

CITY COUNCIL
CITY OF NEW YORK

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TRANSCRIPT OF THE MINUTES

of the

COMMITTEE ON ENVIRONMENTAL PROTECTION

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September 10, 2008

Start: 1:43 pm

Recess: 6:22 pm

HELD AT: Council Chambers
City Hall

B E F O R E:

JAMES F. GENNARO
Chairperson

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Anthony Como
Bill de Blasio
Mathieu Eugene
G. Oliver Koppell
Melissa Mark-Viverito
Christine C. Quinn, Speaker
Domenic M. Recchia, Jr.
Peter F. Vallone, Jr.

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Commissioner
Department of Environmental Conservation

Jack Doll
Director of Bureau of Oil and Gas Regulation
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Resident, Landowner
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Josh Fox
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Pat Carrulo
Co-Founder
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Ken Baer
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Member, New York City Resident
Damascus Citizens for Sustainability Group

YVETTE MOLINA: Testing, testing.

Today's date is September 10, 2008. This is a Committee hearing on Environmental Protection and it's recorded by Yvette Molina.

CHAIRPERSON JAMES F. GENNARO: We weren't going to fit into the room next door. I'd like to thank John Liu who was to chair a hearing of the Transportation Committee in this room. So he moved next door in somewhat cramped quarters, notwithstanding the fact that he's got a pretty large group himself. So I wanted to thank him for making room for us in here. As I said, we'll be starting momentarily.

Okay. We're going to commence. I want to thank everyone for their patience. As I said before, we had such a big turn out here we had to change rooms. We were going to be next door and now we're in the big room as we should be because this is a big hearing.

I'm New York City Councilman Jim Gennaro, chair of this Committee. We're joined by Speaker Quinn, we're honored to have her here today. Also we have members of the Committee, Council Members Vallone, Como, Recchia and Mark-

Viverito was here. She will be coming back.

Before we start I know people have waited a long time so far but I think it's important to recognize in a special way and remember in a special way someone who chaired this Committee for ten years. Many people know that former Council Member Stan Michaels, the chair of this Committee, who chaired this committee for ten years. I had the pleasure of sitting right next to him for those ten years.

He had a real passion for the watershed and all the issues that come before this committee. This is the first hearing of this Committee since the passing of our dear friend, Stan. I dedicate my efforts today to his memory and I think it's appropriate that we just pause for a moment of silence in Stan's memory, after which we will commence. So a moment of silence for my friend, Stan Michaels.

Thank you all and thank you Stan. So we're here today to talk about the prospect, the specter of gas drilling in the water supply. I have this nice open statement, all nice and typed out which as it turns out I'm not going to

1
2 read from but it's certainly available for the
3 record. Let me just do a little bit of stage
4 setting here so people get some perspective on
5 what we've been through for the last 18 years to
6 try to protect the water supply.

7 Back in the early 1990s New York
8 City was excited about the prospect of trying to
9 apply for filtration avoidance so they wouldn't
10 have to filter the Catskill Delaware water supply.
11 I was around working for the Council back then
12 with Stan. The federal government, before they
13 granted us filtration avoidance status, took the
14 time and trouble to convene the best watershed
15 experts in the country to see what this blue
16 ribbon panel would think about New York City's
17 watershed being granted filtration avoidance.

18 And they studied very carefully.
19 It was Daniel Oaken from North Carolina and a
20 bunch of other watershed experts from around the
21 country. They came back and unanimously
22 recommended that New York City's water supply not
23 be granted filtration avoidance status because at
24 the time the city only controlled about 7% of the
25 land up in the watershed. We had an outdated

watershed rules and regulations. We had sewage treatment plants that weren't up to code.

We had a lot of stuff going on in the watershed that was not conducive with long term filtration avoidance and we would have been the only city to get filtration avoidance that had a lot of development within the watershed. The other three cities nationwide that enjoy that status had no development whatsoever in the watershed.

So the blue room panel said don't give it to New York City, they're never going to be able to control the activities in the watershed. The federal government in its wisdom said look guys, we got a document here from the best experts in the country that says that we're silly to give you filtration avoidance status. But you know what?

We're going to work with you. We're going to work with you to do this whole watershed protection process by which we're going to buy land, by which we're going to require that you update septic. That you have a whole farm program, that you do everything you need to do.

We're going to update the sewage treatment plants up there and we're going to work with you to see if we can make this happen.

But understand that you are really on the edge here and the best experts in the country don't think that we're going to be able to get this done in perpetuity. And really hold on to filtration avoidance. All these years later with DEP and the state and the federal government and our partners and the environmental community and the owners of the lands and the watershed have worked together cooperatively. Sometimes friendly, sometimes not so friendly but we got through it and we really created a paradigm for watershed protection that I think is the ending of the jurisdictions.

So enter this notion of gas drilling in the watershed. And I'm telling you as the Chairman of this Committee, as a geologist, as someone who has worked on this issue for 18 years, this is something that in my belief is just not feasible. It's completely inconsistent with a drinking water supply.

[Applause]

Well we have to--I'll play Sergeant at Arms now and tell folks that they shouldn't outburst. But the fact of the matter is that when you look at the big map and you see where the Marcellus Shale is and you see the million acres of the New York City drinking water supply and you see the percentage of the Marcellus Shale that's taken up with the New York City drinking supply, what could have happened, what should have happened but unfortunately didn't happen. When this legislation was going down the tracks, which it pretty much went down the tracks in stealth, unfortunately, that the New York City drinking water supply watershed should have been excluded from the bill. That was the smart thing to do.

It should have been done. I said okay, where in New York State does it make sense for us to advance this drilling bill, which is going to make it more economic and more feasible for the gas drilling companies to start to drill. Where in the state does that make sense and where in the state that does not make sense? And it certainly doesn't make sense within the boundaries of the New York City's drinking water supply.

When you look at the economics of the whole thing, it's been told to me that maybe we're looking at the prospect of over the next seven or ten years, or however long it takes to deplete the Shale of its natural gas resources. Or maybe there's \$10 billion worth of gas down there, terrific.

But when you look at the amount of gas that could be extracted from the small portion of the Marcellus Shale, which is a New York City drinking water supply watershed. What are you talking about, \$1 billion worth of gas, \$2 billion worth of gas, which is certainly nothing to sneeze at. But look at the consequences of fouling our water supply.

When you look at how much it would cost the City of New York to build a filtration plant, this is a plant that was estimated circa 1994-1995 to cost between \$8 and \$10 billion back then. So how much would it cost today in 2008? Who knows what the number is, even when you look at the Croten filtration plant. That was supposed to cost \$600 million, it's currently at 2.8 and who knows where that's going.

The whole notion that we'd allow this to go forward within the confines of the New York City drinking water supply watershed and risk the prospect of New York City repairs. Having to shoulder a \$10 billion plant, \$15 billion plant, \$20 billion plant, make up a number. This is what we're looking at.

The whole notion that we would risk not only this kind of expenditure but also the forfeiture in the future of all the watershed protection activates which are going on now because those all go out the window once we do the filter plants. There's not going to be enough money left to buy water around the watersheds. There's not going to be anything for the forestry program, the whole farm program. It's all out the door and then all the money goes to build this filter plant.

I'll mention just to mention that in an age of terrorism, we're talking about this one plant, this one plant being the one link between New York City and clean water and there won't be one drop of clean water for New York City but for the fact that this plant has to work at

1 peak efficiency, 365. And this is, to me, just
2 does not make sense. This flies in the face of
3 everything we've done of the last 18 years, flies
4 in the face of everything of what the federal
5 government originally told us back in the early
6 1990s, that we're not really a candidate for this
7 anyway.
8

9 But I think if we really work
10 together we can make something happen and get
11 filtration avoidance status. Just to recount some
12 of the stuff--and also some of the consequences of
13 this. So we say okay, let's say we do drilling in
14 the watershed. New York City still has to
15 purchase a lot of watershed lands up there because
16 we've purchased what, 77,000 or 80,000 acres over
17 the last 10 years. I think it's even more than
18 that.

19 118,000 and we're on pace for the
20 next 10 years to purchase something like that.
21 How is the City of New York going to compete with
22 land acquisition if it has to compete with your
23 drilling rights or whatever? It will basically
24 preclude New York City's ability to go forward
25 with this land acquisition program.

Let me just go through some of the things that have happened. I found out about this from a reporter who called me up. I thought it was a silly notion; I spoke out against it. He wrote a letter to the governor saying that there should be a one year moratorium, at least until we have the updated GEIS, which the governor recognized was not in place when we signed the bill. And I certainly would encourage that to go forward. So I wrote to him about that.

I wrote to the US EPA to get a formal opinion from EPA as to whether or not this activity in the watershed would jeopardize filtration avoidance to which the answer, of course, is yes. EPA did answer my letter but they didn't answer my question. They're not here today but they know that you can't do this in the watershed without jeopardizing filtration avoidance. So I've tried to engage them and get them on board.

DEP back on July 18th wrote a letter to DEC. A letter that they turned around in one day once they found out that this was going on. They didn't, DEP didn't, find out it was

going on until the bill was already passed. So they turned around a letter in one day and it's unfortunate that this letter does indicate that DEP is asking for a one mile buffer between this kind of activities and the reservoirs, which is completely insufficient. I had a conversation with Emily Lloyd on the telephone yesterday to that effect.

DEP is not going to be coming before us today. Emily had a pre existing engagement and her top watershed person was going to be with her. Today they're in Washington and so they are going to hire a consultant that's going to, I hope, challenge DEP's own letter. Emily also wrote a letter to me and to the Committee indicating why they were not going to be here and reiterating some of the points that they made to DEC in the letter that they sent to DEC. They re-affirm here that they are looking for the one mile buffer, which is not sufficient.

Our hearing today is going to focus on many folks who have very important things to say about this critical matter. I certainly look forward to it. We're graced by the presence of

Pete Grannis, the Commissioner of DEC. It is a rare occurrence that we have a state commissioner testifying at one of our hearings.

The state is under no obligation to be at a local legislative hearing but they're here today and I'm certainly grateful for that. We look forward to his good testimony. But for now I wish to turn it over to Speaker Quinn for a statement and Speaker Quinn will be starting off the questions as well. I apologize for the long statement but I had a lot to say about this issue. I've been working on it for 18 years so that's 18 years of what I know.

It is with pleasure that I call upon Speaker Quinn for a statement and I thank her for her leadership on environmental issues. When we were wrestling last year with when we were redoing the FAD. The FAD 2007 we were going for 10 years and it was a big issue. A real instructional issue for the Council was whether or not the Bloomberg administration was going to put enough money in the budget to fulfill the FAD promise to keep a pace the land acquisition purchases. While they paid lip service to that, they didn't put the

money in the budget.

This speaker right here made sure that it was an institutional issue for this Council that that money was put in the budget and it's because of Speaker Quinn that that \$300 million is there. So I want to thank her publicly for not only being here but for the great thing that she did last year with making sure that we could continue to purchase land. So with that being said, Speaker Quinn has a statement.

CHRSITINE C. QUINN, SPEAKER: Thank you. Thank you. Jim let me first start off by thanking you for taking that moment of silence to remember Stanley Michaels who I didn't have the honor of working for but I did have the honor of working with when I was a staff member to another council member and serving with as a city council member. Stanley would have liked that very much so thank you.

CHAIRPERSON GENNARO: Sure.

SPEAKER QUINN: You told us a lot of what you know but we know it's not your full 18 years of knowledge on it. That would take a lot longer but thank you. But Commissioner Assembly

Member Grannis, thank you for being here today and I want to underscore what Jim said that we will be working with the DEP and they'll be at future hearings. But the DEC is under no obligation to be here today and I think it speaks volumes about your interest in working with us. And it also speaks volumes about how some times it's good to make a legislator a Commissioner because they respect and understand the legislative process so thank you very much.

I just want to add a little bit to what the Chair said. Although what I'll add is along the same lines as what the Chair said. This is an issue of long standing concern to this Council and this Committee. Last year we really pushed that issue and kind of put our money where our mouth is sort of speak and said we just can't say we're going to buy land around the watershed to protect. We have to make sure that the budget has the money in there to actually buy the land. So this is something that we have long been concerned about.

We're very, very luck here in New York to have the best water supply out there. And

1
2 it's not just me and Jim saying that, it's been
3 proven clearly most recently in August of 2008 at
4 the New York State Fair at Syracuse and the water
5 testing contest we won. So it's without challenge
6 that we have the best water supply system.

7 That said, you don't end up with
8 the best water supply by accident. You end up
9 with it because you make a conscious decision as a
10 people and a government that a clean water supply
11 is something you need and that it's something
12 you're going to make sure that you continue to
13 have. And it's something that we can not risk
14 losing and we can not allow drilling to proceed
15 until we fully understand what the consequences
16 will be. If moving forward poses any risk at all
17 of compromising our water supply. Because once
18 it's compromised, you can not go back and
19 miraculously take it back to where it was before.

20 I think we all are realistic about
21 the challenges we face in the 21st century. And
22 certainly the conversation today about the water
23 supply and drilling for natural gas underscores
24 some of our biggest environmental changes. I
25 don't think there is anyone here who doesn't want

us to continue to explore how we can move towards natural gas in a way from other energy supplies. But we can't rush to do that and we can't cause problems we've created for the environment to force us to create other problems for the environment.

Hydrofracture drilling uses millions of gallons of water and chemicals which are often unknown in their specificity. The idea of those chemicals are often protected as trade secrets. That's exactly the last thing someone wants to think is happening in their water supply or the result of drilling. Other places, other states have done this type of drilling but in those states, DEPs or DEC's they often have entire divisions just committed to this.

They often and more typically have much more specific environmental impact statement procedures. Ones that are usually not broadly generic for the entire drilling plan but specific to the drilling sites. So until we firmly understand what the risks are, we can't move forward with this process. I know there's EIS going on, that should be the minimal timeframe we

1
2 commit. It's not until that is done to
3 understand. But we can't move forward and
4 determine if there is a safe way until we have a
5 full set of information. And we don't know what
6 the answer will be then. But what I think we all
7 do know now is we don't have that information. We
8 don't have that full set of knowledge and the risk
9 would be far too large to move forward today.

10 We may never move forward. We
11 don't know that answer today. But we do know
12 today that today is not that day and we don't have
13 the information we need. So thank you Chairperson
14 Gennaro for being such a diligent steward of our
15 watershed. And thank you Commissioner for coming
16 today to help us move forward on this issue and to
17 more deeply understand our concerns and our sense
18 of caution and our real direction to this state
19 that you do not move forward at this time.

20 CHAIRPERSON GENNARO: Okay.
21 Commissioner, we would call upon you to commence
22 your good testimony. I don't have a copy of your
23 statement. Has a copy of your statement been
24 distributed?

25 SPEAKER QUINN: If the Sergeants

could check.

CHAIRPERSON GENNARO: The Sergeants could provide the Chair, the Speaker and the members with a copy Commissioner Grannis'...

COMMISSIONER PETE GRANNIS: I think they're using it at the Transportation Committee now.

COUNCIL MEMBER G. OLIVER KOPPELL: Mr. Chairman. Mr. Chairman. Mr. Chairman.

CHAIRPERSON GENNARO: Sorry. I didn't see you Oliver. I recognize Council Member Koppell.

MR. KOPPELL: Thank you. While you're looking for the statement I just want to welcome the Commissioner, with whom I served in the state legislature for many, many years. He's also a close personal friend and it's great to see you here, Pete. I'm just delighted you have the position you do.

CHAIRPERSON GENNARO: It's the case of the missing testimony. The case of the found testimony. Please proceed.

MR. GRANNIS: Thank you very much Madam Speaker and Mr. Chairman and members of the

Committee. I'm very pleased to be here.

CHAIRPERSON GENNARO: Is your
microphone on? I can't hear you?

MR. GRANNIS: Is up on?

SPEAKER QUINN: You might have to
get closer.

MR. GRANNIS: Okay. I wouldn't
have missed this opportunity. I do know the role
you play. It's an important one and I just made
it for many years in hearings--

CHAIRPERSON GENNARO: [interposing]
I just want to ask the technical specialist to
turn up the volume on the Commissioner's
microphone. How's that?

MR. GRANNIS: You'll have to let me
know.

CHAIRPERSON GENNARO: Okay.

MR. GRANNIS: Okay? All right.

CHAIRPERSON GENNARO: Bingo.

MR. GRANNIS: Thank you Mr.
Chairman. Anyway. I want to thank you very much
for the opportunity to participate in this
hearing. I'm here with Jack Doll, who is the
Director of our Bureau of Oil and Gas Regulation

from the Department of Environmental Conservation. I wanted to remind you that for many, many decades New York State, the Department of Environment Conservation and the city have been long time partners in protecting the city's watershed. We are fully and absolutely committed to maintaining this relationship in ensuring the continuation of the filtration avoidance determination that you both talked about.

The potential for natural gas drilling in the Marcellus Shale formation within the watershed does not alter our agency's position in any way. We will not permit any drilling to take place that presents any threat to the city's drinking water supply. No permits will be issued, I just want to repeat, for any activity that threatens the city's water supply.

As a city resident and consumer of the city's water supply and as a member of the legislature with a long time commitment to the same issues that you identified, Mr. Chairman, I both understand and share the Council's concerns for the city's watershed.

On a daily basis, many of the

department's divisions play an important role in protecting the watershed and our law enforcement officers along with those in the Department of Environmental Protection are actively involved in safeguarding this invaluable asset.

The reason I am here today is to assure you and the residents of New York City, that Governor Paterson and I are fully committed to protecting this resource. And that as we move forward to meet our regulatory obligations under the state's minimum resources program. We will continue our longstanding policies of protection and vigilance with respect to this watershed.

As there has been a significant amount of misinformation regarding this matter, it's important to reinforce a number of very salient facts. First, DEC has not received any applications from Marcellus Shale horizontal drilling in the New York City watershed - none. Accordingly, there is no eminent threat or harm to the city's water supply and most certainly no emergency where action is needed today. Even if we were to receive an application, however, no permits would be issued until a completion of a

1 full environmental review specific to the special
2 sensitivities of the watershed and the individual
3 application.
4

5 Next you need to know that the new
6 law lending to the way that well spacing units are
7 established as nothing to do with the
8 environmental review that is required before
9 drilling permits are issued. Every application to
10 drill an oil or gas well undergoes an individual
11 environmental review. Any suggestion that
12 applying our uniformed well spacing rules to
13 horizontal drilling somehow changes that policy or
14 acts to allow drilling in the city's watershed is
15 simply false.

16 As you know and as you've referred
17 to Governor Paterson's direction, at Governor
18 Paterson's direction when he signed the bill, DEC
19 has initiated a public process to supplement the
20 existing generic environmental impact statement
21 that currently covers all oil and gas drilling act
22 in the state. The supplement will include
23 consideration of the specific impacts related to
24 the proposed high water volume hydraulic
25 fracturing in the Marcellus formation.

We are currently preparing what is known as a scoping document to guide this undertaking. Over the next few months we'll be holding public hearings across the state. First on the completeness of the scoping document and then on the resulting drafts supplement to the EIS to consider impacts unique to this technology, including, of course, any potential impacts on watersheds, not just this watershed but other community's watershed.

I encourage and welcome the members of the City Council to participate in these hearings and ensure that all concerns specific to New York City's watershed are fully and completely addressed in this public process.

While we are focusing on the Marcellus Shale issues, it's important to recognize that DEC has administered a very successful, decades long regulatory program for oil and gas drilling. It carefully protects New York's environment while achieving the public policy goals of enabling private property owners to take advantage of the mineral resources under their properties.

