25 and at that time the shopping center in Chester Springs,

1 head of Tiger Brook, was under construction and there was  
2 a noticeable increase in silting in Peapack Brook, which  
3 we--

4 THE COURT: Noticeable impact of--

5 THE WITNESS: Silting impoundments  
6 along Peapack Brook, particularly one on Fox  
7 Chase Road, which is a, had to be dredged out  
8 at that time, and so we went back upstream  
9 and found that it coincided with times when  
10 there was heavy silting in Tiger Brook.

11 Q And, what, what was the relationship in time  
12 between your observation and the construction of Chester  
13 Springs Shopping Center?

14 A It was during the  
15 period construction was actually taking place, grading con-  
16 struction, grading work on that site was taking place.

17 Q Did you ever communicate the information you  
18 have just testified about to Mr. Thomas Lloyd?

19 A Yes, I did.

20 MR. ENGLISH: No further questions.

21 BY MR. LINDEMAN:

22 Q Mrs. Ashmun, how far is the area where sand was  
23 deposited in Tiger Brook and Peapack Brook below Peapack  
24 from the development of the Chester Springs Shopping Center?

25 A I have to check the map for exact mileages.

Q Not exact, A Tiger Brook comes

1 down past the Peapack Reservoir, and enters Peapack Brook  
 2 below the reservoir, so there's no settling out taking place  
 3 in the borough's reservoir.

4 Q How far is that from--

5 A From Chester Springs--

6 Q --Chester Springs Shopping Center?

7 THE COURT: As the crow flies, or as the  
 8 road is driven?

9 MR. LINDEMAN: I think it ought to be  
 10 as the crow flies.

11 A Stream distance probably. I have to scale it off on  
 12 the map. I could do that.

13 Q Approximately. Is it 100 yards, or is it  
 14 half a mile, or--ten yards? A Probably  
 15 a mile or two.

16 MR. ENGLISH: Might I suggest, I don't  
 17 want to interrupt Mr. Lindeman, but there's a  
 18 scale map on the easel over there if the wit-  
 19 ness, you want to--

20 THE COURT: The southern--

21 THE WITNESS: Chester's on 206.

22 THE COURT: Is that Chester Borough or  
 23 Chester Township?

24 THE WITNESS: Chester Borough. Used to  
 25 be a swimming hole.

1 Q Now, you have stated, Mrs. Ashmun, in your  
2 communication to Mr. Lloyd that development, and that parti-  
3 cularly is the development of the Chester Springs Shopping  
4 Center, has increased not only the nutrient load in the  
5 stream, but also the amount of sediment? A It was  
6 a conclusion drawn from the fact that the increase happened  
7 at the time that the disturbance of the soil was taking place.

8 Q The disturbance of the soil--

9 A Grading and moving around of the soil to grade out the  
10 pond that had been at the head of Chester Springs.

11 Q Now, does Tiger Brook and the Peapack Brook

12 flow through the Chester-- A Tiger Brook flows  
13 through the Chester Springs.

14 Q I thought I said that. Does Tiger Brook and  
15 Peapack Brook, do both of them--

16 A No.

17 Q Just Tiger? A Yes.

18 Q Tiger Brook flows through the Chester Springs  
19 Shopping Center? A Right through the center  
20 of it.

21 Q Right. And, you say that during the course of  
22 construction you noticed that sediment and the nutrient load  
23 increased in the area about a mile or mile, or perhaps more,  
24 from Peapack, from the shopping center? A It  
25 increased in the Tiger Brook stations, which are about a

1 quarter of a mile below the Chester Springs Shopping Center,  
2 and in the Peapack Brook stations after the Peapack, Tiger  
3 Brook had come into Peapack Brook.

4 Q Now, will you tell us, please, what records  
5 you have of the nutrient load that was in the stream prior  
6 to the construction of the shopping center?

7 A Yes, that's in the reports prepared for the Watershed  
8 Association by the Philadelphia Academy in previous years.

9 Q Did you take them? Are you familiar with them?

10 A I'm familiar with them, but I did not take them. That  
11 was done by the Academy.

12 Q Now, that was done approximately when?

13 A '65.

14 Q And, the Chester Springs Shopping Center was  
15 constructed when? A In the period, '73, '75.

16 Q Now, you do not know, do you, whether or not  
17 that nutrient load had increased prior to commencement of  
18 construction, namely around '72 and in '73, prior to the  
19 construction--

20 MR. ENGLISH: If the Court please, I  
21 submit this line of interrogation is outside  
22 the scope of the direct examination, which  
23 was limited to an observation of silt during  
24 construction. I did not ask the witness any-  
25 thing about nutrient loads prior to or afterwards.