Today there are approximately 13,000 active oil and gas wells in New York. Virtually all of these involve drilling through aquifers. And as a result of DEC's strict regulatory regime, including stringent well casing requirements, which isolate the drilling operation from any ground water, water supplies are fully protection.

Any suggestion that these standards and requirements may be relaxed or will not be applicable, should deep horizontal Shale drilling be proposed in the city's watershed or anywhere else in the state is utterly baseless. At DEC we've been preparing to address horizontal drilling in the Marcellus Shale since the exploration companies began expressing an interest in New York opportunities. We've been clear from the outset but the need for strict environmental protection specific to the potential impacts of the proposed drilling in this formation.

Leading our concerns, and you referred to them, as the vast amount of water needed for the Shale fracturing operations, so called hydro-fracking. Including its sources, its

1 management during the fracking operation and its
2 safe handling and disposition following the
3 conclusion of the operation. As a condition for
4 obtaining a permit, it's our intention to require
5 that all fluids and additives used in the drilling
6 process be identified, regardless of their
7 proprietary nature and properly and safely handled
8 during and after drilling.
9

10 Under our industrial waste hauling
11 regulations, any waste fluids will need to be
12 properly transported and legally disposed of in
13 permitted treatment facilities. Our focus as is
14 the case of our oversight of all drilling
15 operations in the state will be detecting surface
16 as well as ground water. While there are reports
17 of significant amount of leasing activity by gas
18 companies and their agents we have received, as I
19 mentioned, only a handful of permit applications
20 for horizontal drilling in the Marcellus Shale.
21 As I noted earlier, none of these are for drilling
22 in the New York City watershed.

23 As a result we are in a position
24 where we can conduct the careful and deliberate
25 public process we believe necessary to examine

potential environmental impacts of horizontal drilling in this sensitive formation. And take the appropriate regulatory actions to continue to ensure that gas drilling in New York State including drilling in the New York City watershed is conducted in an environmentally sound way without risk to surface water or ground water.

Here's the bottom line: we would not issue a drilling permit today if a proposed well threatened the city's or any other watershed. And we will not issue a drilling permit in the future if the proposed well threaten the city's or any other watershed. The City Council and every interested party will have the opportunity to vet our work and raise any technical, legal and policy concerns that it has regarding drilling in the city watershed, as our process to supplement the generic impact statement moves forward.

I look forward to your participation in these proceeds. The concluding paragraph in my formal statement includes a reference to our web site where we've got a specific page dealing with Marcellus drilling issues and a generic impact statement that is

1
2 already in existence that we will be supplementing
3 is available on that page as well. I want to
4 thank you again for this opportunity to
5 participate and be pleased to try to answer any of
6 your questions.

7 SPEAKER QUINN: We thank you very
8 much, Commissioner. You said something to the
9 effect that there wouldn't be any drilling or
10 activity that posed a threat to the New York
11 City's water supply. Can you define threat?

12 MR. GRANNIS: I think it's a site
13 specific review we'll do and obviously the scoping
14 document is to define the range of issues that
15 ought to be vetted in our preparation of the
16 supplement to the GEIS, the Environmental Impact
17 Statement. And at that point we will obviously
18 take into account every concern that is raised by
19 every stakeholder and members of the Council and
20 any other--

21 SPEAKER QUINN: [interposing] I'm
22 sorry. Take into concern what?

23 MR. GRANNIS: Any issues that are
24 raised about concerns about the impact of this
25 drilling operation in these areas. The may--

SPEAKER QUINN: [interposing] So you haven't determined yet what that means? You're going to do a participatory process to come up with that?

MR. GRANNIS: Well the purpose of the scoping document and the supplement is all to gather information to form the basis for making these kind of analyses first and then conclusions based on the facts.

SPEAKER QUINN: And take us through the timing on that.

MR. GRANNIS: The scoping document is going to be available within several weeks. It will be put out for public comment, a series of public hearings all across the impacted region. You'll see a copy of it, obviously, very soon. And the scoping document then will be finalized as the determining document for determining what we look at in preparing the supplement to the Environmental Impact Statement that exists.

SPEAKER QUINN: So you don't know yet exactly what the topics are that are going to be included in the EIS that will be part of--?

MR. GRANNIS: [interposing] No.

Obviously the purpose of the scoping document is to identify all topics whether they are local impacts, regional impacts, threats or possible threats to aquifers or surface water supplies, the whole range of concerns, many of which have been voiced already. Even those that we may not know about may obviously be a subject of the scoping document review.

SPEAKER QUINN: I just want to reiterate. You said, I just want to make sure, that the individual permits, right? An individual environmental reviews for each potential site, is that correct?

MR. GRANNIS: Right. For each application.

SPEAKER QUINN: For each application.

MR. GRANNIS: So in addition to having to comply and be guided by the Environmental Impact Statement, every individual application goes through a secret review where it will be a site specific review on top of the EIS standards for every single application that comes before us.

SPEAKER QUINN: Forgive this next question because my sister's a geologist, Jim is one so I'm not all that helpful. We had a lot of rocks in our basement when I was a kid so it hasn't given me as much help as I would have liked now. But when you say each application, is an application singular to one individual drilling...

MR. GRANNIS: Yes.

SPEAKER QUINN: ...or could an application have a bunch?

MR. GRANNIS: No.

SPEAKER QUINN: No. Okay.

MR. GRANNIS: Each site, they're site specific applications.

SPEAKER QUINN: Okay. And in your process if this drilling ends of happening, will the gas companies be required to disclose the chemical components of the fluids of the fracture drilling?

MR. GRANNIS: Absolutely. And we've modified our existing permitting requirements to require even the wells that are being drilled horizontally today will have applications to disclose fully all--

SPEAKER QUINN: [interposing] And publicly?

MR. GRANNIS: And publicly all of the components. Some of those may be protected by business interest from foitable. We will have full disclosure of every component in the fracking fluid. If the permit is wanted, if they don't want to disclose it, no permit.

SPEAKER QUINN: Great. Okay. One of the things that I reference and I think you've certainly heard and you've made reference to it in your opening statement is if this happens does the DEC have the staff to actually deal with not just the volume of work it would generate but the real specificity of the type of work that would go along with it. And talk to us about what you think those staffing levels would need to be and what they are presently. And how if you're not at that level, given the state's financial crisis how that could possibly happen?

MR. GRANNIS: We believe in our work on the scoping document and on the anticipated preparation of the supplement to the GEIS we will have adequate resources and we will

not be able to complete that process without having those in hand. We believe they're there.

The bigger issue is then what happens after that should drilling applications come before the agency and we will be able to proceed at a pace that's commensurate with the available staff. If staff aren't there, they won't be able to process the applications.

SPEAKER QUINN: As staff has indicated to me, you have 19 inspectors. Is that right for the 14 active wells in the state?

MR. GRANNIS: Yes. Most of the drilling operations, the inspections of the drilling operations are site reviews before drilling starts, while it starts and as they conclude the drilling and put the land back into its proper state. The ongoing operations of looking at existing wells very, very infrequently, ever a necessity. We've had no problems with the 13,000 wells that are out there as they're producing unless there's been a spill. But there's no need to inspect those so it's really looking at the sites as they're going through the permitting process.

SPEAKER QUINN: Is it these 19 individuals who would do the work associated with the permitting process that you're talking about? Or who would do it or is it going to be new people?

MR. GRANNIS: If we get a flood of permits then we're going to need more staff, obviously we're going to have more staff. We're going to have to request more staff and budgeting for more staff but we are not going to short circuit or any way fast track permit reviews because we don't have staff to do the work.

SPEAKER QUINN: I understand that. I'm just trying to understand if hypothetically this was starting tomorrow and you got to work and there was a pile of permits to be reviewed. To what unit would they be referred and how many people work in that unit.

MR. GRANNIS: Those are the 19 people you talked about.

SPEAKER QUINN: The 19. And again, I apologize for being a little bit of a novice, what's a typical case load? Is reviewing one permit going to take a week or one of these 19

individual's time to--

MR. GRANNIS: [interposing] We process 400 to 600 permit applications a year.

SPEAKER QUINN: But not of this type of exact...

MR. GRANNIS: No.

SPEAKER QUINN: No. So how long does it take to review a horizontal natural gas drilling on the watershed permit?

JACK DOLL: To review these kinds of permit--

SPEAKER QUINN: [interposing] Just identify yourself for the record. Sorry.

MR. DOLL: I'm sorry. I'm Jack Doll, Director of Bureau of Oil and Gas Regulation, DEC. To review these kind of permit applications would take many weeks, if not months, based on existing staff.

SPEAKER QUINN: And how many permits could potentially come in if this occurs?

MR. GRANNIS: We have no idea. As you know and as the Chairman referenced, the land men has been cruising across--

SPEAKER QUINN: [interposing] I'm

1
2 sorry, what?

3 MR. GRANNIS: The oil company,
4 advanced people, I don't know. But the closure of
5 the sub prime mortgage hustle a lot of these
6 people are now out hustling oil and gas leases in
7 the southern tier so we don't know. They're
8 signing up leases. How many applications will
9 result from that, I don't know.

10 SPEAKER QUINN: I mean this with no
11 disrespect and I take you at your word that you're
12 not going to allow staffing levels to cause
13 permits to move too quickly. That said, you're
14 not going to be the DEC Commissioner forever and
15 it's entirely possible that these permits could
16 come across a DEC with a different Commissioner.

17 So how do we know that the
18 staffing, if this was to happen, is going to be in
19 place in a way where things are really going to
20 get checked? Because it doesn't seem like 19
21 people who already have other responsibilities,
22 given the complexity of these questions, are going
23 to be able to keep pace with what could be
24 particularly given the hustle that's going on now
25 with the volume that's going to come in.

How do we assure what you're saying is a fact now? And how do we assure that if there was an agreement to do this it would remain a fact?

MR. GRANNIS: The law requires all of these permits to go through a full secret review so that's the existing law unless the law is changed. We have--

SPEAKER QUINN: [interposing] But how does the citizen know that the full review--

MR. GRANNIS: [interposing] They're public. It's a public participatory process. There are notices, there are public hearings, opportunities for public input in vetting. At the end of the day I can't tell you that we're going to--

SPEAKER QUINN: [interposing] It's hard to think that 19 people can get this done and there's a review and there's a review. And there's a kind of review a human being does when they have nothing else on their desk and they have the kind of review a human being does when they have a huge pile that's going to fall and suffocate them.

MR. GRANNIS: We have eight permits pending, that's it. So we're not facing this. Everybody, the industry and most of the community that we work this knows that we're going through this drafting process for the scoping document. Clearly when we define the workload, obviously that's going to be a matter for an application for more staff to do the work that may result from this activity. People will be there and we're not in any way going to short circuit the review process that's required by law.

SPEAKER QUINN: Just one or two quick more questions and I might come back for it later. The Governor has, which I completely understand given we're a legislative body that has to pass a budget too. And I'm very mindful of the true severity of the fiscal situation the city and even more so the state in is so I don't say this in any way as a criticism as the Governor's direction to commissioners.

But the Governor has directed you and other commissioners to have your budgets not grow from fiscal year '09 to '010. So if you were to increase the staff in this 19 person unit that

would have to come from decreasing staff in other areas, correct, if you were to remain constant '09 to '010?

MR. GRANNIS: We do have the ability and plan to assess people for our work in conjunction with a private permit applicant--

SPEAKER QUINN: [interposing] I'm sorry. Say that again, I couldn't hear you.

MR. GRANNIS: We have the ability to assess applicants for the added work that comes to the agency for doing a secret review of their permit application. We would obviously pass those costs along to the applicants.

SPEAKER QUINN: And that's enough to cover full staff--

MR. GRANNIS: [interposing] It's enough to cover our costs associated with doing a secret review of an individual permit application.

SPEAKER QUINN: And how does that work just from a timing perspective, though? Because I assume that money would come in after the review was done not before and if you have to stay consistent, how would you budget for that without taking other units down?

MR. GRANNIS: Those are issues we're going to have to cope with as this process moves forward. But we have a big agency and people that are in this division have done a phenomenal job with the 13,000 wells out there. We've had no problems. None of these anecdotal surface contamination issues that have been raised in other jurisdictions, Arizona, New Mexico, Colorado, have happened here because of the work done by this division.

So our track record has been extraordinarily successful in making sure that the existing drilling operations, which are spread all across the state, have been done in a safe and reliable manner without contaminating drinking water, ground water or surface water.

SPEAKER QUINN: Last question, I just want to confirm. Property owners have the right to say no, correct?

MR. GRANNIS: They do.

SPEAKER QUINN: And New York City would have that same right for the property that we own?

MR. GRANNIS: Absolutely right.

SPEAKER QUINN: And there's no state overriding of that?

MR. GRANNIS: No.

SPEAKER QUINN: No.

MR. GRANNIS: Nobody is forced to let drilling take place on their property.

SPEAKER QUINN: Okay. Thank you.

CHAIRPERSON GENNARO: Thank you. Thank you Madam Speaker, thank you for being here today. Thank you for your leadership on watershed related issues. We're grateful to you for the value added that you brought to this hearing already.

SPEAKER QUINN: Thank you.

CHAIRPERSON GENNARO: Thank you, Madam Speaker. Commissioner, okay. Certainly we're here at this place we have this bill which has been signed into law. I just want to go back in time a little bit to figure out how we actually got here.

Based on what I heard from Emily Lloyd yesterday, as I mentioned in my opening statement, I had a conversation with her yesterday. Because frankly I was a little upset

1
2 at the fact that DEP wasn't going to be here so
3 she'd figure she would get on the phone with me to
4 calm me down a little bit. It helped a little but
5 DEP did not become aware of this bill, I guess,
6 the city has inter governmental people and Albany
7 people and legislative people. For some reason it
8 was not on the city's radar.

9 The Commissioner of the agency that
10 has oversight over the watershed wasn't made aware
11 of the fact that this bill was going to go to the
12 Governor for a signature until it looks like the
13 day before he signed it. Because her letter which
14 she said DEP turned around in a day is dated July
15 18th and I believe the Governor signed it on or
16 about mid July, 20th, 23rd, something like that.
17 So when this bill was being negotiated I imagine
18 there was some kind of negotiation between the
19 legislature and the executive as this bill was
20 being discussed. That's a presumption on my part
21 but it sounds like one that makes sense, right?

22 MR. GRANNIS: It is Mr. Chairman.
23 But this is a departmental program bill introduced
24 early in the year, February or March. It was part
25 of our program package. It was heavily--

CHAIRPERSON GENNARO: [interposing]
This was a program bill?

MR. GRANNIS: Of the department,
it's a technical program bill. It had nothing to
do with anything related to environmental
protections. It's a technical bill dealing with
spacing really to protect property owners from
having to have--

CHAIRPERSON GENNARO: [interposing]
Right. But yet let's just divert a little bit.
Let me go to the document I have here about the
memo in support for--this is the Senator Young
bill, which ultimately became the bill of record.

MR. GRANNIS: The legislators carry
program submitted by the agency and by the
executive--

CHAIRPERSON GENNARO: [interposing]
Okay. Fine, fine. So the memo in support sort of
seems to clearly state that this bill put forward
for the purpose of facilitating drilling
operations. And yes it was a technical bill but
the language within the memo in support it talked
about this will allow operators in a smaller
acreage positions to develop smaller units. And

the provision for well share units would allow operators to drill several wells from the centralized location.

And it clearly makes reference through this memo in support that the intent of this bill in addition to clean up whatever technical issues might be from the old way of drilling to the new hydrofracking was clearly intended to advance the prospects for drilling upstate. I'm not saying that that's a bad thing but that was the purpose.

MR. GRANNIS: If I could ask you to look at the bill, which I have in front of me. The new law really is a spacing bill. The original spacing law did not contemplate horizontal drilling and they're supposed to build that into the spacing standards. This does permit the possibility of drilling several wells from a single drilling pad as opposed to scattering those pads across the landscape. If a driller can drill down and then move horizontally under the ground, it's obviously a way of protecting--

CHAIRPERSON GENNARO: [interposing]
But as the memo in support says, in the absence of

1 this legislation it would have been more
2 cumbersome for this hydrofracking process to
3 advance. And that in absence of legislation wells
4 and new fields must be drilled on 40 acres, which
5 would not always foster efficient resource
6 recovery. The DEP projects a significant increase
7 in the number of horizontal wells to be proposed,
8 particularly in the target Shale formation which
9 is not contemplated by the statute that was on
10 record before this. So this clearly was done with
11 the intent, not an evil intent certainly, but to
12 facilitate this new technology and to advance its
13 prospects in New York State.

14
15 MR. GRANNIS: It was done to
16 protect--

17 CHAIRPERSON GENNARO: [interposing]
18 I understand. It's just it is what it is.

19 MR. GRANNIS: Mr. Chairman, that's
20 I think an in appropriate characterization. It
21 was a technical bill dealing with spacing to
22 account for this new drilling technique which lets
23 somebody go down and then move out horizontally,
24 sometimes thousands of feet. But it was designed
25 to protect adjacent land owners.

Without this, the old spacing requirements would have enabled individual drillers to put their pads scattered in much more random ways across the landscape. But this lets them consolidate drilling operations, which could have taken place on many sites under a single site--

CHAIRPERSON GENNARO: [interposing]
But it's also, again, we won't belabor. But it's fair to say that under the old paradigm it might not have been as economic for entities to come forward. We don't have to belabor that because I want to get to--With foreign oil costing so much and everyone not wanting to rely on foreign oil anyway because their enemies we get the oil from. Everybody sees natural gas as a clean fuel. A new drilling technique, certainly it's going to be the case that natural gas prospecting in the U.S. mainland is going to increase because of economics and other things.

The question is as this bill was being contemplated, why was it not thought that perhaps New York City's water supply should be exempted from this activity--

MR. GRANNIS: [interposing] This was not an environmental protection bill. This was a bill dealing without internal review processes and the efficiencies that we can bring to the table.

CHAIRPERSON GENNARO: I understand that.

MR. GRANNIS: It wasn't in any way contemplated. There's no basis for excluding any particular watershed or any particular sensitive land. We didn't deal with any of the environmental protections as I made clear in my statement. This is still a technical spacing bill that in no way diminishes or any way undercuts our existing requirements for full environment review.

CHAIRPERSON GENNARO: Right. But here's where people depend upon their government to protect them from movements that are out there and processes that are out there and forces that are out there that could endanger their water supply. Up until now it's really not been an issue within the city's drinking water supply watershed. The current updated drinking water supply rules and regulations don't even mention it

so it wasn't even contemplated when the new watershed rules and regs were put together.

And as state government takes this issue and puts it under the microscope and recognize that what was previously uneconomic in terms of getting national gas out of Shale is becoming economic because of the price of oil and because of new technology. And because of this and that, that's the time when this issue is under the microscope for state government, with the legislature to figure out what would work in terms of going forward.

It's like yes, we should figure out what areas in the state this would be good to do and how we can make it more effective and how we can protect property rights. But certainly within the confines of New York City drinking water supply watershed, we shouldn't have it there. So we shouldn't have it there but we should advance it here with the proper environmental safeguards. And that's what people sort of count upon their government to do. It's my belief that this is what didn't happen here.

And I'll further ask, as this was

1
2 being contemplated, but you said it wasn't an
3 environmental bill but was there any consultation
4 with the US EPA, who was originally coming forward
5 with it. Who granted us filtration avoidance
6 status or with the State Department of Health that
7 currently manages the filtration avoidance
8 determination or with the city. But we can't
9 answer that question because they weren't
10 consulted.

11 I'm just trying to figure out how
12 we got here and why the legislature and state
13 government as a whole did not foresee that this
14 was not going to be a problem for the New York
15 City drinking water supply and act accordingly by
16 carving out the water supply. Long question,
17 sorry.

18 MR. GRANNIS: The easiest answer,
19 Mr. Chairman. I've sat in your position many,
20 many times is to have a record that supports those
21 decisions and that's what our scoping document and
22 our supplemental EIS is intended to do. To see
23 whether or not these concerns are supported by the
24 facts, the science the USGS, the Health
25 Department, your health department, your DEP.

Whether or not there are legitimate concerns and that's what this whole process is to do. There are private landowner rights all through the watershed.

If we were to make a decision, an arbitrary decision not based on the scientific based on, not supportable by the facts and the record, we could lose every single lawsuit for taking a property without due process and just cause. So obviously the scoping document that we are preparing, which we'll have out there, is to look at the very issues that you've raised to see whether or not there is merit in those issues. If they do warrant decisions to impose restrictions or limitations within the watershed, those will clearly be the result of this scoping process.

We will then have a record that we can sustain and support and withstand legal challenges from. And that's the critical part about our role as a regulator, is to make sure that if we are to make those decisions they are fully supportable by the record that we have before us.

CHAIRPERSON GENNARO: Right. But

1 here's the problem with that in that wouldn't it
2 have been better to have a moratorium until the
3 new EIS was fully complete and that would have
4 avoided this rush for people to go out there and
5 sign these leases and offer these leases. So now
6 we already have a situation where people who live
7 in the watershed. Because there was a decision
8 made not to sort of hold back on the process going
9 forward.
10

11 Like the statement that was made
12 that we don't have an up to date EIS but that fact
13 notwithstanding, we don't want to stop the
14 process. We're willing to sort of let it go
15 forward on a case by case review basis and that
16 kind of thing. So people start knocking on doors.
17 Start selling gas drilling leases. Now you have a
18 situation where that is all out there and I think
19 perhaps that could have been avoided by doing the
20 technical work and the scoping and everything
21 first.

22 Putting it out there like a big fat
23 question mark as to whether or not this kind of
24 activity was going to be able to proceed inside
25 the watershed. Then it was government's job to do

1
2 all that work and then formally proclaim that yes,
3 it can proceed in the after shed under these
4 conditions. That would have determined how the
5 leases would have been led or whatever.

6 If a gas company realizes that
7 based on this information and this EIS, it's going
8 to be very, very difficult to do all the
9 environmental hurdles then what they'd offer for a
10 lease is probably much less than what they would
11 otherwise. I just think that it was approached
12 wrong. It was incumbent upon government to do all
13 the scoping, to do the EIS and to figure out
14 whether or not this was in the realm of the
15 possible for the watershed. Rather than saying,
16 you know what? We're going to let it go forward
17 in the absence of a full EIS and people are going
18 to go out there and knock on doors.

19 People are going to sign drilling
20 leases and then you have all the legal
21 consequences of that already happened and us sort
22 of trying to catch up after the fact. That, I
23 think, was the problem. That, to me, was a real
24 deficiency in this process. That's my opinion.

25 MR. GRANNIS: My job is to protect

1 the environment, Mr. Chairman. So what these oil
2 companies chose to do in going out and talking to
3 farmers and landowners in the watershed and across
4 the Shale formation is really a business decision
5 that they made. Our position, and I made it I
6 thought as clear as I possibly could, we're going
7 to issue no permits without a full environmental
8 review, which involves all of the issue that are
9 on the table.
10

11 Whether it's what's in the fracking
12 fluid, where the water comes from, where it goes,
13 how it's handled on site, local transportation
14 issues, the feeder fields that are necessary to
15 get gas from the well head to the central
16 distribution point to the gas pipelines. There
17 are a host of issues.

18 Community character, community
19 impacts; there's just a range of issues. So if
20 any company chooses to go ahead before we complete
21 our generic update of the Impact Statement,
22 they're going to do it with the full
23 understanding. We've been very clear they're
24 going to have to do a full blown Environmental
25 Impact Statement with public input challenge,

public input for the process, the scope and everything else.

So I think they're very well aware of the risks associated with moving ahead before we have the answers to these questions. They won't because we're not going to issue any permit if there's any question about any risk to the city watershed or any aquifer.

CHAIRPERSON GENNARO: But it seems-
-Okay. Sure. But it would seem to me based on for example, DEP's own body language in this whole thing where they found out about this bill that was passed and just about to be signed into law. They reacted, turned around a letter. They obviously had some reconnaissance of the nature that this is going to happen in the water supply. Otherwise I think their letter would have had, again I can't speak for the Commissioner because she's not here, but I think the body language of this letter would have been a little different.

I know that if I was a DEP Commissioner and it was brought to my attention that drilling operations may proceed within the confines of the water supply that I had

jurisdiction over. The letter that I would have written, I'm going to do everything within my power as the Commissioner of the City Department of Environmental Protection to update the watershed rules and regulations using my best people to make a case that this is an activity that is not consistent with an unfiltered drinking water supply. I would have thrown it back to the state to say you guys do the science and show that the city's position saying this is an incompatible activity.

You guys do the science to show that we're wrong. But instead her and her people wrote this letter that just recognizes that this is something that's going to happen. She even asked for this one mile buffer so I'm kind of wondering why. Without her being here I can't really know that. But it seems that DEP, based on my reading of their letter, seems to be of the mind that this is an activity which is definitely going to take place within the New York City drinking water supply. That also has to be concerned.

But while we're on the letter that

1 they wrote, as you all know. There are eight
2 recommendations and concerns posed in the letter
3 and her statement is that we ask you, meaning the
4 DEC, to agree to the following specific
5 recommendations and concerns. I want to numerate
6 them all. You've had about a month and a half to
7 take a look at this letter. Are you in agreement
8 with what the Commissioner has put forward? And
9 are you willing to abide by these recommendations
10 and concerns?
11

12 MR. GRANNIS: Mr. Chairman we've
13 been discussing them with Emily Lloyd and her
14 staff. They're concerned that we're going through
15 the scoping--

16 CHAIRPERSON GENNARO: [interposing]
17 Pardon me, Commissioner. Can you just repeat
18 that? I'm going to put on Councilman Vallone for
19 a question in a moment. But please if you could
20 just repeat that. I'm sorry.

21 MR. GRANNIS: We're going through
22 the scoping document and all of those issues will
23 be on the table in the scoping document as we move
24 forward. So Commissioner Lloyd is well aware of
25 that, that every concern she has and any other

1 stakeholder has will be part of this scoping
2 document. We're moving forward. The Governor
3 signed this bill. It's a spacing bill; it doesn't
4 deal with any of the, I think, the concerns that
5 have been raised about it. But everything will be
6 on the table in the scoping document.
7

8 We urge you to participate. It's a
9 public process; it's an open transparent process
10 in which we will obviously focus on all issues
11 raised by all stakeholders going forward. But I
12 can't--the answer about how I conclude. We're in
13 the process of gathering information and I'm the
14 decision maker for this agency. I can't pre judge
15 the outcome of a very public process in which
16 scientists will be involved, the USGS will be
17 involved, the Cornell Extension Services will be
18 involved. All of our environmental partners,
19 yours and mine, many of who are in the room will
20 be involved.

21 We intend to listen to everybody's
22 concerns and we will seek to address all of those
23 in the scoping document which will then lead to
24 the work, the underlying, the hard work. Which is
25 to address the issues defined in the scoping

document as meriting further review and consideration.

CHAIRPERSON GENNARO: Let me pose one more question. You know what? Let me just put Pete on for a question. I'll come back to you. He has to go but I'll recognize Council Member Vallone and also I'll recognize the presence of Council Member Bill de Blasio from Brooklyn. Council Member Vallone.

COUNCIL MEMBER PETER VALLONE:
Thank you Mr. Chair. I think, once again, you're showing why it's so important that we have our own resident geologist as chair of this committee. Again, your expertise is very helpful here. Again we thank you for that. I want to thank you also for being here. As the Speaker said, you don't have to be and your testimony was very impressive. I have one quick question. I do need to get to another hearing so thank you for this.

Here's my question: do you, as an agency of the state, do you assume liability and responsibility for your decision? What I mean is this, let's say you implement every safe guard known to man before making this decision, every

one that we would recommend. And you come to the decision, as a state agency that you will issue a permit and allow this drilling. Something goes wrong, the water supply gets contaminated, who pays for the filtration system? New York City or New York State?

CHAIRPERSON GENNARO: I can answer that one but I'll let the Commissioner answer it.

MR. VALLONE: It's way above your pay grade and the Chair is going to say New York City, which makes absolutely no sense. If you're going to make the decision, you assume the liability, you assume the responsibility. Otherwise we'll make the decision so that's all I wanted to add so thank you.

CHAIRPERSON GENNARO: Commissioner?

MR. GRANNIS: I, I--

CHAIRPERSON GENNARO: [interposing]
I'll answer the question then.

MR. GRANNIS: The FAD is the City is granted a great deal of work from my agency and the state health department as well as City officials and City agencies that were very pleased with the ten year FAD that was given by federal

1
2 EPA. I was at the ceremony with Administrator
3 Johnson, one of the few things I've agreed with
4 him on in the environmental field when his agency
5 decided to give you the ten year filtration
6 avoidance agreement. We're partners with your DEP
7 in protecting your City's water supply, as I
8 mentioned before. Our people are in the
9 watershed, our inspectors are there. There's a
10 watershed inspector general from the Attorney
11 General's office that's involved. I assume--

12 CHAIRPERSON GENNARO: [interposing]
13 I'm not quite seeing--

14 MR. GRANNIS: [interposing] At the
15 end of the day this issue is such a magnitude that
16 obviously we're all in it together. Clearly our
17 experience has been to date we have not had a
18 problem and we're counting on maintaining that
19 record. It's a good question though.

20 MR. VALLONE: Thank you.

21 CHAIRPERSON GENNARO: Thank you
22 Council Member Vallone. Let me just kind of
23 expand on Pete Vallone's point a little bit. I
24 brought it up at the outset of the hearing. We
25 were fortunate back in the early 90s that the

1 federal government took a real gamble on us and
2 said that notwithstanding the belief of the top
3 experts regarding watershed and water supply
4 protection. New York City we're going to give you
5 a chance.
6

7 We're going to grant you the
8 opportunity to work with the federal government to
9 make watershed history and see if we can grant you
10 sort of ongoing filtration avoidance as long as
11 you do everything that you have to do. In the
12 process you'll be building your watershed
13 protections which will protect the watershed in
14 perpetuity. And you'll also save yourself \$10,
15 \$15, \$20 billion in the process for a plant that
16 you wouldn't otherwise need.

17 They took that gamble and to me,
18 this is the critical time and this is the mistake
19 that I believe the state is making by going
20 forward and even entertaining the notion that this
21 can be an acceptable activity within the City's
22 drinking water supply. I just believe it's folly
23 and it's ultimately going to cost the City, it's
24 going to cost the water and sewer rate payers of
25 the City of New York \$10 billion, \$15 billion, \$20

1 billion. And this is going to make or break the
2 watershed.
3

4 One of the critical elements here
5 is that for the first ten years, Pete, the
6 filtration avoidance determination was managed by
7 the federal government who chose for the first ten
8 years not to give the state primacy. Usually the
9 federal government would set up this filtration
10 avoidance and then it would devolve responsibility
11 for the day to day maintenance of the filtration
12 avoidance determination to the state, which they
13 chose not to do for the first ten years.

14 It's only when we did the third FAD
15 in 2007 where we went to ten years that the EPA,
16 pursuant to an agreement that had been made a long
17 time ago, gave primacy to the New York State
18 Health Department. It seems sad that no sooner
19 does the state governor essentially gets the keys
20 to the fad, so to speak, that we end up making
21 some decision that's completely inconsistent with
22 long term filtration avoidance and could cost New
23 York City billions of dollars.

24 If I had my druthers, I think we
25 have the making of a case for the federal

1 government to take primacy back from the state
2 because I think the state in its first year out of
3 the box in a ten year FAD is going down the road
4 to perdition with regard to long time prospects
5 for filtration avoidance. I'm not criticizing the
6 fact that this was a technical correction bill in
7 order to accommodate new technology, in order to
8 bring revenues in that state.
9

10 But the view from 30,000 feet is
11 that we've got a drinking water supply that barely
12 by the skin of its teeth was eligible to be a
13 filter free system and we certainly risk that. I
14 look forward to the federal government not being
15 shy. I call upon them to sort of answer my letter
16 that I issued to them last month where I asked
17 them to render a formal opinion as to whether or
18 not this activity could endanger the City's
19 filtration avoidance determination, which clearly
20 it can.

21 No amount of regulations, no amount
22 of scoping documents however can change the
23 essential fact that for each and every well head,
24 you've got 200 tanker trucks coming in. You've
25 got to build the well head, you've got to build

1
2 roadways to get there. You've got to mix the
3 toxic brew of chemicals in sand and water; you've
4 got to inject it. Then you've got to get it out,
5 then you've got to put it in ponds. Then you have
6 to take it out of the watershed. You've got to
7 treat the hazardous waste. There are all kinds of
8 questions that surround this kind of technology.

9 We have people who have flown in
10 from out of state at a great expense to bring this
11 to our attention. No amount of regulatory process
12 can revoke the fundamental laws of what you can
13 and can't do inside an unfiltered drinking water
14 supply that already has, unfortunately, plenty of
15 stresses and strains on it.

16 When you look at other activities
17 that DEP has done, like its uproar over the
18 Bellaire Development project. That was going to
19 be one resort, at one pinpoint in the watershed
20 that DEP's appropriate position that if we don't
21 do this particular development right then this
22 could cost us our filtration avoidance status.
23 They fought tooth and nail. They figured out how
24 to get the project made smaller.

25 All of the impacts--again I'm not

1
2 totally satisfied with how that came out but the
3 effort was there. But now for DEP to issue a
4 letter saying that if you give us a one mile set
5 back and it's done clearly; their own belief.
6 They don't think that they're going to get away
7 without having drilling inside their watershed.

8 MR. GRANNIS: If I could just
9 comment. One hydrofracking is not new; it's not a
10 new technology. It's been in existence. We have
11 hundreds and hundreds of hydrofracking--

12 CHAIRPERSON GENNARO: [interposing]
13 Not in the watershed. It's never been done in the
14 watershed.

15 MR. GRANNIS: Vertical
16 hydrofracking has gone on for years, number one.
17 And number two, we have made no decision. The
18 purpose of our scoping document and our ongoing
19 review is to build a basis for making a decision.
20 We have permitted to drilling, hydrofracking or
21 horizontal drilling. There have been no permits
22 applied for or contemplated in the watershed.
23 Nothing has happened and nothing will happen until
24 we have those assurance you're concerned about to
25 make sure the watershed is protected.

1
2 Most of the problems are ground
3 water. The City's water supply is dependent on
4 run off. It's not deep well hydrofracking, which
5 is often thousands of feet below the water table
6 where it exists. So we're obviously concerned
7 with some of the operations you talk about, the
8 preparation of the site, the restoration of the
9 site after the drilling is done. But there have
10 been no decisions made whatsoever.

11 We need to have a record that
12 justified our decisions. I can not, as a
13 regulator or as an administrator, make decisions
14 without a record and that's what the scoping
15 process and then the supplement is designed to do.

16 CHAIRPERSON GENNARO: Is it your
17 testimony today that the result of this regulatory
18 process could result in a complete prohibition of
19 natural gas drilling operations within the New
20 York City watershed?

21 MR. GRANNIS: Possibly. You're not
22 unique here. The Shale formation covers many
23 communities' watersheds so there are other issues
24 involved. Obviously, the outcome is a science and
25 the facts--

CHAIRPERSON GENNARO: [interposing]
My jurisdiction kind of ends at the New York City
drinking--

MR. GRANNIS: [interposing] I know
but what you're asking for is implications that
affect my jurisdiction, too, which is statewide.

CHAIRPERSON GENNARO: Yes. Yes,
yes.

MR. GRANNIS: And we're worried
about precedent and we're worried about
supportable record that can withstand the legal
challenges. That we make decisions that affect
private property rights and mineral rights under
those properties. Obviously, Mr. Chairman, we're
not at odds with you but we're looking at this as
a way to build a record that can sustain and
support whatever decision we might make.

If the decision is not to permit
drilling at some portion of the watershed or near
some of the reservoirs or whatever, it has to be
supportable, it has to be factually based. Not
just based on some anecdotal concerns that come
from Colorado and Arizona about the
misapplications of their laws. We're obviously

looking at these issues every--

CHAIRPERSON GENNARO: [interposing]

Surely. I would certainly commend to you the report that was done by the EPA blue ribbon panel back--I think the report was released in 1992 or 1993, if my memory serves me correctly. That, I think, speaks volumes about what the best watershed experts in the country believed about New York City's watershed's ability to continue to be a watershed for which filtration avoidance made sense because it was their learned opinion back then. Based on what they saw New York City's watershed was not a candidate for filtration avoidance, absent Herculean efforts, which we've done over the last 15 years only to be put at risk by this new phenomenon.

MR. GRANNIS: We will do, Mr.

Chairman, whatever is needed to protect the filtration avoidance agreement. We'll do nothing that puts that agreement in jeopardy.

CHAIRPERSON GENNARO: But yet again, people can't help but wonder. You've got a state government that wants drilling to proceed and also kind of holds the cards on the fad. So

1
2 it's certainly a delicate balance there. I think
3 it has to be clearly understood by all
4 stakeholders that anything that causes New York
5 City's water supply to degrade and anything that
6 would force us to build a \$10, \$15, \$20 billion
7 filtration plant. That would not only suck up all
8 the money that we have but would also preclude
9 future watershed protection measures that would be
10 advisable even if filtration were to proceed.
11 It's something that you give folks a great pause.
12 People are, depending on their state government,
13 sort of fully protect them from the specter of
14 that--

15 MR. GRANNIS: [interposing] We
16 agree completely Mr. Chairman and we will do our
17 job.

18 CHAIRPERSON GENNARO: Thank you,
19 thank you. Does anybody else have any questions?
20 Let me just see if I have any remaining questions
21 Commissioner. I'll just ask Council to work with
22 me a little bit here. What have we not gotten to?

23 Okay. We don't want to ask them
24 all but here's one. As part of the EIS process or
25 even separate from that is the department planning

1 to do a complete build out analysis of the
2
3 potential number of gas wells, dirt roads,
4
5 pipelines based on topography and Shale
6 development history that might be expected to
7 result from widespread gas drilling in the New
8 York City water supply?

8 MR. GRANNIS: Yes--

9 CHAIRPERSON GENNARO: [interposing]
10 The questions get to these piece by piece
11 determinations--

12 MR. GRANNIS: [interposing] Our
13 scoping document will include a cumulative review
14 of all of our best guess of all the impacts of
15 multiple wells being drilled in any community.

16 CHAIRPERSON GENNARO: Okay. What
17 role, if any, will the state health department
18 because they're sort of like the keepers of the
19 FAD sort to speak, play in the Environmental
20 Impact Statement review? What's their role in, I
21 guess by extension other stakeholders that are
22 part of the FAD process? The federal government--

23 MR. GRANNIS: [interposing] All
24 relevant stakeholders will be at the table. This
25 is going to be a fully open, transparent public

1 process. And we'll take into account and
2 participate gladly with anybody that has an
3 interest in this issue. So they will be there as
4 a sister agency, the state health department. Its
5 role of protecting drinking water quality is
6 obviously a major player and will be at the table
7 with us.
8

9 CHAIRPERSON GENNARO: I think that
10 that's all I had, Commissioner.

11 MR. GRANNIS: I just want to...

12 CHAIRPERSON GENNARO: Oh sure.

13 MR. GRANNIS: I just want to make
14 one point about there was some concern about this
15 bill. This bill went through multiple hearings
16 and committees, multiple committee hearings. It
17 was widely discussed in Albany. It was not passed
18 in the middle of the night and it was on the
19 Governor's desk well after it was passed by the
20 legislature. It was considerable review.