1 MR. LINDEMAN: Well, that's not readily  
2 apparent from the report, but if counsel is  
3 taking that position, perhaps I just ought to  
4 be instructed as exactly what--. Am I correct?  
5 It's just the silt during the construction  
6 phase that was communicated to Mr. Lloyd?

7 THE WITNESS: That was the only dis-  
8 cussion that I had with Mr. Lloyd, only direct  
9 conversation.

10 MR. ENGLISH: Just one moment, please.

11 THE COURT: I thought she said it increas-  
12 ed the silting and nutrients in response to the  
13 question. I thought she said nutrients.

14 THE WITNESS: He was reading from some-  
15 thing.

16 MR. ENGLISH: I don't recall that, but  
17 I defer to your Honor taking notes, which I  
18 was not doing.

19 THE COURT: I asked her one time about  
20 the silting. I thought after that she said  
21 nutrients. I may be mistaken because I have  
22 a question mark next to it.

23 MR. LINDEMAN: I did ask that question.

24 THE COURT: Not you asking the question,  
25 on direct. Let me ask you this: You were

1 talking, Mrs. Ashmun, about '75 and '76, and I  
2 have written down here, "while the Chester Springs  
3 Shopping Center was under construction, there  
4 was noticeable silting", and I have, "and increased  
5 nutrients." Did you say that on direct testi-  
6 mony in response to Mr. English's question?

7 THE WITNESS: I don't know.

8 THE COURT: Go back in the transcript.  
9 Check the transcript.

10 (REPORTER COMPLIES.)

11 THE COURT: The impoundment is what she  
12 said. She didn't say it then. It goes well  
13 beyond the scope of her examination. So, deal  
14 with the silting.

15 MR. LINDEMAN: All right.

16 Q What examination, if any, did you make of the  
17 increase or the extent of the silting prior to the commence-  
18 ment of construction, just prior to the commencement of con-  
19 struction of the Chester Springs Shopping Center?

20 A I think all I can say in answer to that is that I  
21 spent a great deal of time up and down that stream all the  
22 time, and there had not been that type of silting in that  
23 stream until the construction commenced up there.

24 Q Are you saying that--

25 MR. LINDEMAN: Hold it just a moment,

1                                    please.

2                    Q            --because of your visual inspection from time  
3 to time?                    A            Yes.

4                    Q            Was that the proper method to determine silting  
5 and the building up of silt--                    A            Silt is  
6 generally a visual observation, sometimes by instrument, but  
7 it's a visual observation.

8                    Q            Now, what other causes might there have been  
9 for the increase in the amount of silt, other than in construc-  
10 tion of the shopping center?                    A            Only any  
11 activity on Tiger Brook which drains the Borough of Chester.

12                    Q            Could have been any activity?

13 A            Any similar construction activity on Tiger Brook.

14                    Q            Now, did you make any examination as to whether  
15 or not there was any other construction such as the building  
16 of homes or any other kind of building in that area?

17 A            In that watershed, the pond, the Chester Springs pond  
18 acted as a settling pond up until the time construction on  
19 the site began.

20                    Q            Was there any other construction, though, between

21 '69--                    A            Not that I was aware of.

22                    Q            How would you, how would you know that there  
23 were none, had you made any study of it?                    A            Not  
24 particularly.

25                    Q            You don't know anything about building permits

1 having been issued or any other construction?

2 A No, that's not--

3 Q Did you make any engineering study of any  
4 kind of the extent that the construction of the shopping  
5 center may have had on the Tiger Brook, and the increase in  
6 sediment?

7 A No, I was only referring to the  
noticeable increase in silting that I observed.

8 Q Would you not say that the noticing that you,  
9 that you did could have been done by anybody, whether it was  
10 an expert or not, or was some expertise required?

11 A Well, the fact that I was making regular testings of  
12 the brook all up and down that watershed was not as casual  
13 as it would have been done by just anybody.

14 Q What is the meaning, if any, of the increase  
15 in silt deposit in the, in Tiger Brook and Peapack Brook?

16 A Water running off into, in that watershed is carrying  
17 the soil from the surface of the ground in the watershed  
18 downstream.

19 Q Does that mean it's carrying the soil from the  
20 shopping center area or from other areas as well?

21 A I would assume it would be from the springs area since  
22 settling pond, effect of the pond before had precluded that.