21 So while I can't address directly
22 Commissioner Lloyd's concerns, obviously our
23 process in Albany, as dysfunctional as it may be
24 now that I'm out of it somewhat, can certainly.
25 There was nothing, this was a program bill. It

1 was out there, it was vetted. It had been around,
2 it gone through both houses, it went through two
3 or three committees in the Assembly. And I
4 imagine at least two in the Senate. It was on the
5 floor and I know there was a considerable amount
6 of discussion I know because both houses were
7 trying to figure out who was going to get credit
8 for passing the--

10 CHAIRPERSON GENNARO: [interposing]
11 We tried to check the record on that. We tried to
12 look at the Senate record. We couldn't find any
13 of the debate, actually, on the record. We took a
14 look at that. I think Counsel to the Committee
15 tried to kind of scare up the Senate debate. Were
16 we able to find anything on the record?

17 MR. GRANNIS: Mr. Chairman, you
18 know you do have a very active and effective
19 lobbying office in Albany that monitors all of the
20 activities of the--

21 CHAIRPERSON GENNARO: [interposing]
22 Yeah. Not too effective it seems because the
23 Mayor's legislative people, the Council's
24 legislative people, this kind of slipped under the
25 radar. The Commissioner of our DEP, I take her at

her word when she was on the phone with me, it was not brought to her attention, not brought to her agency's attention. I forget what word she used but she indicated it was not brought to her attention until after it was passed.

One of her apologies, sort of speak, for the letter that she issued on the 18th to DEC. One of her apologies was that this was a letter that we had to turn around in a day. She said because the signing of the bill was eminent and she wanted to get something out there and voice some of her concerns. She was, in my conversation with her, open to the prospect of her new consultant, which she's going to bring on in the next couple of weeks. May even challenge some of the recommendations that DEP made to you back on July 18th.

Because it is certainly my hope that her consultant will find these recommendations as woefully no short of the mark. And will bring DEP up to an appropriate posture of push back on this. Hopefully DEP will create a body of science necessary to advocate that this is an activity that is completely inconsistent with

1
2 an unfiltered drinking water supply system and one
3 that would result in the city having to build a
4 filtration plant. So hopefully she'll be able to
5 get that done.

6 I was thankful that she took the
7 time to talk to me on the phone yesterday. But I
8 very much would have wished her and her people to
9 be here. Is there anyone from DEP in the
10 audience? Okay. Mark Lanigan, Deputy
11 Commissioner. I'm not going to call you forward
12 Mark. I just want to make sure that DEP was in
13 the room.

14 So with that said, Commissioner, I
15 want to once again reinforce that we're grateful
16 to have you before us. That's been said a couple
17 of times. You are under no obligation to come
18 before our little legislature here. The fact that
19 not only DEC is here but DEC is here in force with
20 you personally, that speaks well about DEC's
21 willingness to engage the Council very directly.
22 Come here before everyone and put your positions
23 forward. We look forward to working with you and
24 your good people as this thing rolls down the
25 track. Thanks once again, Pete and Jack. Thanks

very much. I appreciate you being here.

MR. GRANNIS: Thanks Mr. Chairman.

CHAIRPERSON GENNARO: Okay. Let me just go through the next couple of panels here. We're joined by New York State Assembly James Brennan and also a staff member for Deborah Glick, also a member of the Assembly. Her name is Molly Bidel. I think if we could panel Ms. Bidel with Assemblyman Brennan, this will be I guess the State Assembly panel to be followed in the panel. After this will be NRDC and Riverkeeper. If we could keep it down a little bit, that would be good.

The panel after that will be the people, who we are very, very grateful to have in this room, who came a long way, Mr. Bruce Baizel of the Oil and Gas Accountability Project from Colorado. And Dusty Horowitz of the Environmental Working Group in Washington, DC to be followed by Bob Tudor of the Delaware River Basin Committee. So that gives the next couple of folks in the batting order. Of course there are many other witnesses but that will be the next couple of panels. Do we have the statement from

Assemblyman? Okay, great.

Thank you Assemblyman Brennan for being here. We appreciate it. We look forward to your good testimony on this and then we'll hear the statement of Ms. Bidel on behalf of Deborah Glick. Assemblyman Brennan.

JAMES BRENNAN: Thank you Council Member Gennaro. I appreciate your holding this hearing and your obvious commitment and concern regarding this matter. The contamination related to the water supply of the City of New York issue came to my attention in April or early May. And my office introduced a bill in early June of this year in the state Assembly, A11527, which if passed would have enacted a moratorium on the issuance of permits for gas and oil drilling in New York State for two years. It directs--

CHAIRPERSON GENNARO: [interposing]
In the state?

MR. BRENNAN: The entire State of New York, right. It directed state DEC to study the need for environmental protection related to the drilling of oil and gas wells in the state. The legislature took no action on this bill. It

was introduced very late into the session; just a few weeks before it was over.

The parent of young bill, the well spacing bill that you had the colloquy with Commission Grannis about passed the Assembly in the last several days, I believe, of the session. And there were--

CHAIRPERSON GENNARO: [interposing]
Late June, right?

MR. BRENNAN: Very late June, last couple of days and maybe even the last day. I believe there were only about seven or eight votes against it.

CHAIRPERSON GENNARO: In the Assembly?

MR. BRENNAN: In the Assembly, yes. At any rate, as this issue has evolved my office has been in consultation with environmental groups and we are now in the process of amending the bill that is currently in the Assembly, 11527, to enact--

CHAIRPERSON GENNARO: [interposing]
The original bill, the moratorium bill?

MR. BRENNAN: Yes. To enact a

1 permanent ban on oil and gas drilling in the five
2 county New York City watershed area. It would be
3 a permanent ban. And with respect to the rest of
4 the state, the moratorium would be in place for
5 all new gas permits until the DEC's Environmental
6 Impact Statement review and a mitigation plan for
7 gas drilling has been completed. We will
8 introduce this bill again next year. Obviously
9 we'll have a new number.
10

11 CHAIRPERSON GENNARO: Sure. But it
12 will go from being a statewide moratorium bill to
13 be--

14 MR. BRENNAN: [interposing] It will
15 be a permanent ban in the New York City watershed
16 in the five counties, Delaware, Greens, Gahaery,
17 Sullivan and Olster, that's the Marcellus Shale.

18 CHAIRPERSON GENNARO: Sure. Now
19 when you say the five counties so it would include
20 all land area within all five counties whether or
21 not it was in the water supply?

22 MR. BRENNAN: We're in consultation
23 with some environmental groups to write the bill
24 now or to amend the bill now. Taking a look at
25 exactly how the language ought to be dealt with to

1 protect the watershed itself. But there is a map
2 in my testimony, it's actually a state DEC map
3 that shows an outline of the Marcellus Shale.
4

5 CHAIRPERSON GENNARO: Yes, I've
6 seen that map.

7 MR. BRENNAN: So it's our intention
8 to make sure that the five county area is
9 protected. Delaware County, which is where the
10 bulk of the watershed is located, there is gas
11 drilling right now in the adjacent county, Broom
12 County. Broom County is the county immediately
13 west of Delaware County and there is drilling
14 activity in Broom County now in relation to this.
15 So it's creeping towards the water supply.

16 I just wanted to--so we're working
17 and there are members of the legislature who are
18 concerned. I'm sure Assembly Member Glick's staff
19 member will testify. We are aware and working to
20 address this appropriately, if possible.

21 CHAIRPERSON GENNARO: We certainly
22 do appreciate that. Let me ask you. I said I'm a
23 geologist and not a lawyer. Were the state to
24 pass a bill now to make that change and to ban
25 this kind of activity within the city's watershed-

-

MR. BRENNAN: [interposing] Well the state has the police power. The state has the power to do this to protect human health. Whether a full fledged Environmental Impact Statement is necessary by the New York State legislature, I don't think so.

CHAIRPERSON GENNARO: I guess I was curious whether or not, now that--

MR. BRENNAN: [interposing] I think as long as there is some adequate factual record, it doesn't--

CHAIRPERSON GENNARO: [interposing] Okay. I'm wondering all these people who have signed leases. I'm just playing devil's advocate here. For the state to go and do that--

MR. BRENNAN: [interposing] If we did a permanent ban right now without any further elaboration in relation to a factual basis for doing so, would the state be subject to a takings lawsuit? Sure. Anybody can sue anytime they want so obviously we would need to do some hearings and other things like this. But it's completely within the police power of the state in my point

of view.

CHAIRPERSON GENNARO: Okay. We s--

MR. BRENNAN: [interposing] Let me just...

CHAIRPERSON GENNARO: Sure.

MR. BRENNAN: You have been referring throughout the hearing to Commissioner Lloyd's letter to I guess it was Commissioner Grannis with these eight concerns. I think it's a very useful document to look at about why DEP is so concerned. Actually I think makes the case for the permanent ban in the watershed quite clearly because Commissioner Lloyd has eight separate prerequisites that she wanted in relation to whether or not there should be any drilling at all, including this one mile exclusion zone. So to some extent the DEP is already kind of on record that there ought to be a permanent ban in some part of the watershed--

CHAIRPERSON GENNARO: [interposing] Right. But my problem with that being--

MR. BRENNAN: [interposing] Water migrates.

CHAIRPERSON GENNARO: Right. But

1
2 my problem with that statement in the letter, I
3 told her yesterday and I'll say it publicly now,
4 it just sets the bar way too low for your good
5 legislation or any other entity that wants to
6 advocate for a total ban. What they're going to
7 wave in the air as Exhibit A is Emily Lloyd's
8 letter that says a one mile buffer is good enough
9 which it's not.

10 MR. BRENNAN: She wants a full
11 secret review, she wants the Attorney General to
12 affirm that gas exploration and extraction are not
13 exempt from the watershed rules and regulations.
14 Wants full disclosure of the chemicals that will
15 be used in the hydrofracking process and not
16 withstanding what Commissioner Grannis said, any
17 business that wanted to do oil and gas drilling
18 has a right to apply for trade secret status in
19 relation to whatever they have. They have a right
20 to apply. If the DEC said no to granting trade
21 secret status, that business could sue the state
22 saying that the information was propriety under
23 the Freedom of Information law.

24 CHAIRPERSON GENNARO: Right.

25 MR. BRENNAN: The Freedom of

Information law has a mechanism whereby a business can maintain the confidentiality of certain information anyway. So it's not a 100% guarantee that all disclosure will take place. There are many, many good reasons for a permanent ban within the police power of the State of New York.

CHAIRPERSON GENNARO: I certainly appreciate and applaud your efforts. You saw this coming. You put pen to paper; we certainly appreciate that. We wish you success at that. We at the Council will try to do everything we can to move DEP and city government in the direction that hopefully they want to go to get this consultant on board.

We're going to make a case to DEP whether we do it through formal counsel resolution or not. But I think the DEP ought to be moving forward with making amendments to the watershed rules and regulations to prohibit this kind of activity as completely inconsistent with an unfiltered drinking water supply system.

They ought to put the state on the hot seat and say we've done our due diligence. We know this is going to damage filtration avoidance

1 and this is going to risk a \$10 to \$20 billion
2 filtration plant and have the state make a case
3 with the health department. It ultimately has to
4 sign off on the watershed rule changes and then
5 make the case that the DEP pushed a little too
6 far.
7

8 But perhaps the best way, as you
9 mentioned, rather than doing this in the
10 rulemaking process do it through legislation that
11 will accomplish what we need to accomplish, which
12 is not have this activity pursued in the
13 watershed. And I thank you Assemblyman Brennan.
14 I appreciate you being here today, too. And on
15 behalf of Deborah Glick we have Molly Bidel. Am I
16 saying it wrong?

17 MOLLY BIDEL: Yes, yes

18 CHAIRPERSON GENNARO: Okay. Please
19 proceed.

20 MS. BIDEL: Okay. Thank you for
21 this opportunity to testify today. On behalf of
22 Deborah Glick I'll just read her testimony. As a
23 New York State Assembly Member representing
24 persons of Lower Manhattan and as a member of the
25 Assembly's Environmental Conservation Committee, I

am very concerned about projected plans for natural gas drilling in the Catskills/Delaware watershed Area, particularly as 90% of New York City's drinking water comes from this area.

This issue came to my attention when a bill regarding well spacing appeared before the Assembly for a vote with very little time to review the issue. The legislation would allow wells to be located closer together, making it easier for drilling to occur in the watershed area. Given the potentially serious ramifications that drilling can have on New York City's water supply, I believe that an in-depth examination of the issue was necessary. Therefore, although the bill passed I voted against it because I thought there was not enough time for sufficient investigation, debate and discussion.

In July, I sent a letter to Emily Lloyd, Commissioner of the Department of Environmental Protection, which I voiced my concerns about drilling for natural gas in New York City's watershed area. And asked what authority the city has to regulate the drilling in this area. I also asked if the city can guarantee

1 that gas drilling in this area would not
2
3 contaminate New York City's water supply. I'm
4 still waiting for a response from DEP and I
5 believe that these questions must be answered
6 immediately to ensure that New York City's water
7 supply is protected.

8 Geologists have known about the
9 natural gas in the Marcellus Shale for years but
10 now with skyrocketed gas prices and technological
11 prices in drilling, there is a renewed interest in
12 extracting it. A new method of drilling is being
13 used in the Marcellus called fracking, short for
14 fracturing. This involves drilling horizontally
15 through the bedrock for up to a mile and cracking
16 it open with high pressure blasts of water, sand
17 and chemicals in order to release the gas.

18 In this process significant volumes
19 of waste water of produced. Disposal of this
20 waste water has been an ongoing challenge for
21 communities where fracking has occurred, although
22 drilling and the pursuit of drilling in the
23 Marcellus Shale is in its early stages and it may
24 be too early to measure its environmental impacts.
25 Drilling in similar shales has proven that

extracting natural gas by fracking can have disastrous consequences to the air, water, public health, wildlife and the integrity of local communities.

Pollution from gas exploration and production has involved known carcinogens, reproductive toxicants and other toxic chemicals like arsenic, hydrogen sulfide, mercury and volatile compounds including benzene and xylene.

Exacerbating the environmental and health concerns already mentioned is the fact that the U.S. Energy Act of 2005 exempted oil and gas companies from the Clean Water Act, the Safe Drinking Water Act and the Super Fund law, as well as community right to know laws. In regard to community right to know laws, companies can withhold information about the chemicals they use in the fracking process claiming them proprietary information.

We can not be too cautious about the environmental consequences for drilling for natural gas, especially given the potential effect it could have in the upstate reservoirs and watershed that provide New York City's drinking

water. It is of paramount importance that we act to protect New York City's watershed. Therefore I support Council Member Gennaro's call for the state to put a moratorium on gas exploration in the Catskills/Delaware watershed area until the environmental impact is fully assessed. Thank you.

CHAIRPERSON GENNARO: Thank you very much for being here Ms. Bidel and please give Deborah our best regards.

MR. BRENNAN: Just one further comment.

CHAIRPERSON GENNARO: Oh, of course. Assemblyman Brennan.

MR. BRENNAN: I know you have a number of environmentalists and scientists testifying today. There are records available. I believe there's adequate scientific and technological information to sustain a ban.

CHAIRPERSON GENNARO: Clearly I think. Going back to the blue ribbon panel report, which nobody remembers but I do in the early 1990s done by the best watershed experts in the country on how they believe that New York City

was not suitable, the water supply was not a suitable candidate for filtration--

MR. BRENNAN: [interposing] Right. The Federal Bureau of Land Management did a study in 1998 that identified the chemicals in the fracking process. It says only 28 tablespoons of a particular chemical called MTBE could contaminate millions of gallons of water at a concentration that would cause the water to be unusable. So there's plenty of scientific information available to sustain a ban.

CHAIRPERSON GENNARO: There sure is. Thank you for jumping out ahead of that information and putting it on the record what needed. I wish you success in legislating this to a good conclusion. You can certainly count on my for any help I can possibly provide.

MR. BRENNAN: Thank you.

CHAIRPERSON GENNARO: Thank you Assemblyman Brennan. Thank you Ms. Bidel. Our next panel Eric Goldstein of the National Resources Defense Council, James Simpson of Riverkeeper. Is Riverkeeper here? Okay. I've got Riverkeeper and Eric. Okay. Thank you both

1
2 for being here. Thanks for standing with me,
3 standing with the Council on two previous press
4 conferences that we've had. We've engaged in a
5 lot of colloquy since we first knew that this was
6 going to happen. Of course, I appreciate you
7 being here today. But there's no other place you
8 would be today other than here so thank you. With
9 that, I want to recognize Eric Goldstein for your
10 good testimony.

11 ERIC GOLDSTEIN: Thank you Mr.
12 Chairman. My name is Eric Goldstein. I'm an
13 attorney with the Natural Resources Defense
14 Council, as you know. And with me is Kate Sinding
15 also an NRDC lawyer who's working on this gas
16 drilling issue statewide. I'll summarize our
17 written testimony today because as Barry Commoner
18 used to say at hearings like this dealing with
19 different subjects, the topic we're discussing
20 today is really very simple.

21 New York City's water supply is our
22 single most important capital asset. It's hard to
23 imagine the city operating for even a single day
24 without the 1.2 billion gallons of water that the
25 19 upstate reservoirs provide. We're fortunate

now to have filtration avoidance in place. We're one of only five cities in the country that does. But avoiding filtration is something we worked very hard, as you know, to accomplish over the years; it's not a guarantee. If we're not careful we can lose that filtration avoidance.

The economic costs to that would be staggering. Water rates would soar, perhaps doubling here in the City. We'd lose all the benefits of the billions of dollars we've already invested and no one would benefit if that were to take place.

Industrial gas drilling with hydraulic fracturing, which we've heard today, is an inherently pollution generating process with millions of gallons of water being required for each individual well, mixed with toxic chemicals, injected deep underground under high pressure. And then you have the issue once the natural gas is released of what you do with all of that waste water.

Experiences in other states indicate that gas drilling activities do in fact lead to pollution problems. Just take a look at

1 what's happened in parts of Alaska or take a look
2 at what's happened most recently in the Marcellus
3 Shale in Pennsylvania where the state DEC earlier
4 this year actually suspended the operation of some
5 gas drilling operations for violating
6 Pennsylvania's Clean Streams law. Water quality
7 problem is happening in the Marcellus Shale in our
8 neighboring state.
9

10 The cornerstone of filtration
11 avoidance is pollution prevention. That's the
12 simple concept that says we're going to try to
13 prevent pollution from entering the water supply
14 before the pollution occurs rather than trying to
15 clean it up at the end of the line. And allowing
16 an inherently pollution generating activity like
17 industrial gas drilling throughout the watershed
18 would shift the paradigm from pollution prevention
19 from pollution control. That's really asking for
20 trouble. That's the story in a nutshell.

21 It goes against the rules of nature
22 and against common sense to suggest that we could
23 have hundreds if not thousands of gas wells
24 throughout the watershed, each requiring the use
25 of a million gallons or more of water and toxic

chemicals and not ultimately end up causing significant pollution problems for our unfiltered drinking water supply.

Why would we want to take this risk? It would be foolish, short sided public policy. And making sure that it doesn't happen is both the state responsibility and the city responsibility. The environmental community and the public will be watching both the city and the state agencies. Holding them accountable if they abandon the precautionary principle on this issue.

We have three preliminary recommendations for the Council. First we recommend that you call upon Governor Paterson and Commissioner Grannis to impose a moratorium on the issue and stop any new gas drilling permits until the state has completed work on its final generic Environmental Impact Statement. We appreciate Commissioner Grannis' testimony but we didn't hear one reason today why imposing a formal moratorium on any drilling until this EIS is completed in the watershed shouldn't take place.

That, by the way, would be consistent with what's just happened in New

1 Mexico. Where their governor Bill Richardson just
2 extended for another six months a moratorium on
3 oil and gas drilling in special sensitive areas in
4 Santa Fe County to allow additional time for fact
5 finding and rule making to safeguard drinking
6 water aquifers in that area. So if they're doing
7 it in Mexico and they're saying no permits until
8 we've made sure we're protecting our water
9 quality, we ought to be doing it here in New York.
10

11 Second, we've called upon Governor
12 Paterson to place the watershed off limits to gas
13 drilling. And we recommend that you use your good
14 offices to work with the City DEP to amend the
15 City's watershed rules to explicitly prohibit
16 industrial gas drilling within the
17 Catskills/Delaware watershed. The City has
18 authority to do that. They need State agreement
19 but they have authority to do that under Section
20 1100 of the State Public Health Law.

21 Significantly, if the City were to prohibit gas
22 drilling in its watershed via these watershed
23 rules, there would still be a very dramatic and a
24 wide open area for gas drilling even in New York
25 State in the Marcellus Shale.

Marcellus Shales stretches all the way down to West Virginia. It's slightly larger than the size of Florida; 54,000 square miles. The watershed is 2,000 square miles and in New York State alone the Marcellus Shale extends into all of parts of 30 counties. As you know, what we're talking about with the New York City watershed, it's parts of five counties. So New York State could reap the economic benefits of gas drilling even if it put in place a prohibition on drilling in the watershed area.

Of course we would only want that to move forward if there were a comprehensive environmental regime in place, if there were adequate enforcement agents to ensure that the rest of the state and its natural resources are protected and all of the other safeguards are in place. But the point is you could prohibit gas drilling within the watershed and still have plenty of gas activities and economic activities throughout New York State. The Marcellus Shale is that big.

Third and finally we ask that you urge Governor Paterson to ensure that the State

1
2 Health Department serves as a co-lead agency with
3 state DEC in this forthcoming generic
4 Environmental Impact Statement. Why do we call
5 for that? Well it's the State Health Department
6 that now has primacy or primary enforcement
7 authority under the safe drinking water act, as
8 you know, to oversee the City's filtration
9 avoidance determination.

10 So ultimately it's the State Health
11 Department that now can say New York City, you've
12 got to filter this supply. If that's the case,
13 they ought to have a say in reviewing the
14 Environmental Impact Statement and the scoping
15 document and all of that. They ought to have a
16 role in determining the extent to which this
17 becomes a balancing test versus the extent to
18 which this is a public health protection issue and
19 a pollution prevention measure. We think that
20 they would add enormously to the state
21 environmental review, to have them as co-lead
22 agencies.

23 We thank you for holding this
24 hearing. We look forward to working with you.
25 It's rare that we've had a more important issue

come before this Committee. Thank you Mr.
Chairman.

CHAIRPERSON GENNARO: Thank you
Eric and I'll hold back my questions and comments
until we have the opportunity to hear from our
good friend, Jay Simpson. It would take me the
rest of the day to talk about the battles that
Riverkeeper and this Committee have fought side by
side on. We're happy to have you here today, Jay,
and we look forward to hearing from you and
working with you as we proceed on this important
matter. Jay.

JAMES SIMPSON: Thank you Mr.
Chairman. It's a pleasure to be here. Again, my
name is James Simpson. I'm a staff attorney with
Riverkeeper. As one of the signatories to the
1997 New York City watershed memorandum agreement
or MOA and in keeping with our mission to
safeguard the integrity of the New York City
drinking supply watershed, Riverkeeper welcomes
the opportunity to participate in this important
hearing.

If we are to transform our energy
policy away from dirty coal and dependence upon

foreign oil natural gas may be a reasonable and necessary interim option. However, natural gas development is progressing across the vast Marcellus Shale at a pace and scale that no one ever envisioned. Lost in the rush for access to this mineral reserve is the fact that the entire west of Hudson portion of the New York City watershed sits on top of the Marcellus Shale. Here I note to point out that I have also attached a map of the state depicting the Marcellus Shale along with the watershed within that Shale.

Much of our New York City drinking water system is a modern wonder of the world. The New York City watershed comprises roughly 4.2% of the state's land. It's supplies unfiltered drinking water to over half the state's population. Service water collection large reservoirs and travels via tunnels and aqueducts to the taps of consumers upstate and New York City.

The great taste of New York City pizza and bagels is but one benefit of this award winning tap water. In short, the New York City watershed is the City's greatest capital asset and

the state's most precious natural resource.

Hydraulic fracturing involves a high pressure injection of millions of gallons of water, sand and toxic chemicals into horizontal wells of depths of over one mile below ground. After the fracking process, the water chemicals must be recovered and delivered to a suitable treatment center. While we need to learn more about the fracking process to understand its environmental impacts fully and support the State's decision to conduct a full supplement environmental review of those impacts, we already know that natural gas exploration brings with it a whole host of activities and apparatus that are unacceptable within this pristine natural resource.

A web of pipe lines to transport the gas and noisy compressors to push gas from wells to the pipe line system will be needed. Large drilling pads capable of handling several wells will be constructed. And hundreds of tanker trucks will be used to haul in water and to remove waste water. All of this upheaval and disruptive service activity that would accompany any drilling

process occurring in a watershed infamous for heavy flooding and where all surface water run off flows into New York City's water supply is simply not acceptable. Moreover, allowing this activity would be reckless in the context of the FAD and the prospect of the City paying for this potentially \$10 billion filtration plan.

As I said before, Riverkeeper is one of the signatories to the MOA. As is the City, the State and DEC as well as up to 60 to 70 watershed communities and towns. In that agreement all parties agreed that "the New York City water supply is an extremely valuable natural resource that must be protected in a comprehensive manner." All the parties also agreed that economic development within the watershed communities must be consistent with watershed protection. However, no economic development is less consistent with watershed protection than this. Furthermore, the MOA did not contemplate and does not protect the economic vitality of out of state gas companies.

All parties also agreed to maintain and enhance the social character of the watershed

towns. As I described, natural gas drilling brings with it a whole host of activities that would be incongruent with the social character of these watershed towns.

In addition to the MOA's requirements I wanted to touch briefly on just two traditional themes and underpinnings of environmental law that provide a sound basis and justification for designating the New York City watershed off limits for natural gas drilling. The first are the thoughts of President Theodore Roosevelt. 100 years ago President Roosevelt, himself a great New Yorker, said that "the prosperity of our people depends directly on the energy and intelligence with which our natural resources are used." Roosevelt had convened this conference of governors at the White House to discuss conservation, the proper use of natural resources facing a drastic increase in coal during that time.

There he proclaimed the need for foresight and wise use for natural resources as a duty to posterity. The need for foresight and planning and the use of natural resources is just

as relevant today as it was in Roosevelt's time. There can be no better example than a watershed that provides unfiltered drinking water to half the state's population. To that end Riverkeeper played a role in crafting the MOA, which has been praised internationally as a model for watershed protection.

Designating the watershed off limits would heed Roosevelt's call for wise use of this natural resource, particularly when the New York City watershed, as Eric has just described, such a small portion of the Marcellus Shale within New York State.

The second idea is that of the tragedy of commons, which addresses the issue of cumulative impacts which has been discussed here already today. In 1968 a little known biology professor from the University of California published an article in Science Magazine. Its premise was that there is a class of problems to which there are no technological solutions. Nuclear war, population growth and pollution are common examples.

The author himself used an example

1 of herdsmen grazing cattle on an open common. He
2 noted that each individual herdsman being rational
3 actors will try to exploit the pasture as much as
4 possible until a point where the commons is
5 useless to all. Therein lies the tragedy.

6
7 The tragedy of commons teaches that
8 there is a need for regulation in situations where
9 individual rational division eventually will
10 produce collectively irrational results. The
11 tragedy of commons has served as a basis for many
12 of federal environmental regulations. We must
13 strive to ensure that out of state gas companies
14 do not try to privatize the commons that is the
15 New York City watershed and exploit it for their
16 own private gain to the detriment of all New
17 Yorkers.

18 In conclusion, Riverkeeper thanks
19 the City Council for their leadership on this
20 important issue and for the opportunity to
21 participate in today's hearing. Thank you.

22 CHAIRPERSON GENNARO: Thank you.
23 Thank you. I don't have too many question or
24 comments by virtue of the fact that we have this
25 really esteemed panel coming up and they've been

1 waiting patiently. And many other people that
2 wish to testify. But let me just ask you what you
3 make of Pete Grannis' comments with regard to how
4 he is a regulator. He said in order for me to
5 make this kind of decision I need an EIS, I need a
6 record. If the EIS doesn't show that this has to
7 be forbidden then I can't do it.

8
9 So he's approaching this whole
10 thing from this regulatory perspective of this ban
11 being something which is outside his realm that he
12 can't do. So I want to know your thoughts about
13 that. Perhaps the appropriate remedy would be a
14 bill along the lines of Mr. Brennan's and what
15 potential legal pitfalls his bill might fall into
16 with regard to the state being party to a taking
17 or whatever. To the extent that you can comment
18 on that, I'd appreciate that.

19 MR. SIMPSON: I'll at least attempt
20 to comment on portions of that. I think that
21 Commissioner Grannis' statement that before DEC
22 could act comprehensively, they needed a full
23 record is one that makes sense and one that we
24 agree with and one that we support. What was
25 troubling about his presentation, however, was the

fact that from a philosophical standpoint he did not express what I believe he may personally feel, which is a commitment to the pollution prevention approach rather than the regulatory approach.

To NRDC and to I'm sure my environmental colleagues as well, the prospect of hundreds, if not thousands of individual gas drills throughout the watershed, even if somehow they could have many more than the 19 employees they have at DEC. This is not an area for after the fact regulation that you could control in this way.

There needs to be a philosophical commitment that the watershed is like the Grand Canyon or the other crown jewels of our nation's natural resources that needs to be protected. This is an area that we are going to say if off limits. The state has the authority to take that action. The DEC has the authority to take that action. They need to at least express the philosophical commitment to do that and then build up a record.

We also believe that the City, too, has the authority to take that action and

1 demonstrate the leadership. So we hope that you
2 will encourage and press both the governor and DEC
3 and the city DEP to take that. Let the DEP begin
4 the actions necessary for adopting new watershed
5 rules. They will establish the record and then
6 let the state health department come in and say
7 no, we don't think that is necessary.

8 That would be a very, very
9 surprising turn of developments if the state were
10 to day that. I'll stop there and turn it over to
11 Jay.

12 MR. SIMPSON: I would certainly
13 agree with Erik's comments. We support the
14 supplement GEIS fall aid. The supplement
15 environmental review, the full public process is
16 important. I was somewhat hardened to hear his
17 commitment to a study of every single issue
18 imaginable. He seemed very sincere and direct
19 about that. We will certainly hold his feet to
20 the fire to ensure that the scope is adequate
21 enough.

22 But I didn't hear anything that
23 would not justify a moratorium while that process
24 is going on. I still did not hear it and then
25

1 today, about that. I don't know why that is not
2 on the table for DEC. To me makes perfect sense.
3 As I laid out and explained, Riverkeeper believes
4 fully that facts and the science will back up that
5 it makes no sense whatsoever to drill in the
6 watershed. It just sounds nuts. But we support
7 this supplemental environmental review fully.
8

9 In terms of Assemblyman Brennan's
10 bill, in general context I am support of it. Of
11 course I would have to review the language and
12 details when it comes out but I think it makes
13 quite a bit of sense, particularly when you think
14 about the New York City watershed being a small
15 percentage of the Marcellus Shale within New York
16 State. We're not talking about banning drilling
17 statewide; we're talking about maintaining this
18 pristine and extremely important natural resource.
19 Keeping that protected; not allowing drilling
20 within that simple area. Economic development can
21 still go on and we can have it both ways.

22 CHAIRPERSON GENNARO: Thank you.
23 Go ahead.

24 MR. SIMPSON: One quick final
25 point, the moratorium in New Mexico was a six

1 month extension of a moratorium, again, for
2 hydraulically important area sin the state. That
3 was accomplished with the three page Governor's
4 executive order, which we're happy to share with
5 you.
6

7 CHAIRPERSON GENNARO: Thank you,
8 thank you. Before I call the next panel, I just
9 want to thank you for your response to the last
10 question I had. Also what we've done thus far,
11 we're already having a Council resolution calling
12 upon the governor to do the moratorium. That's
13 already in draft and we are going to be doing a
14 Council resolution calling upon DEP to do the
15 appropriate rulemaking that will exclude this kind
16 of activity from the drinking water supply
17 watershed.

18 So DEP's in the house, they heard
19 it. So that's something that we're doing. Of
20 course, we'll further digest the good testimony
21 you've brought forward and take other actions that
22 you indicated in here that you think would be good
23 to do. Guys, thanks very much. I appreciate you
24 being here, as always. A lot more work to do on
25 this and appreciate you being here. Thanks very

much.

MR. GOLDSTEIN: Thank you.

MR. SIMPSON: Thank you.

CHAIRPERSON GENNARO: Now we're very pleased and happy to have Mr. Bruce Baizel, hopefully I'm saying that right. Senior staff attorney and policy advisor for the Oil and Gas Accountability Project; flew in all the way from Colorado. And Dusty Horowitz, staff attorney with the Environmental Working Group in Washington, DC. I just have to have just a quick word with someone in the back. Just get situated at the table. I'll be back in 60 seconds; nobody move.

Okay. Let's see, who would like to go first.

BRUCE BAIZEL: I guess I will.

CHAIRPERSON GENNARO: Okay. Great. Mr. Horwitt, is that right?

MR. BAIZEL: No, I'm Mr. Baizel.

CHAIRPERSON GENNARO: Mr. Baizel, forgive me. Thank you very much Mr. Baizel for coming here all the way from Colorado. We greatly appreciate you going through the great length that you've done to be here. Thank you.

MR. BAIZEL: My pleasure. It's great to be back in New York. My name is Bruce Baizel. I'm the senior staff attorney for the Oil and Gas Accountability Project. I'm based in Durango, Colorado. Our organization deals with nothing but oil and gas issues, in particular the impacts on communities and how to address those.

My testimony I provided to you and that I'll summarize to some extent today is based on our work over the last decade in a number of states. Primarily in the West but also up in Canada. In particular I was a member of the New Mexico Governor's Pit Rule Task Force, which was looking at the question of drilling fluids and fracking fluids and modifying those rules.

We've also been formally participating in three sets of rulemakings in a couple of states. Upon revision of oil and gas rules and have developed and helped pass state legislation in both Colorado and New Mexico that deals somewhat with this question that you've brought up about moratoriums and rights of landowners versus rights of mineral owners. I also noticed that in your briefing from your staff

1 that you've referenced some of our documents and
2 those were actually prepared under my supervision
3 over the course of my work with OGAP.
4

5 My testimony is going to address
6 three main risks that we have seen from gas
7 development. There's the well drilling and
8 production phase, there's the hydraulic fracking,
9 which there's been considerable discussion of and
10 then the transportation of fluids to and from the
11 well site. Then I'd like to bring to your
12 attention some specific incidents that illustrate
13 these risks in a number of state. I heard the
14 Commissioner's comment about anecdotal stories.
15 All of these have been verified by the agencies
16 and also have been subject to testimony under oath
17 so it's more than just anecdotal.

18 Then we've done an initial look at
19 the bureau here in New York, that their oil and
20 gas regulations. We're working through those in
21 more detail but I have a few comments about what
22 we saw in the rules as they currently exist. Then
23 finally make some suggestions as to what other
24 municipalities and states have been doing to try
25 to address the impacts of oil and gas development

but primarily gas development.

When I prepared these the question of a moratorium, as Eric mentioned, we're actually advising Santa Fe county on their moratorium and there are two other counties in New Mexico that have moratoriums in place on oil and gas permit processing. Those are temporary; they're not permanent. I would expect that they tend to be political questions as much as they are factual questions with some legal elements to them.

I have not looked at New York State to see if there are federal minerals here. If there were federal minerals here I think you might have some difficulty making your moratorium apply to those. But other than that a temporary moratorium has been litigated in other states. I don't see a reason why you couldn't do a temporary moratorium and we certainly have seen it as a good catch your breath, let's figure out what we're going to do mechanism in other places. So it is being done.

I think as Eric mentioned, it's important to keep in mind, gas development, its industrial activity. The operations associated

1 with gas development, no matter where they take
2 place, no matter what state they're in, generally
3 follow a similar pattern of scope and intensity.
4 It is also important to keep in mind that gas
5 development is going to take place over a 20 to 30
6 year timeframe. It's not a simple once in and out
7 kind of operation, particularly in the case of the
8 Marcellus Shale.
9

10 There are a number of potential
11 environmental and public health impacts associated
12 with each stage of gas development. And the
13 stages generally are divided into exploration,
14 drilling, production, treatment of the gas and
15 then plugging in abandonment of your well. The
16 impacts that we've seen in other states include
17 loss of land value due to surface disturbance,
18 contamination of ground and/or surface waters,
19 human or animal health effects related to ground
20 and/or surface water contamination, erosion or
21 sedimentation, loss of wildlife habitat and air
22 and soil degradation.

23 Based upon experience with gas
24 development elsewhere, the most important risks
25 from the perspective of protecting the New York

1 City water supply are those that might result in
2 the release of hydrocarbons and other contaminants
3 to the land surface into soils and ground water or
4 into surface waters. These releases, as we've
5 found over years of monitoring the industry, occur
6 sometimes in a single event such as a spill or
7 over longer periods of time through seepage from
8 drilling or fracturing pits or from slow leaks in
9 pipes and storage tanks.

11 These spills and seepage result
12 from human error, equipment failure,
13 transportation accidents, improperly designed
14 containment facilities, vandalism or natural
15 phenomenon such as floods and storm events. When
16 I was out there in, I believe it was May, and I
17 was up in your watershed. You could see the
18 evidence of a flood that had come through the
19 bottom land area there and taken out roads. If
20 you had a drilling pit or a well there, it's going
21 to get taken out as well and then you're left
22 with... You can shut those wells in and they do
23 that sometimes. but if you don't have any warning
24 about a flood, if it's down near a watershed, you
25 got a well that can be taken out by a natural

event. You don't have to have bad intent, these accidents happen.

These releases and subsequent contamination are not just theoretical but real events that have been documented across the gas fields of the U.S. today. For example, New Mexico has experienced significant impacts to its water sources from oil and gas development. Between 1992 and 2000, their oil and gas agency documented over 700 ground water contamination events due to oil and gas development and as a consequence, I mentioned, they just finished revising their rules to try to prevent that.

The New Mexico experience also involved sampling. This has shown that many of the contaminants released by oil and gas development are hazardous and even toxic to public health and the environment. The New Mexico OCD, which is their oil and gas agency conducted an analysis of drilling and production pits in 2007 as part of the rulemaking process and found that many of these pits contained high enough levels of heavy metals and other hazardous constituents such as naphthalene, benzene and toluene to be considered

Super Fund sites.