23 Q Sorry. I don't follow. A There  
24 was a pond where the Chester Springs Shopping Center is,  
25 swimming pond, and it was removed, filled, graded away, piped

1 by construction activity. That pond had acted as a natural  
2 silting basin for Tiger Brook up until construction started.

3 Q Did the silt come from some place higher than--

4 A No, it would have to have come from the pond or below.

5 Q But, you say that the pond acted as a silting  
6 basin so that the silt had to originate from some place  
7 above the pond; isn't that so? A Prior to  
8 construction.

9 Q And, therefore, the silt coming down the stream  
10 might have come from some place other than the construction  
11 area itself; isn't that so? A Unlikely,  
12 since most of the area drained by that brook is already built  
13 on.

14 Q But, you did say that the pond acted as a silt-  
15 ing basin? A For the run-off from the streets  
16 and roads or any previous--

17 Q Now, you have no way of knowing what the  
18 ultimate source of that silt build up is, do you?

19 A No, I don't pretend to.

20 Q I'm not quarreling, just asking you, really;  
21 it might just as well have come from a source other than the  
22 shopping springs area, correct? A Only if  
23 there were that kind of activity somewhere else.

24 Q Is there any scientific way that you know of  
25 by which a determination can be made to, of the source of

1 the silt? A I think there is, but I wouldn't  
2 want to testify to that.

3 Q And, you wouldn't want to testify to it because  
4 that's not your-- A Not my thing.

5 Q You're not an expert, you don't consider your-  
6 self as an expert. In other words, you simply observed the  
7 silt in Chester--, well, in the, in the bed of, I guess it's  
8 Peapack Brook and Tiger Brook, after the construction?

9 A Yes.

10 MR. LINDEMAN: I conclude my cross-  
11 examination, your Honor, but I'll have some-  
12 thing further to say--

13 THE COURT: Any further--

14 BY MR. ENGLISH:

15 Q Was Chester Springs pond that you referred to  
16 destroyed or circumvented in some way as a result or as part  
17 of the process of constructing the Chester Springs Shopping  
18 Center? A It's piped, and in so doing had  
19 to regrade the whole area, fill it and pipe it.

20 MR. ENGLISH: No further questions.

21 THE COURT: Anything further, Mr. Linde-  
22 man?

23 MR. LINDEMAN: No.

24 THE COURT: All right. You may step  
25 down, Mrs. Ashmun. Thank you. All right,

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ship? A I have.

Q I show you a document and ask you if this is the report which you prepared. A It is.

MR. ENGLISH: May I have the report marked for Identification?

THE COURT: This is not one that's been marked?

MR. FERGUSON: No, sir.

THE COURT: Okay. D-34. What's the name of it?

MR. ENGLISH: It's entitled, "An Assessment of Water Quality in Peapack Brook, and Analysis of Factors Affecting Water Quality."

THE COURT: For Identification.

(D-34, report, was received and marked for Identification.)

Q Mr. Lloyd, does this document which has been

1 marked D-34 for Identification, strike that.

2 Who was the author of D-34 for Identification?

3 A I was.

4 Q And, in the course of, strike that. Can you  
5 describe in very general terms what the content and scope  
6 of D-34 for Identification is? A The report

7 includes a collection and summary of all the water quality  
8 data that was, were available for Peapack Brook. It also  
9 includes an analysis of slopes, geology and a map is in-  
10 cluded of 1977 land use, and the overall purpose of the  
11 report was to determine the existing levels of water quality  
12 in Peapack Brook, and relate these to the natural features,  
13 such as the slopes, soils, land use.

14 Q Now, you told us that you relied on existing  
15 water quality data and I will show you a series of documents  
16 which have been marked for Identification in this proceeding,  
17 and ask you whether or not you utilized these documents in the  
18 preparation of your report, which is D-34 for Identification.  
19 I show you Exhibit D-22 for Identification, which is entitled,  
20 "Water Quality Survey, Upper Raritan Watershed, for the Upper  
21 Raritan Watershed Association, Inc.," prepared by the Academy  
22 of Natural Sciences of Philadelphia, Department of Limnology,  
23 the date, August and November, 1967, appears in it, and also,  
24 what I assume is a publication date of April, 1968, and I  
25 ask you if that is one of the sources of data which you

1 utilized in your report?

A Yes, it is.