In fact, a report prepared as testimony for the rulemaking by OCD staff stated that "except for the Rickra exemption, constituents were present at concentrations that would be characteristically hazardous at other sites". There's been a similar experience in Colorado.

Our review of that state's database found that over 1,500 reported spills and releases have occurred since January of 2003, of these 1,500 over 20% have impacted ground and/or surface water. The oil and gas industry as part of a rulemaking that is still going on now, submitted its own study to the state oil and gas agency this past summer. The industry's own testing results were above state ground water standards for benzene and toluene for samples taken in each of the four major gas development basins.

With regard to transportation impacts, usually this involves transportation of produced water, waste pit contents and hydraulic fracturing fluids. For almost all gas shale wells, the rock around the well bore must be

1 stimulated or hydraulically fractured before a
2 well can produce significant amounts of gas. This
3 fracturing process requires hundreds of large
4 trucks to haul the stimulating and fracking
5 constituents. My understanding is that Dusty has
6 a good photo of showing the trucks as a frack job.
7

8 Not only does this impact the roads
9 and residents with noise and dust, but it also
10 creates the inevitable consequence of trucking
11 accidents, accidents that can involve large
12 volumes of hazardous materials. For example
13 residents in the area of Barnett Shale in Parker
14 County, Texas are already experiencing tremendous
15 amounts of truck traffic. Approximately 100
16 trucks per day in a neighborhood that yet has only
17 10 wells drilled out of the 30 planned for
18 development. In older gas fields in Colorado, we
19 have also seen the consequences of heavy truck
20 traffic.

21 In 2005, a Halliburton truck
22 released over 300 gallons of acid into the
23 Colorado River when their truck over turned. In
24 2006, another Halliburton truck spilled diesel
25 fuel into the Colorado River again as a result of

an accident.

The following incidents, these are the incidents that have been made under OFUR [phonetic] and have been documented by the agencies illustrate that the spills and releases occur in a variety of ways. It's not just the hydraulic fracturing, which is an issue in and of itself. But it's through the drilling, the waste pits as well as the fracturing that affect both people and their water.

A couple in Garfield County, Colorado had their water well explode after fracturing activities began on the neighboring property approximately 1,000 feet from their house. Afterwards they could light their water on fire because the high levels of methane in the water. After the agency initially said the methane was naturally occurring, the woman then developed a rare adrenaline gland tumor and pursued her case with legal help and the assistant of a scientist. So more tests were completed showing that methane and other chemicals used in the fracturing including 2BE had in fact gotten into their water because of those activities.

A rancher down where I live in southwest Colorado came home a day after a well just had been completed on a neighboring property, approximately 400 feet from his house. He took a drink of water from his kitchen sink and immediately spit it out because of the bad taste. A regulatory agency in Colorado determined that an unlined drilling pit had been used and that fluids from that pit had contaminated the rancher's domestic water well.

Further north in west central Colorado, another gentleman visited his hunting cabin to find that his water well had been contaminated. He took a drink of water from his tap and immediately felt a burning sensation in his mouth and throat. He was taken to the hospital for treatment as testing for his water revealed that it contained benzene, one of the hydrocarbons coming from natural gas, a known carcinogen. The agency there issued notices of violation to several companies and is still looking to see exactly how the benzene got into his water.

This past winter as a result of at

1 least four pit related leaks near the Garden Gulch
2 area in north west Colorado, which is the center
3 of our drilling boom right now, a frozen waterfall
4 of pit sludge threatened the land and the
5 irrigation surface waters of area residents down
6 stream. The release came from leaks at the bottom
7 of the pits, traveled underground through
8 fractured shale until it reemerged as a frozen
9 waterfall over a cliff. It was only found then by
10 a private pilot flying over who took some
11 pictures. The regulating agency has since
12 confirmed that the spills were from those pits and
13 issued notices of a violation and is working
14 towards remediation after the fact.

16 On August 26, 2008, so just a few
17 weeks ago, the Pinedale Anticline working group,
18 this is west central Wyoming, released its annual
19 report on area ground and surface water quality
20 for the Pinedale Gas Field. That report gave the
21 results from 257 samples taken from 220 wells.
22 These wells included industrial wells, stock wells
23 and domestic wells. 23% of those samples were
24 above accepted limits for drinking water due to
25 the gas development activity in the area.

In December of last year in Guyuga County Ohio, the Emergency Management agency notified an Ohio Department of Natural Resources, Mineral Resource Inspector that there'd been an explosion at a house in Guyuga County, Ohio. The Bainbridge Fire Department personnel recognized that natural gas was entering homes via water wells. They subsequently determined that an accumulation and confinement of deep, high pressured gas had been trapped behind the production casing. And then had migrated into natural fractures in the bedrock below the base of that casing. The pressure associated with hydraulically fracturing that well contributed to the gas migrating vertically through fractures into the overlying aquifers before exiting that aquifers up through the local water wells.

We have a number of incidents, we seem to get called when these come out so we have quite a catalog of them. But these are recent, they involve drilling and fracturing and they're certainly not anecdotal. In our brief assessment of New York regulations our initial review indicates that the current regulations do not seem

adequate to protect public health and the environment.

Comprehensive regulations that require operators to maintain chemical inventories, use setbacks, residential or water course setbacks, best management practices and exclusionary buffer zones are currently in use elsewhere around the country. These regulations are not in place in New York and if you were to go ahead with drilling should be incorporated into the New York regulatory scheme prior to development in the Marcellus Shale.

For example, the current setback in the regulations that we found was for public water sources was 50 feet. I think from the earlier incidents that I describe, you are talking about at least hundreds of feet of movement of fluids. Colorado is currently considering a buffer zone of between 300 and 2,500 feet within municipal watersheds and this is because the incidents of ground and surface water contamination that they've experienced.

Further, we didn't find much regulation for waste pits in the New York

1 regulations. Waste pits, based on what's on the
2 books now in New York, that contain drilling
3 fluids, they do not have to be lined, cleaned up
4 and the waste disposed of in a permitted facility
5 or even monitored for potential seepage into
6 ground level sources. As has been found in
7 studies conducted in Colorado and New Mexico,
8 drilling fluids move and hydrocarbons move very
9 rapidly in air or in soil and water can be
10 hazardous and can be very expensive to clean up if
11 not properly managed.
12

13 When we checked on the number of
14 active wells in the State of New York we found--
15 the Commissioner said 13,000, I believe his web
16 site says it's over 14,000 but somewhere in that
17 ball park. This number is expected to grow
18 exponentially over the next 30 years as the
19 Marcellus Shale begins to be developed. While we
20 could not get a confirmation from the oil and gas
21 bureau as to how many actual inspectors they have
22 versus how many staff, we believe they have three
23 actual inspectors for the area of the watershed.
24 I hear 19 in the earlier testimony statewide so I
25 did the math, that's about 600 wells per person,

something like that.

If the Marcellus Shale develops quickly, it is physically impossible for this level of staffing to adequately handle the kind of growth in drilling that would be expected, particularly given that the current New York regulations based on our review so far are reactive rather than preventive. I'd like to make one other comment there in terms of the staffing issue.

This comes up a lot when I'm talking with oil and gas agencies. Usually they have permit processors, they have engineers who deal with the production process and they have an environmental bureau who either deal with spills and releases or do some of the on-site inspections. At current pay rates, I don't know what it is here for New York State government but states out west have a very hard time paying enough to get good inspectors to stay on staff compared to what industry can pay. So chronic understaffing is an issue across states. It's very difficult to keep a fully staffed agency even if you have good rules.

CHAIRPERSON GENNARO: I'm going to have to ask you to kind of move through the rest of your testimony as quickly as possible. As rude as that sounds given the great distance that you've traveled, we just have a boatload of witnesses to come.

MR. BAIZEL: Absolutely. I apologize.

CHAIRPERSON GENNARO: No, no. Please don't.

MR. BAIZEL: In light of the discussion earlier, we had six approaches or items we think you should keep in mind based on our experience elsewhere. They were implicit in some of the discussion earlier. First is as the supplier of water, it's been our experience elsewhere that you should have a formal voice at the table to protect your interests. If you rely on the oil and gas bureau, whose mission is really to produce the resource efficiency or even the health department to some extent, we haven't found that to be very effective. You actually need a formal voice at the table prior to the issuance of a permit. If you try to come in after the fact,

1 it's too late. You don't get effective
2 protection.
3

4 I think Eric mentioned prevention
5 first rather than trying to clean up afterwards.
6 At a minimum if the state is going to proceed they
7 need to require the use of pitless drilling
8 systems. They're commonly done. It's not a
9 technical issue. Those are one of the single
10 biggest risk factors for contamination. There's
11 just no way they should be using pits here; they
12 should be using closed loops systems. Other
13 cities have required that.

14 Built into any permit should be
15 they will have to clean up afterwards to any
16 multiple use standards for the soils. They pay
17 much better attention if they know they're going
18 to have to pay the cost of cleaning up at the end
19 of the process. The use of buffers was mentioned,
20 absolutely. I guess the question of the size of
21 the buffer would be what you might want to look at
22 carefully. It's commonly done now, you move drill
23 sites away from schools, houses, water courses
24 elsewhere. They have the technology to reach
25 quite a distance underground.

1 If you're going to allow drilling,
2
3 be prepared to have emergency response and that's
4 part of the reason chemical inventory is so
5 important. The examples I've given you here, a
6 gas well blow out, a gas field worker dosed in
7 drilling fluids or fire department personnel
8 responding to tanker trucks. Those are all real
9 examples and they didn't know what they were
10 dealing with. In fact a nurse ended up in the
11 hospital.

12 There has been talk of green
13 drilling and frack fluids; we have yet to see a
14 workable framework for that. Maybe it's something
15 that can be pursued but how would you certify
16 them? There's a number of questions there. I
17 know some companies claim they have them, we're
18 not convinced yet.

19 Speed in permitting is not the
20 answer. Speed of drilling is largely a function
21 of operator revenues. In testimony that we've
22 been through by both super majors and independent
23 oil and gas companies, really speed is a matter of
24 them generating as much revenue as quickly as they
25 can. It doesn't affect the overall volume of gas

that you get out in the long run. So it's really not in your interest to have a speedy process. That's really an operator issue.

If you were to allow development in the watershed, we would suggest that you look at clustering and phasing it so it can be managed. Again, that's assuming you've agreed that it should happen. No is a much cleaner answer.

Finally, the Environmental Policy Act of 2005, which exempted the fracking federally from regulation. It may be that you would want to revisit that with Congress and EPA to allow some floor standards being put in federally to help give you some leverage here in the state. But thank you for your time.

CHAIRPERSON GENNARO: Thank you Mr. Baizel. Thank you.

[Applause]

CHAIRPERSON GENNARO: Yes. We appreciate that. I will reserve question or comment to your statement until we hear from Mr. Horowitz. Oh, it's Mr. Horwitt. We have the wrong thing on our thing. Thank you Mr. Horwitt, please commence. You have a long statement that's

for the record but you have a little presentation for us, right?

DUSTY HORWITT: Yeah, it's just two photos and I'll try to get through it quickly.

CHAIRPERSON GENNARO: Okay. And you got to speak loudly and into your microphone just like I am otherwise people won't be able to hear you.

MR. HORWITT: Okay. And I'll try not to--

CHAIRPERSON GENNARO: [interposing] You got weak microphones at that table, I got the good one.

MR. HORWITT: Thank you Mr. Chairman and members of the Committee for having me here to testify. My name is Dusty Horwitt. I'm a senior analyst for public lands with Environmental Working Group. We're a non profit research and advocacy organization based in Washington, DC and Oakland, California.

For the past several years we've been tracking what is virtually a unprecedented drilling boom in the Western United States. To give you some idea of the scope of this boom and

1 what might be in store for New York and other
2 eastern states. We found that between 2001 and
3 2006 there's been an average of 12,400 drills per
4 year in the West, that's 50% higher than what we
5 saw during the 1980s when the Reagan
6 administration opened up vast areas of federal
7 land for energy development. So this a real boom
8 we're seeing right now.

10 Until recently seeing something
11 like this in the New York area would have seemed
12 about as likely at Brett Farve coming to play
13 quarterback for the Jets. But we've got this boom
14 now and while Environmental Working Group is not
15 opposed to all natural gas drilling. We believe
16 that given the inherent pollution involved in this
17 drilling, as Bruce has demonstrated, given the
18 thousands of wells that may be drilled and given
19 the billion dollar cost of treating New York
20 City's water. We would strongly recommend no
21 drilling in the New York City watershed.

22 Let me just show these two photos
23 to give some sense of the scale of these
24 fracturing operations. These photos are from Dale
25 Resources, which is a Texas based company.

There's just two. I'll switch the photo in a second. You can find them on the website of burnettshalenews, which is an industry publication.

This shows a fracturing operation. You can see all the trucks. Let me just change this one.

CHAIRPERSON GENNARO: Sergeant at Arms, I was wondering if you could position the screen in such a way that Members can see it a little better?

MR. HORWITT: And this is an overhead view of the fracturing operation. You can see there dozens of truck; I counted more than 40. There's a pond of water that may well be a--

CHAIRPERSON GENNARO: [interposing]
That's fine Sergeant.

MR. HORWITT: May well be a pit for the excess fluid or the produced water that comes up from underground. So--

CHAIRPERSON GENNARO: [interposing]
That's one well head, right?

MR. HORWITT: That's correct.
That's one site there. This is occurring in the

1 Barnett Shale, which is near Houston, Texas, which
2 is also Shale formation like the Marcellus Shale.
3 The industry estimates say that you could have,
4 like this one, as many as 40 tanker trucks coming
5 in and out. You could use a million gallons or
6 more of fluid.
7

8 We found, according to records from
9 IHS Energy which is a respected energy data
10 company in Colorado, that Delta Petroleum in Mesa
11 County, Colorado used almost 1.5 million gallons
12 to fracture a well of unknown fluids and acid. We
13 found in Garfield County, a Canadian company in
14 Canada, and this was just in the past couple of
15 years, used a million gallons of fluid to
16 fracture. And Dell Resources suggests that in the
17 Barnett Shale, which is also a shale formation,
18 companies could use as much as 4 million gallons
19 per well. So one of the--

20 CHAIRPERSON GENNARO: [interposing]
21 4 million gallons per well?

22 MR. HORWITT: Yeah, 4 million. So
23 obviously water quantity is a major concern as is
24 water quality. We did a study with the Endocrine
25 Disruption Exchange, which is a Colorado based

organization. They've done a lot of research on the chemicals used in hydraulic fracturing. We found that at least 65 of the chemicals used in the natural gas industry in Colorado are listed as hazardous under six different federal laws designed to protect the environment and human health, including Clean Air Act, Clean Water Act and Super Fund.

These chemicals are used not just in hydraulic fracturing but throughout the natural gas operations. In fact, we're not exactly sure how they're used because the industry doesn't tend to disclose how these chemicals are being used. We found that there are associated with a range of health problems, everything from nervous system disorders to brain problems to cancer.

The EPA found in the draft report that was unearthed by Bruce and his colleagues through a Freedom of Information Act request. At least two of these chemicals are injected in hydraulic fracturing operations at concentrations that can pose a risk to human health.

We're very confident that at least some of these chemicals will be used in the

1 Marcellus Shale and the question is which ones
2 because as I said earlier, the industry guards
3 these as trade secrets. They're not required
4 under law to disclose what they're using or what
5 concentration of these chemicals they're using.
6 The Endocrine Disruption Exchange was able to
7 track down some of these chemicals through
8 material safety data sheets, through spill and
9 accident reports. But these sources are often
10 incomplete and they often are geared toward acute
11 exposure like the material safety data sheets.
12 And don't mention what would happen through long
13 term exposure the way we might encounter these
14 chemicals in drinking water.

16 As one of the prime examples of how
17 secret the industry keeps these chemicals, Bruce
18 mentioned this. There was a nurse just this year
19 in Durango, Colorado who became seriously gravely
20 ill after inhaling fumes from a worker who had
21 fracking fluid spilled on him, who the nurse
22 treated. As she experienced liver failure, heart
23 failure and respiratory failure, the company
24 refused to tell her doctor what was in the
25 fracking fluid. That's how secret the industry

keeps the--

CHAIRPERSON GENNARO: [interposing]

Oh, I see. So her life was at risk because she was being exposed to something. Her doctors wanted to help her medically and needed to know what she was exposed to. They weren't forthcoming with it.

MR. HORWITT: That's right. I believe the doctor eventually found out but only under a confidentiality agreement. That's cold comfort for someone who needs to know it right at the time. We've also seen data that--there's a report from Oklahoma that even in dense formations like Shales, there can be fracturing and heaving of the formation that can cause fluids to migrate underground through the formations. So the gas companies may say that when we inject the fluids they'll stay in place but that may not, in fact, happen.

Garfield County, Colorado there was a recent documented case in 2004 of contamination of surface water because of a drilling operation where natural gas bubbled up through the surface water similar to the example that Bruce shared

3,500 feet away from the well site. That water was also contaminated with toxic chemicals including benzene. The company involved in this incident in Canada was fined a record amount by the Colorado Oil and Gas Conservation Commission. While it's not clear whether hydraulic fracturing was used in this operation, fracturing in the area is quite common.

Bruce mentioned the other documented evidence of contamination and spills in New Mexico and Colorado. I just wanted to share just two last instances and examples.

Tweety Blansett is a rancher in New Mexico. She and her husband have operated a ranch there. It's been in the Blansett family since the 1870s. Their ranch has been basically ruined by natural gas drilling. Her water has been contaminated. She said that her water samples that she's brought up contain heavy metals, hydrocarbons and other things that she said we don't want to know about. She has the tests to prove it. She has given an invitation to New York officials to come to her ranch anytime to see what has happened there.

We also spoke with Oscar Simpson, he's a representative with the National Wildlife Federation in New Mexico. And served for about 20 years for the State of New Mexico as a regulator for the oil and gas industry and later for drinking water across the State of New Mexico. It was his opinion that the pollution involved in natural gas operations from beginning to end is so great and inherent in the industry that no drilling should be allowed in New York City's watershed. That's our position as well.

We make that recommendation, which we also submitted to Governor Paterson and Mayor Bloomberg in a recent letter. We would suggest that the state adopt standards to make sure that companies disclose the chemicals they're using and not allow any chemicals to be used that might be harmful to human health or drinking water. Thank you.

CHAIRPERSON GENNARO: Thank you both. I really appreciate the comprehensive testimony that you've both given. After having heard what you both said, I realize how ill prepared I would be to sort of work on this issue

in the upcoming weeks or months without the testimony you've just given me. So you helped me; you put me in the position where I can do my job a lot better. I certainly appreciate that and I want to thank you for all the support you've given our staff as they put together materials for this hearing. Your work product has been very, very valuable. We thank you for coming such long distances to give us the benefit of your views. We're very grateful to you and thanks for being here today.

[Applause]

CHAIRPERSON GENNARO: Next we'll hear from Bob Tudor of the Delaware River Basin Commission. Oh, yes. I completely lost my manners. I got so absorbed in the testimony of the witnesses that I forgot to recognize my colleague, my friend and a member of this Committee, Dr. Mathieu Eugene. Thanks for being here Dr. Eugene. DEP is still in the house. We're grateful for that. Thank you for sticking with us to the end. State of New York, are they still in the house? Okay. Who's here from the State? Okay, fine. Terrific. Mr. Tudor, do we

have testimony from Mr. Tudor.

ROBERT TUDOR: I just handed it in.

CHAIRPERSON GENNARO: Okay.