2 MR. LINDEMAN: If your Honor please,  
3 please excuse me. I wonder if for convenience  
4 we might relate these references to references  
5 contained in the report which appear at page 46.  
6 It would help me. I can't tell from that des-  
7 cription which one of these documents that  
8 refers to.

9 MR. ENGLISH: May I make an unusual  
10 suggestion, which I recognize is unusual, and  
11 Mr. Lindeman may want to comment, but it seems  
12 to me that it might be of help to the Court to  
13 have Mr. Lloyd's report to be able to refer to,  
14 even though technically it's not in Evidence,  
15 because I haven't laid all the necessary foun-  
16 dation, and I wonder whether Mr. Lindeman  
17 would object to my actually handing the report,  
18 D-34 for Identification, to the Court to use  
19 at this time.

20 MR. LINDEMAN: The Court is very familiar  
21 with this kind of thing. I think it might ex-  
22 pedite a lot of the rulings on this.

23 THE COURT: All right.

24 (COURT OBSERVES.)

25 Q Mr. Lloyd, are you able to refer somewhere to

1 Exhibit D-22 for Identification? A First  
2 reference on page 46.

3 THE COURT: It's which reference?

4 THE WITNESS: The first one.

5 THE COURT: Joseph Edward, Inc.?

6 THE WITNESS: I'm on page 46.

7 THE COURT: All right. I'm on the  
8 wrong page. Okay. Fine.

9 Q Did you personally have anything to do with the  
10 preparation of Exhibit D-22 for Identification?

11 A No, I did not.

12 Q I now show you Exhibit D-23 for Identification,  
13 which is entitled, "Water Quality Studies of the Upper Rari-  
14 tan Watershed for the Upper Raritan Watershed Association,  
15 May, 1968 - October, 1969," which apparently was prepared  
16 by the Academy of Natural Sciences, Department of Limnology,  
17 and is dated March, 1970, and ask you if that is one of the  
18 sources of data which you used in preparing your report, D-34  
19 for Identification. A Yes.

20 Q Did you have anything to do with the preparation  
21 of D-23 for Identification? A Yes. I  
22 drafted the report under the direction of Dr. Ruth Patrick.

23 MR. LINDEMAN: Is that the third item?

24 THE WITNESS: Yes.

25 MR. ENGLISH: Perhaps the stenographic

1 record should show that the second item of  
2 reference on page 46 of D-34 for Identification  
3 is the Natural Resource Inventory which we're  
4 all, perhaps, too familiar with at this point.

5 MR. LINDEMAN: D-24?

6 THE COURT: Yes.

7 Q Mr. Lloyd, I show you a document which has been  
8 marked D-25 for Identification, which is entitled, "Upper  
9 Raritan Watershed Water Quality Survey, 1972, for the Upper  
10 Raritan Watershed Association," apparently prepared by the  
11 Academy of Natural Sciences of Philadelphia, Division of  
12 Limnology and Ecology, and dated March, 1974, and ask you if  
13 that is one of the sources you relied on?

14 A Yes, it's the fourth reference.

15 Q Did you have anything to do with the prepara-  
16 tion of D-25 for Identification? A Not with  
17 the preparation of it, no.

18 Q Did you have any connection with the work which  
19 was done, part of the preparation of D-25 for Identification?

20 A Only in a very small way, in the beginning had to do  
21 with a substantial sum of the stations that were sampling  
22 during that study.

23 Q I will now hand you a group of documents which  
24 have been marked, respectively, D-26 for Identification,  
25 D-27 for Identification, D-28 for Identification, D-29 for

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Identification, and D-30 for Identification, all of which

1  
2 appear to be various studies made by the Upper Raritan Water-  
3 shed Association between 1974 and 1976, and ask you whether  
4 you utilized and relied on the data in any of those docu-  
5 ments as part of your report, D-34 for Identification?

6 A I did. I utilized data that were obtained for Peapack  
7 Brook in that study. Excuse me. The data that the Upper  
8 Raritan Watershed Association provided me is included in the  
9 next to last reference in my report.

10 Q On page 47? A Right. It's all  
11 lumped together, water quality--. Upper Raritan Watershed  
12 Association.

13 Q All right. And, the reference you have just  
14 made on page 47 of your report is to those documents that you  
15 just-- A That's correct.

16 Q Now, I show you a document which is marked  
17 D-21 for Identification, which appears to be entitled, "Water  
18 Quality and Aquatic Biology Report, Peapack Brook and Its  
19 Tributaries, prepared by Jason M. Cortell & Associates,"  
20 dated January, 1977, and ask you if that document contains  
21 data which you used in your report? A It  
22 does, and the reference is the next to last reference on  
23 page 46 of my report.

24 MR. FERGUSON: Your Honor, at this time

25 I would like to move into Evidence the docu-

1                   ments which we identified, and qualified with  
2                   Mrs. Ashmun, and those are specifically D-26  
3                   through 30, I believe, 26, 27, 28, 29, and  
4                   30, and also the D-21, Jason M. Cortell report,  
5                   which, on which I examined Mr., I believe it's  
6                   Lewis, Ellis, Mr. Ellis, on the same day Mrs.  
7                   Ashmun testified. The relevance is as, of  
8                   course, as foundation for Mr. Lloyd's  
9                   work and for his report. The other three  
10                  documents, D-22, 23 and 25, I would move now,  
11                  but I will tell the Court that Dr. Patrick will  
12                  be here tomorrow to more fully qualify those  
13                  documents as a person under whose supervision  
14                  they were, in fact, prepared.

15                               MR. LINDEMAN: I would like to ask some  
16                               questions about some of these documents, your  
17                               Honor. D-21 in particular.

18 BY MR. LINDEMAN:

19                   Q           The report of Jason Cortell, what is the Cortell  
20                   company, Mr. Lloyd?           A           It's an environmental con-  
21                   sultant firm.

22                   Q           Was D-21 prepared for, at the request of any  
23                   particular body or was it for general publication, if you  
24                   know?

25                               MR. ENGLISH: If the Court please, I

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don't think this witness can answer these questions. My understanding, although I defer to Mr. Ferguson and Mr. Lindeman, to your Honor, on that, that these documents were essentially identified and proved by Mr. Ellis when he was here.

MR. FERGUSON: I believe Mr. Ellis stated they were prepared for the Borough of Peapack-Gladstone, and I think there's a reference to that on the front page of that report. Of course, if this witness knows, I suppose he's free to answer.

MR. LINDEMAN: I don't know that Mr. Ellis said that. The document does state that, but my recollection is that Mr. Ellis merely identified the document as having been prepared by the Cortell company, and that he had participated in some of the, in the gathering of some of the technical data in it.

THE COURT: He indicated he collected some of the samples, did some of the interpretations under the supervision of someone else. Just on the stream conditions.

MR. LINDEMAN: Yes.

THE COURT: He helped write it, I believe

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he said.

MR. FERGUSON: I believe he said he wrote it.

MR. LINDEMAN: Well, my recollection is that he was not qualified as an expert on the subject of aquatic biology, and that he did, testified that he only worked on it, that he operated somewhat of the nature of a lab technician, collected data.

THE COURT: He said the samples were identified, its tributaries, what water sampling entails, method of it, talked about that and talked about the three dates on which the sampling took place.

MR. LINDEMAN: Your Honor, I feel that there is no further examination of this witness that is required to buttress my objection to the document. The document is one which first purports to receipt some descriptive things, and then talks about water quality methods, and aquatic, describes aquatic biology in this area, aquatic biology results, and then at page 10 has a summary which contains conclusionary statements which Mr. Ellis did not associate himself with, nor would he have been able to

1 do that. I think there's nothing really that  
2 Mr. Lloyd can do--

3 MR. FERGUSON: Maybe I can cure the  
4 problem this way.

5 BY MR. FERGUSON:

6 Q Mr. Lloyd, did you, what did you use from this  
7 document, D-21? A Just the data.

8 Q So, in your report, you did not use the pre-  
9 paratory language and the conclusion to which Mr. Lindeman  
10 just referred? A No. The only--

11 BY MR. LINDEMAN:

12 Q Tell us in your own words what you used in that  
13 report? A Just--. Excuse me. I made a  
14 reference in my report to the fact that they had performed  
15 their water quality analysis in accordance with standard  
16 methods for analyses of waste, waste water samples, and I  
17 used the results of their chemical test, and I used to a  
18 limited extent the results of their biological investigations.  
19 I did not use their conclusions, or anything else basically.

20 MR. FERGUSON: Your Honor, we limit our  
21 offer solely to those elements which Mr. Lloyd  
22 in fact used, which I believe I did elicit from  
23 Mr. Ellis on the stand, which was just the data  
24 at the three testing stations on the Peapack  
25 Brook.