Sergeant's will be--okay got it. Thanks very much Mr. Tudor. Thank you for your patience. We appreciate it.

MR. TUDOR: Thanks for inviting me.

CHAIRPERSON GENNARO: You bet.

MR. TUDOR: I'm Bob Tudor. I'm Deputy Director of Delaware River Basin Commission. I have provided my written testimony but in the interest of time at the end of the day here, I'll keep my verbal remarks concise and try to focus on things that have yet to be brought up.

CHAIRPERSON GENNARO: Thank you.

MR. TUDOR: I'll tell you a little bit about DRBC. A little bit about why DRBC could be an ally from a water quality protection perspective in this issue of natural gas because we have common interests. A little bit about our regulatory authority and the interaction we have had to date with the oil and gas industry and the kind of level of activity that we're seeing and next steps of coordination with both Pennsylvania

and New York DEC.

The DRBC is what's called an interstate federal compact agency. We have representatives of the four governors; it's actually the four governors that are the commissioners and a presidential appointee in the form a brigadier general in the Army Corps of Engineers.

CHAIRPERSON GENNARO: Okay. And that would be New York, Pennsylvania, New Jersey and Delaware, right?

MR. TUDOR: Correct.

CHAIRPERSON GENNARO: All right.

MR. TUDOR: It's all the land that drains to the Delaware River including parts of those four states. Our mission is to manage the water resources without regard to political boundaries. Think about the system, think about how to keep the good water clean. In terms of our authorities, we are a planning an institution. A management institution can develop but in this case we want to talk about our regulatory authorities.

We have many programs in this case,

I'll just focus on our water quality protection program. Specifically, we've talked a lot about the uniqueness and the critical nature of the watershed lands. But from my perspective of looking at the Delaware River as a system going from the mountains to the ocean, it is unique from Trenton up, that's the non-title river in that about three-quarters of it is part of the National Wild and Scenic River System. So you have then the National Parks Service who is invested with figuring out how to protect that wild and scenic river quality. They have looked at DRBC to put the regulatory controls in place.

In each of their management plans they say goal number one is protect the high water quality. That means water quality that's better than the State's water quality standards; fairly pristine. So our objective at DRBC is just what your previous speaker spoke about from an NRDC and some of the other institutions, the Riverkeeper. Is the prevention one, how do you keep the clean water clean for future generations?

We have put in place something called a Special Protection Water Program. It is

an anti-degradation program. So that is the platform we're going to work from in terms of engaging the gas industry. If you seek drilling locations you're going to have to meet our standards. We have wrote them all letters saying you are regulated and you have to come before us to get what is our equivalent of a permit.

Basically we've started to frame out what our regulatory strategy would be. I'd say it's a four prong strategy. The first is concerned with the actual withdrawal of the frack water. You heard people give different volumes. Our understanding is it's like 3 to 9 million gallons per well.

CHAIRPERSON GENNARO: How much?

MR. TUDOR: 3 to 9 million gallons per well.

CHAIRPERSON GENNARO: 3.9 million?

MR. TUDOR: 3 to 9, somewhere in the range, three at the bottom--

CHAIRPERSON GENNARO: [interposing]
Oh, I see. 3 million to 9 million gallons per well. Okay.

MR. TUDOR: Right. And we were

concerned about in the upper part of the basin where we want to maintain the integrity of streams, not dewatering streams, ensuring they don't go below a base flow. The second, a lot of speakers have spoken about release of pollutants to either ground water or the surface waters. What is in these frack fluids and how can we be sure that they don't escape to either the reservoir or the streams? That would be a big focus of our review.

We have met with some of the energy companies that have come to us to date. We do think we're going to get some information about what the constituent breakdown is of the frack fluids, we probably just won't get the recipe. Two parts this, one part that, three parts that. But we would be able to say organic chemicals like nazalyne, benzene and things we've just thrown out. We do think we'll have access to that kind of information to at least know what the constituents are. So we'd want to talk with you and share information about that.

Lastly, in terms of some of the graphics we saw, sort of what a typical staging

1
2 area looks like. You see these lagoons when the
3 frack water comes back up and they kind of have it
4 in a holding area. We're very concerned about the
5 treatment and ultimate disposal of that water,
6 where it goes. And we'd be looking at those
7 issues.

8 Then lastly is what I call
9 footprint issues. If you have a staging area like
10 that, what's an acceptable place and what isn't?
11 Is it a setback from a stream of what, 300 foot, a
12 mile or have an outright exclusion zone? So we
13 would be engaging with Pennsylvania and New York
14 in terms of those kind of considerations. It is
15 reasonable to not treat all pieces of the
16 landscape equally and say if there are watershed
17 lands that serve a drinking water function for the
18 largest city in the country that you could have
19 higher requirements for those footprint issues.
20 But that's a slightly different issue than an
21 outright moratorium or prohibition for all the
22 land so we haven't quite got there with our
23 commissioners on those kinds of things.

24 But we do hope to put in a fairly
25 stringent set of requirements that we think would

1 be aligned with a pollution prevention approach.
2 So that we could meet both protection of the
3 watershed lands kind of perspective that you all
4 bring to the table as well as protection of these,
5 what we call special protection waters, that are
6 there for the National Wild and Scenic River
7 System.
8

9 Having said that, we haven't seen
10 lots of activity which may reinforcing
11 Commissioner Grannis' comments. We've had three
12 energy companies come to us, actually they've all
13 been seeking locations in Pennsylvania right now,
14 not New York. It was just for a few wells, like a
15 handful of wells.

16 We have also engaged with the
17 U.S.G.S., U.S. Geological Survey and tried to get
18 an understanding from their energy experts about
19 as you go from West Virginia across Pennsylvania
20 to New York, is there any difference in terms of
21 what the yield could be from a gas perspective.
22 It's our understanding that as you come east that
23 the organic carbon content is less, say 1% or 3%
24 versus 3% to 5%. Therefore from a yield
25 perspective your reserves would be somewhat richer

in central or western Pennsylvania. We are seeing a much higher level of activity right now in the subsequent Hannah River Basin, which is immediately to our west.

I do think we have a little bit more time maybe before the rush gets to us to put together a coordinated framework among the different interested governments to make sure that we do our wise stewards for our constituents and future generations and things like that.

But we would be interested in working with you in figuring out what the ultimate framework is. Right now we're thinking that maybe some amount of gas exploration will occur but it will have to be done within a framework of very stringent standards.

CHAIRPERSON GENNARO: Certainly. The reason why we're concerned now is that we see all the leasing deals going forward. Maybe the gas people aren't making their way to your door, but they're certainly making their way to the people who live in the watershed and live in areas by the Marcellus Shale and that's our understanding of the phenomenon that is going on.

But it's good to hear that at the moment it's not quite 1849 with the Gold Rush. But we're very concerned about it.

One of the good things of a hearing like this is to come face to face with people like yourself who have similar issues and certainly we both have a vested interest in seeing water quality in the upstate area remain as pure as possible. You for your reasons, me for my reasons; but the reasons are common. We really appreciate this opportunity to work with you as this goes forward. Mr. Tudor, you will be on our list of folks to interact with as we try to come to grips with this serious problem.

I thank you for your patience for being here the entire day and for your willingness to work with us to achieve a common purpose.

MR. TUDOR: All right. Thanks for having us. We look forward to working with you.

CHAIRPERSON GENNARO: You bet, Mr. Tudor. Okay. We're trying to get through many of the good witnesses who have come in today. Hopefully these folks are still here. Bruce Ferguson of Catskill Citizens for Safe Energy, Wes

Gillingham, Program Director of Catskill Mountain Keeper, Michael Lebron and Joe Levine, both of Damascus Citizens for Sustainability and Tracy Carluccio of the Delaware Riverkeeper Network.

So the folks that we called over, Bruce Ferguson, Wes Gillingham, Michael Lebron, Joe Levine although I know Michael Lebron and Joe Levine are testifying on behalf of the same entity and perhaps maybe one of them can speak on behalf of Damascus Citizens for Sustainability and Tracy Carluccio of the Delaware Riverkeeper Network. So that's the batting order. Bruce Ferguson, Wes Gillingham, Michael Lebron, Joe Levine. Hopefully we'll hear from either Michael Lebron or Joe Levine and Tracy Carluccio. I don't know who's first.

BRUCE FERGUSON: Bruce Ferguson here.

CHAIRPERSON GENNARO: So why don't we take you Mr. Ferguson. Again, we've heard a lot of testimony today. It's been very enlightening. To the extent that it's possible in your testimony to primarily focus on the issues that are sort of bring something new to the

colloquy that would be great. We all understand we have a lot of concerns but many things have been expressed so no need to express something that's already been expressed many times. We're looking for new things that we haven't heard yet. But thank you for being here, thank you for your patience.

I'll call upon Bruce Ferguson, Catskills Citizens for Safe Energy to go first and we have your testimony here Mr. Ferguson. Please proceed.

MR. FERGUSON: I'm going to hit a very few parts of issues that have not been covered. First of all I want to agree with you about the well spacing bill. We opposed it and found it to be stealth politics. It passed on the very last day of a legislative session without proper public comment. In fact--

CHAIRPERSON GENNARO: [interposing]
You got to speak right into the microphone.

MR. FERGUSON: Queens Assemblywoman complained she only heard about that bill four hours before it passed. Our representatives in the legislature would tell us the bill would not

be acted on this year up to two or three days before it was voted on.

CHAIRPERSON GENNARO: Oh really?

MR. FERGUSON: Yes. We can document that, I think, for you in emails.

CHAIRPERSON GENNARO: Please do.

MR. FERGUSON: Yes. It was definitely stealth politics; very sneaky deal.

CHAIRPERSON GENNARO: I'd like to make an introduction to the counsel to the Committee. Samara Swanston, she can give you her business card.

MR. FERGUSON: I've been in touch with Ms. Swanston.

CHAIRPERSON GENNARO: Okay. Whatever kind of reconnaissance you have, we want.

MR. FERGUSON: Okay. Now the other thing I wanted to touch on. Stewart, the gentleman in the second row there, just showed me a map he had. I think it's a bit disingenuous for Commissioner Grannis to say this drilling is not near the watershed. This shows that at least within 1,000 of the Cannonsville Reservoir, a gas lease by Chesapeake Energy. There is leasing

going on right in the vicinity of the reservoirs,
not to mention the reservoirs. So it's a little
disingenuous to say--

CHAIRPERSON GENNARO: [interposing]
Oh, leasing going on.

MR. FERGUSON: Leasing, yes, within
1,000 Chesapeake Energy has a gas lease within
1,000 feet of the reservoirs.

CHAIRPERSON GENNARO: I think the
Commissioner's point was a formal application.

MR. FERGUSON: They're not applying
because they're waiting for the update to be
completed. Nothing's going to be acted on.

CHAIRPERSON GENNARO: Yeah, yeah.

MR. FERGUSON: So you wouldn't
expect applications now.

CHAIRPERSON GENNARO: Exactly,
exactly.

MR. FERGUSON: That's why I say
disingenuous. Another thing that I think you have
to be very careful with what the DEC is saying is
their description of what is going to be disclosed
with fracking fluids. They've never asked for the
content of fracking fluids before although they

1
2 say fracturing's been going on in New York State
3 for many, many years. They don't know what's in
4 the fluid. They never have known what's in the
5 fluid.

6 Now they say we're going to ask for
7 disclosure but they're very careful. They said it
8 again today. We're going to ask disclosure for
9 horizontal wells in Marcellus Shale, that still
10 means vertical wells and drilling into other
11 geologic formations can have fracturing without
12 disclosure of the chemicals. So that is something
13 that's got to be looked at very carefully. The
14 language is very carefully worded there.

15 CHAIRPERSON GENNARO: Right. It
16 wouldn't be under the jurisdiction of this
17 Committee. I'm solely concerned with my only
18 jurisdictional area that I have any standing is
19 for the area within New York City drinking water
20 supply.

21 MR. FERGUSON: But there still
22 could be wells within the watershed with a do not
23 disclose fracking fluids if they were drill into
24 another formation or if they were drilling
25 vertically also.

CHAIRPERSON GENNARO: I see.

MR. FERGUSON: A vertical well within the watershed, you won't know what's in it.

CHAIRPERSON GENNARO: Got it.

Okay. Thank you.

MR. FERGUSON: Another thing, we talked about fracking fluids a lot but the DEC has refused to commit to storing these perhaps million gallons at time toxic fluids in steel containers. Simple, cheap easy remedy to prevent contamination, they insist it may not be necessary. They will not commit to that. They're insisting that may be okay to put a piece of plastic in a pasture, gouge out some ground and dump the fluid there.

We have had, and we can talk more about this, three 200 year floods, one 500 year flood in the last four years. We don't need open toxic waste pits. No--

CHAIRPERSON GENNARO: [interposing] They've actually told you that.

MR. FERGUSON: They refuse to commit to steel containers. They say that there's nothing wrong with open waste pits. We've pressed

1 COMMITTEE ON ENVIRONMENTAL PROTECTION 156
2 them on this again and again and again. We
3 haven't gotten a satisfactory answer. The other
4 thing that has not been mentioned, I don't think,
5 is somewhere between 30% and 60% of the toxic
6 fluids that are injected in to the ground never
7 come out. They can not be recovered. They said
8 don't worry, it's below the portable aquifers.
9 Well fine if it stays there.

10 But what if there's a seismic
11 event? What if there's an undisclosed fault? And
12 there is migration, how do you fix a broken
13 aquifer? You can't. The other thing that's
14 relevant to that is director Michael Enam from the
15 DEC told me, complaining to me about how strapped
16 they are. That there are thousands of uncapped
17 wells in New York. And to quote him, "and no one
18 will give us the money to cap them". Well what
19 happens if they're fracking and they hit an
20 uncapped well? There is a conduit. This well may
21 be 100 years old and it may be a conduit right up
22 from one strata where the gas it to the aquifer.
23 What are they going to do about that? Some of
24 these wells are, in all likelihood, unmapped.

25 Another point--

CHAIRPERSON GENNARO: [interposing]
Oh, so they're unmapped and they're--

MR. FERGUSON: [interposing] Yeah.
There are wells going back go 1840.

CHAIRPERSON GENNARO: They're
abandoned.

MR. FERGUSON: They're abandoned;
no one knows about them. And they don't have--
they talk about their 70,000 wells and safety
records. They have maybe records for 25 wells at
most. The rest are pre DEC. They don't have
records. They don't know whether there have been
accidents or not; moving on very quickly.

There has not been scientific study
on fracking, that's just a fact. A court ordered
study in 1997 federal court after problems with
drinking water in Alabama. The federal EPA did a
study that damaging information was redacted.
This is under Bush/Cheney, of course. It was
faulted by every scientist from the outside that
looked at it.

First of all it was reviewed by two
people from Halliburton. Now Halliburton invented
fracking. They still make \$1.5 billion a year

1 from the process. One former Halliburton employee
2 and one current Halliburton employee were among
3 the seven people who reviewed the study. It's
4 been denounced by insiders and outsiders. I will
5 read one quote here from Henry Waxman on the EPA
6 study. He concluded that the EPA made a faith
7 based leap to conclude that injected toxin
8 materials underground posed little or no threat.
9 And that "unanswered questions in EPA's report cry
10 out for further study".

12 Another thing that hasn't really
13 been talked about too much. One thing is we have
14 two waste products from drilling. Produced water
15 which is the extracted toxins that not only
16 contain the chemicals the companies put into them
17 but now have toxic heavy metals, volatile organic
18 compounds, all the crap that comes up with the gas
19 from underground. What do they do with that? How
20 do they dispose of it safely?

21 They're talking about waste water
22 treatment plants. Well eliminating toxic
23 chemicals is not the same as eliminating ecoli,
24 bacteria so where is it going to go? Part of this
25 stuff right now, they call it brine water because

of the high concentration of salt and they sprinkle it on our roads to keep down the dust and to melt ice. That is acceptable under current New York State regulations.

The industry is now resisting the DEC call for chemical analysis of what they spread on the roads. Their product is drill cuttings which is the solid material that comes up when they drill a bore. That in the Marcellus Shale will be radioactive and contain toxic heavy metals. It's acceptable practice to bury that at the site where they did the drilling. Dig a hole, put it under a little bit of dirt - that's that. Again, moving very quickly.

Of course there's virtually no federal regulation of the industry. That was all wiped out in 2005 by the Energy Act so there exempt from the Safe Drinking Water Act among other things and most of the provisions of it. The last point, I'm going to really move fast here. I would like to read one very short section here.

It questions, Is the DEC up to the Job? With virtually no federal protections, New

1
2 York City must rely on a New York State DEC but
3 there's real question whether the agency is up to
4 the job. Most people are unaware of the fact that
5 the DEC takes the position that there's a required
6 bylaw to promote extraction. And it's our
7 experience that the Department often seeks to put
8 the interest of the industry over those of the
9 public.

10 The Department recently backed a
11 bill that expedited drilling in Marcellus Shale,
12 while doing away with public hearings and failing
13 to provide health and safety protections that were
14 being sought by New York State residents. Also
15 the DEC fails to use the permitting process to
16 ensure that gas companies behave responsibly in
17 the communities where they operate. The industry
18 is routinely allowed to pass off its business
19 expenses such as water testing and road repair
20 onto local taxpayers, while withholding important
21 health and safety information from the public
22 because it would violate their trade secrets.

23 Even if the Department were
24 disposed to vigorously defend our health and our
25 environment, it's clear they have the resources to

do so. The fact is the DEC is severely understaffed and underfunded. As noted earlier, the Department claims to lack resources to seal thousands of uncapped wells and it currently has only 19 inspectors to monitor some 13,000 to 14,000. That works out to one inspector for every 700 wells.

In recent months, DEC's spokesmen have dismissed health concerns by claiming that the State's past safety records should reassure us that we have nothing to worry about going forward. But the fact is there have been serious environmental accidents in recent years and there's absolutely no evidence that the Department has ever used its limited resources to attempt to systematically study the environmental impact of gas extraction. Nor has it ever dealt with the consequences of gas drilling on the huge scale we're about to see.

We conclude by saying that until there have been peer reviewed scientific studies that establish the safety of hydraulic fracturing, it should not be permitted in watershed. New York should not permit drilling until the federal

1
2 environmental regulations have been resorted that
3 were stripped in '05. It should not be permitted
4 until the DEC has the resources and political will
5 to provide thorough and vigorous oversight of the
6 gas industry.

7 CHAIRPERSON GENNARO: Thank you Mr.
8 Ferguson. I appreciate all the new information
9 that you brought forward in your testimony. I
10 appreciate it. Who's next? You have to hit the
11 button, the button's up.

12 WES GILLINGHAM: Wes Gillingham
13 from Catskill Mountainkeeper. You don't have a
14 written testimony.

15 CHAIRPERSON GENNARO: Okay. That's
16 fine.

17 MR. GILLINGHAM: I will get that
18 later. I want to thank you for the invitation to
19 testify at the hearing today. Catskill
20 Mountainkeeper serves as a strong advocate for the
21 protection of the Catskill area. Through a
22 network of concerned citizens we work to promote
23 sustainable economic growth and the protection of
24 the natural resources that's essential to healthy
25 communities. I'm going to skip through most of my

1
2 testimony. I'll hit on something that I think
3 needs to be reiterated.

4 As you know, the Catskill Mountain
5 area is an area of ecological significance. It
6 has national significance. It's one of ten areas
7 on the eastern half of the United States that has
8 a wilderness area that contains over 50,000 acres
9 of roadless area. That's ten areas in the whole
10 eastern half of the U.S. The watershed is a part
11 of that. The Slide Mountain Wilderness is what
12 I'm referring to.