1 MR. LINDEMAN: May I ask some questions  
2 about that, your Honor?

3 THE COURT: Sure.

4 BY MR. LINDEMAN:

5 Q Mr. Lloyd, is there anything in the, in the  
6 laboratory analysis, and I assume that's what you are re-  
7 ferring to, that is the report, laboratory analysis?

8 A Yes.

9 Q That's what you used in connection with your  
10 report?

A Yes.

11 Q Can you tell us or tell me, please, where there  
12 is anything in this analysis that relates to the content of  
13 phosphorus or phosphates in the water? Is there any such  
14 thing in this report? A You mean whether they  
15 determine ortho and total phosphate concentration?

16 Q I don't mean where they determine that, but  
17 where there is any reference to those things in the report.

18 THE WITNESS: May I see it?

19 MR. LINDEMAN: Yes.

20 (WITNESS OBSERVES.)

21 A There are references to ortho phosphate, total phos-  
22 phate on all of the laboratory reports, pages aren't numbered,  
23 but they are included in Appendix A.

24 Q What are the ortho phosphates, can you tell me?

25 A Ortho phosphate is an--

1 Q Just on the report, what is, the words, "ortho  
2 phosphate," don't appear there. What is--

3 A Excuse me. It appears right here.

4 MR. LINDEMAN: I'm sorry.

5 Q Is that on every report, then, the references to  
6 the phosphates? A I'm not sure what you

7 mean by "every report." Each of these lab reports, yes.

8 Q Now, will you tell us what reference you have  
9 as to what constitutes a high, medium, low, or otherwise  
10 concentration of phosphate, whether they be ortho or whatever?

11 A A phosphate concentration greater than .04 milligrams  
12 per liter has been associated with algae, aquatic plant blooms,  
13 in a number of studies. There's a considerable amount of  
14 literature on it. One very good reference is one entitled,  
15 "California Water Quality Standards." The Environmental  
16 Protection Agency has prepared a number of guidelines and  
17 standards and so forth, water quality standards based on  
18 various chemical concentrations.

19 Q Does it use the word, do any of those reports  
20 you refer to use the word, high, low or some similar--

21 A They usually--

22 MR. FERGUSON: Your Honor, I don't mind  
23 this testimony. I do think it's going far  
24 afield, and getting into cross-examination. I  
25 think it appropriate that the Court direct

1 or control the testimony as to the admissi-  
2 bility of the data as to the foundation for Mr.  
3 Lloyd's report.

4 MR. LINDEMAN: Well, perhaps, I think  
5 it might have saved some time to go into this  
6 now. I guess it's akin to--

7 THE COURT: Are you objecting to its  
8 admissibility?

9 MR. LINDEMAN: Well, these reports, no,  
10 because Mr. Ellis did say that he took them,  
11 and if the witness used them, he used them. How  
12 he used them or what his expertise was is some-  
13 thing else.

14 THE COURT: All right. I'll allow D-21.  
15 (D-21, report, was received and marked  
16 into Evidence.)

17 THE COURT: How about D--

18 MR. FERGUSON: D-26 through 30, I would  
19 make the offer on the same basis that--

20 THE COURT: Mrs. Ashmun.

21 MR. FERGUSON: Mrs. Ashmun testified as  
22 to her participation and her supervision. I  
23 would ask this witness, Mr. Lloyd, did you rely  
24 on any of the written material in the intro-  
25 duction in any substantive way?

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THE WITNESS: I did not.

BY MR. FERGUSON:

Q Did you rely and use from these Exhibits D-26 through D-30 only the recorded data? A I did.

MR. FERGUSON: I would confine the offer in the same vein as the Cortell exhibit, your Honor.

THE COURT: Mr. Lindeman?

MR. LINDEMAN: Just one moment, please, your Honor.

I have no objection to those documents, your Honor.

THE COURT: In Evidence, then.

(D-26, 27, 28, 29, and 30, reports, were received and marked into Evidence.)

Q Did you use the data from documents D-25-- strike that, D-22, D-25 and D-23 in the same way that you used the data from the documents that have now been marked into Evidence? A I used that data, and in addition, I believe, as I recall, there were one or two instances where I quoted directly from conclusions presented in one or more of the reports.

Q So, in effect, you did use the conclusion of these, of one or more of these three? A Yes.

MR. FERGUSON: Dr. Patrick will be here

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tomorrow, and we'll at that time, during her  
examination, we'll move these three into  
Evidence.

THE COURT: It's after four o'clock, so  
let's stop. You can step down, Mr. Lloyd.

(WHEREUPON PROCEEDING WAS ADJOURNED)