13 In terms of Catskill
14 Mountainkeeper, my expertise with issues around
15 the watershed. I'm probably one of the few people
16 that have been there today that have actually
17 walked and hiked from the central part of the
18 Catskills, all along the watershed, down the
19 aqueduct to Central Park with a group of high
20 school students learning all about the watershed.

21 The other part that I really want
22 to speak to that's different than some of the
23 testimony today is I've lived through those floods
24 that we talked about. I lived outside of
25 Livingston Manor; I have a farm there. During the

2006 flood, which was the 500 year flood after experience two 100 year floods in a five year period, I lost three tractors, 60% of my top soil from one of my fields, irrigation equipment and an entire fence.

The area that I'm referring to, which was vegetable production field, has a ditch through it now that was a drainage area. It wasn't a stream. It was just a drainage area for the field. I used to hop over during heavy rains. It is now 7 feet deep and 35 feet wide.

It's in a potential place--the statements by the DEC in the past, they may require steel tanks in the flood plane, well that's the flood plane. If the steel tank was there, it wouldn't be there. It would be downstream. As I mentioned, a tractor is pretty heavy and fluid in a tank would float easier than a tractor. So that's a serious, serious concern of Catskill Mountainkeeper is these slurry ponds as they're proposing or even the steel tanks within an area of a watershed.

The thing we did as an organization originally, starting nine months ago was to do

research and then to provide educational forums for the public to become informed. We put on two forums in the area covering the issues of gas drilling. We flew in people from out west.

The first thing we learned through this process is that New York State is functioning with a generic Environmental Impact Statement that is an outdated document. Not only was it missing specific regulations for technologies that have been used by the industry for 10 or 15 years, but there were blatantly incorrect statements.

This is a statement from the generic Environmental Impact Statement.

Cumulative review is impractical and unnecessary when considering most oil and gas because of the independent nature of each of the wells, i.e., no compounding of the environmental significance.

The fact that the economics generally dictate a more cautioned approach of obtaining permits sequentially because of the high cost involved.

That is obviously very outdated and incorrect statement of this type of development.

This statement really brings to light the issues of cumulative impacts. It would be interesting to

1 read that statement to the people in Wyoming,
2 Colorado, parts of Montana, Texas, Louisiana and
3 Michigan. Where each of those states, the
4 communities are now reacting in trying to deal
5 with the cumulative impacts that they have seen.
6

7 In each of those places, as the gas
8 industry comes into the region, their state
9 regulators told the communities they had
10 everything under control and plenty of experience
11 with the industry, which turned out not to be true
12 because of the nature of the new gas plays and
13 targeting sheet formations with the new
14 technologies at a scale no one has seen before.

15 Today the oil industry is exempt
16 from so many federal protections. It's up to the
17 state and other regulatory agencies to protect the
18 community. As you know, our organization did
19 petition the DEC and the Governor for a
20 moratorium. We complimented DEC for finally
21 acknowledging the need for new regulations.
22 However doing just a supplemental on horizontal
23 drilling in the Marcellus Shale is incomplete for
24 multiple reasons.

25 For the purposes of this hearing,

I'll restrict the reasoning to issues pertaining to the watershed. Major issues that need to be addressed with the entire cumulative facts, as mentioned already. The fact that the industry has identified five target formations, not just the Marcellus Shale within the watershed. The fact that other Shale plates have progressed in a way that lead to down spacing.

If you look at the Oil and Gas Accountability Projects evaluation of shale plays, they show that reducing the spacing unit size. Doing down space and incorporating more vertical wells in order to retrieve more gas once the infrastructure in place is done over time.

There's another fact. There's issues with Article 23 and in the Environmental Conservation Law that supersede local control. That would enable communities to do things like phasing a project, allowing a certain number of wells in the community at any given time in the drilling operation.

The fact that the public may still not know the constituents of the fracking fluids, as people have talked about. The fact that the

1
2 supplemental to the GEIS does not affect
3 applications for vertical wells as Bruce
4 mentioned. That's really important in that down
5 spacing phase. There's no extensive analysis for
6 the risks involved in transporting the chemicals
7 involved in drilling.

8 I'm going to read something else
9 from the GEIS. This is under the heading called
10 unavoidable impacts. Potential adverse impacts
11 and conflicts associated with the disposal of
12 drilling and production, solid and liquid wastes
13 can not be entirely eliminated. We believe they
14 should be entirely eliminated from the watershed.

15 Finally, with the track record this
16 industry has around the country doesn't make any
17 sense at this point in time to allow drilling in
18 public water supply watersheds or significant
19 ecological areas. Are we sacrificing a multitude
20 of important resources for the purposes of
21 exploiting one resource?

22 So we're asking you to use your
23 influence and to pressure the Governor and his
24 Commissioners and New York City DEP to undertake a
25 comprehensive inventory of the places in New York

that should be permanently off limits to gas and oil exploration based on their ecological, cultural, agricultural and historical value.

And to also identify areas that should be off limits for now until we as a state have gone through extensive re-evaluation of our regulations and law along with a comprehensive study of the areas where we allow a gas exploration to proceed. And I would just add to one of the things that Bruce was talking about. There's been quite a bit of leasing within the watershed. There in the town of Andes, based on the amount of property that's leased and then using current gas regulations, there's a potential for 47 wells now in the town of Andes.

There are actually 97 in the town of Tompkins. But as best as I can tell looking at maps, about 52 of those fall within the watershed. And 17 in the town of Colchester. Colchester is one of those towns that has also in the last two years beyond the flooding events that I talked about. I'm sure all of you might have seen some of the news reports of Route 206 that completely disappeared. That was not a flood plain. That

road was completely washed out by a really significant rain event.

There are maps that the Army Corps of Engineers have that show that the Catskills have a propensity for extensive rain events. I'm not talking about global warming and climate change but just natural events that have happened historically. The Mobile, Alabama area, the Smoky Mountains, the Catskill Mountains fall under a group of areas that have significant 12 hour rain events. That seems like a really bad mix to combine this industrial process with flooding, to me, and in the watershed.

CHAIRPERSON GENNARO: Thank you Mr. Gillingham. I appreciate that.

[Applause]

CHAIRPERSON GENNARO: We started out in there. We moved in here because there were too many people. Now we got to move back because there's an event. We've gone longer than--this room is booked for 5:00. Let's just finish this panel.

Who is left to testify on this panel? What's your name sir?

2 MICHAEL LEBRON: Michael Lebron.

3 CHAIRPERSON GENNARO: Michael
4 Lebron. Okay. Is there one more witness from
5 this panel? Could we do two more witnesses before
6 we go? They're just going to be a few minutes
7 each because we have to move through your
8 testimony. People have waited a long time and
9 I've tried not to push them but we just don't have
10 time for lots and lots more testimony. So please
11 Mr. Lebron, I'm sorry to have to be this way but
12 it is what it is. They're throwing us out of the
13 room.

14 MR. LEBRON: I'll be brief. Again,
15 my name is Mike Lebron. Thank you for giving me
16 an opportunity to speak here. I've been living in
17 this city for almost 40 years. I came here to
18 study fine arts at the Cooper Union just a few
19 blocks away from here--

20 CHAIRPERSON GENNARO: [interposing]
21 Okay. You got to speak right into the microphone
22 or else I won't be able to hear you.

23 MR. LEBRON: Okay. I'm going to
24 cut to the chase here with...

25 CHAIRPERSON GENNARO: Please.

MR. LEBRON: ...the point that I want to make, which is a little bit off canned from what others brought have brought to the table here but I think it sort of builds on that.

For about 20 years now I've also been working in advertising. I work with Ogilvy Advertising right now and a number of our clients are pharmaceutical clients. It's from that perspective of helping drugs and device companies promote their products to both physicians and patients that I will be speaking here now.

As you probably know the Mercks, the GalxoSmithKlines and the Pfizers of the world must invest millions of dollars to conduct controlled clinical trials of each investigatory chemical compound that they wish to bring to market. These trials and the subsequent regulatory review by the Food and Drug Administration are designed to ensure the safety of drugs as much as possible before the metabolisms of millions of patients are exposed to them.

Through this process a compound that has several possible indications at the onset

1 of early clinical trials might be found to be
2 appropriate only for a smaller patient population
3 upon further examination of its risk benefit
4 ratio. Sometimes this process leads to research
5 investment that having reached a billion dollars
6 or less ultimately has to be written off by the
7 company because the drugs side effect profile
8 causes too much of a risk relative to its
9 benefits.
10

11 The natural gas industry also
12 submits the public to chemical exposures. Not as
13 a design to improve health but as a byproduct of
14 industrial activity that has adverse health
15 effects. Yet currently it is only required to
16 follow miniscule fraction of the regulatory
17 protocol by which big pharma must abide. WE
18 should have a problem with that.

19 It's been demonstrated out west, as
20 other people have spoken to earlier here, that
21 exposure to the chemical byproducts of hydraulic
22 fractured drilling on the industrial scale being
23 contemplated for this region. By that I mean
24 we're talking about potentially 100,000 or more
25 gas well stretching from the Catskills throughout

the southern tier of upstate New York and much of Pennsylvania lead to cancers, neurological disorders, birth defects and respiratory ailments.

Yet epidemiological studies identifying human tolerance levels to these chemicals are few and anecdotal. WE should be looking at those studies with an eye towards conducting much more systematic control, clinical studies based on them. Exposure limits based on those studies, conjoined with a model of a cumulative amount of wells anticipated in this region, should be developed before we permit any drilling.

If we don't do this we will likely be subjecting ourselves and our neighbors, and that's even throughout here in New York City because we're downwind, to what can turn out to be an uncontrolled medical trial involving tens of millions of people, leading to a significant number of adverse outcomes further burdening our already strained healthcare system. Thank you.

CHAIRPERSON GENNARO: Thank you.
Thank you very much Mr. Lebron for being brief but also very poignant. And again, for views that

have not been raised heretofore in the hearing, I thank you for that important value added. Thank you. You must be Tracy Carluccio, right? Is that right?

RAY LEVINE: My name is Ray Levine. I'm friends of the Delaware Riverkeeper and I'm standing in today for--

CHAIRPERSON GENNARO: - - So you're testifying--

MS. LEVINE: I'm reading a statement for...

CHAIRPERSON GENNARO: Tracy.

MS. LEVINE: Tracy.

CHAIRPERSON GENNARO: Okay.

MS. LEVINE: Carulccio.

CHAIRPERSON GENNARO: Do we have that statement?

MS. LEVINE: Yeah.

CHAIRPERSON GENNARO: Okay.

MS. LEVINE: And everything I'm about to read to you--

CHAIRPERSON GENNARO: Oh. Okay. I don't know if we have time for the whole statement. Which is the best part of the

statement? Please proceed but we--the longer I talk the less you have to get going. Please proceed.

MS. LEVINE: Delaware Riverkeeper Network urges New York City to employ its regulatory powers through New York City Department Environmental Protection's rule, i.e., Chapter 18 that govern the watershed that drain to the City's reservoirs. Our comment focus is on these three reservoirs located in the Delaware River watershed, known as the Catskill Delaware system.

These reservoirs in the Delaware's headwaters make it possible for New York City to withdraw up to 800 million gallons of Delaware River water per day and their massive storage capacity effect the ecological health and flows of the streams below the dams and the entire Delaware River's main stem, as well as the communities downstream that also depend upon the river for drinking water. As a result, managing these reservoirs has long been subject to vigorous debate.

The City's watershed program that was adopted to protect the water quality of the

1
2 reservoirs has been a national, indeed
3 international, success story. By strictly
4 controlling land use and stream discharges in the
5 contributing watersheds of the reservoirs,
6 including cleaning up existing pollution sources,
7 New York City has been able to preserve the
8 exceptionally high water quality of its drinking
9 water, making it the largest unfiltered drinking
10 water supply in the nation, according to Jim
11 Bezult of New York State DEC.

12 Delaware Riverkeeper Network has
13 supported the watershed program since its
14 inception. Cleaning up pollution in headwater
15 streams and comprehensively managing land use has
16 benefited the entire Delaware River. How the flow
17 has been managed has been problematic in terms of
18 fish and wildlife impacts, especially for the
19 streams below the dams. And the controversy has
20 led most recently to the new flow management plan
21 that is presently under scrutiny.

22 Natural gas drilling development
23 and production threaten this success story in two
24 major ways. First, water quality is directly at
25 risk due to practices employed in the Marcellus

Shale formation, which underlies the city's watershed lands. Hydraulic fracturing fluids, which contain chemicals, are used to develop each gas well.

Drilling muds and produced water from the development process add a host of contaminants to the mix of wastewater and solids. Due to the amount of water used to hydro frack or frack these wells, the amount of wastewater produced will be huge. And there are multiple opportunities for release into the watershed; through pits or storage tanks on site, when the well is blown, through non-point source pollution and storm water runoff, unintended ground water aquifer contact and through deposition water from ventilation of chemicals to the air. The situation is complicated by the Congressional exemption of the fracking fluids from the Safe Drinking Water Act, an exemption protested by some scientists.

Storm water runoff is a key piece of the water quality issue that will affect these reservoirs. Because of exemptions granted to the oil and gas industry from some provisions of the

Clean Water Act, non-point source pollution from runoff that will result from the land disturbances, vegetation removal and forests, cover fragmentation that accompanies each well, such as three to five acre well pad, access roads, storage basins or containers, quarrying for road materials and feeder pipeline to export gas, will be a significant source of degradation to these reservoirs.

The Delaware River Bans Commission, DRBC, will be exercising storm water management under its Special Protection Waters program for the Upper Delaware Wild and Scenic River. However, SPW does not apply to lands above the City's three reservoirs.

New York City DEP is responsible there for the storm water management, the most conservative and economically responsible approach for DEP would be to ban all well drilling in the watershed drainage area in order to prevent water quality impacts, both point and non-point source.

Second, water quantity will be substantially affected because of the 2 to 7 million gallons of water that will be used to

frack each well. This is considered a consumptive use so it's impact will compound cumulatively, like an out of basin transfer. If well development proceeds at the scale geologists project is optimal, this could mean a permanent removal of billions of gallons of water.

Where will this water come from? If from streams that feed the reservoirs or the reservoirs themselves, the potential to reduce available water is alarming. These withdraws can directly deplete the available water supply for the city.

Considering ongoing losses due to the aqueduct leaks and the impending shut down for repairs, the planned additional releases into the Delaware River from reservoirs under the Flexible Flow Management Plan and the unpredictability and labile nature of weather patterns, including drought, due to global climate change, reliable reservoir supply is already at risk.

It seems essential that New York City protect what it has so deeply invested in with the Delaware River reservoir system. And ban all well drilling and the withdrawal of water from

the reservoir and its watershed.

Finally, the streams below the reservoirs are completely defined by them, both in terms of quality and flow and the New York City reservoirs affect 25% of the Delaware River at Montague. This means that what happens in the New York City watershed does not stay in the New York City watershed. It defines the flow and ecology of the river, all life and the communities that are dependent upon the river downstream.

The magnitude of degradation of the Delaware River by natural gas development in the New York City watershed is huge and it can be prevented. New York City has the power to prevent the erosion of its accomplished watershed program and save not only the City's water supply but also provide the much needed protection to the at risk Delaware River and its outstanding natural resources.

Delaware Riverkeeper Network urges you to ban natural gas well drilling and production in the New York City watershed. Thank you so much for the opportunity.

CHAIRPERSON GENNARO: Thank you.

If I only had the power to ban natural gas drilling in the watershed, but that is our intent. Thank you. I appreciate you being here. We're moving next door now because there is an event that's supposed to start here in a couple of minutes. They have to clear the chairs, they have to do all the stuff. And so join us next door.

RAPHAEL PEREZ: Testing one two, testing one two. This is a test for the second portion of the Environmental Protection meeting which is being held in the committee room. The test is being done by Raphael Perez.

CHAIRPERSON GENNARO: We just have to figure out a way to move forward and have everybody heard that wants to be heard. I just can't hear a large volume of testimony from any one witness. That's just an unfortunate reality. So anybody who has anything new please say whatever's new we haven't heard before.

But if I've heard it before I'm going to ask you to move past that point onto things that we haven't heard before. I apologize. I'm not a nice guy. It is what it is. I'm trying to get everybody in and I'm trying to not spend a

lot of time listening to things that we've heard already.

With that said, I'm grateful for those that are still here and I certainly appreciate your patience and your interest in the issue. With that being said, we have the pleasure of hearing from Ken Gale from EcoLogic on WBAI. Mr. Gale.

KEN GALE: Hi, thank you for this opportunity to speak to you. My name is Ken Gale. I am a host and producer for WBAI-FM's environmental radio show, EcoLogic. I've been doing that show since 2002 but I've been concerned about environmental issues all my life. My college background is in oceanography, a multi science discipline. That's enabled me to make connections between biology, chemistry and physics because that's the way I was trained at FIT, that's Florida Institute of Technology.

All year now I've been hearing about the oil and gas leases in the Catskills, near the New York City water supply. My first question was about the wording of the leases. Do they say oil and gas or oil and gas and all

1
2 mineral rights? In checking I found out they say
3 all mineral rights. That's scary.

4 You see in 1980 and 1981 Gulf and
5 Exxon were taking out leases for "uranium, thorium
6 and all visual materials" in the Catskills. I saw
7 one of those leases. When there was a citizen
8 outcry up there, suddenly all subsequent leases
9 were for oil and gas and all mineral rights, they
10 wouldn't say specifically what they were looking
11 for.

12 There's a geologic formation that
13 you probably know about called the Reading Prong
14 that stretches from Pennsylvania to Vermont. It
15 goes through the Catskills. It contains uranium
16 deposits as rich and richer than what they're
17 doing in the southwest. Early this year the
18 Navaho banned uranium mining on their lands due to
19 cancers and other health problems that they've
20 traced to uranium mining. That means mining
21 companies have to go elsewhere.

22 You can be sure they didn't forget
23 that the Catskills have uranium and that there was
24 a citizen outcry that resulted in a ten year ban
25 on uranium mining in 1982. The Bendicks Field

You can't filter out radioactivity. Nothing has been invented to do it and they've had since the mid-40s to try. Uranium mining uses up to 6,000 gallons of water per minute to flush it out. All of that water becomes radioactive and is allowed to run off. As you know, everything ends up in the water.

No one has mentioned what happened to the filtered water supply in Milwaukee in the early to mid 90s. In one catastrophe, over 150 died right away, well over 1,000 hospitalized. More died and got sick weeks that followed that but that only made local, not national, news.

New York City has a bigger at risk population than Milwaukee from the micros that thrive in polluted water and there's still no filter that gets them out of municipal water supply. I'm speaking specifically of criptos pre-

-

CHAIRPERSON GENNARO: [interposing]
Cripto?

MR. GALE: Yeah. And geardia. Bottled water is not a solution either. I hope there are others today that's going to address the

health environmental and economic concerns on that. I was hoping that Coca-Cola would also testify today because they have a stake in this water. They bottle and sell it as Dasani. I don't know if you've approached them but I think they would want to be concerned about this also.

CHAIRPERSON GENNARO: They filter their own water. They have their own special filtration apparatus.

MR. GALE: Yeah. But are they going to want the water after the mining is done and what it does to water. The city can function without the gas better than it could function without the water so thank you.

CHAIRPERSON GENNARO: Here, here.

MR. GALE: Thank you.

CHAIRPERSON GENNARO: Mr. Gale, well put. Thank you Mr. Gale for being here today. I appreciate it.

JOE LEVINE: I'll be brief. I hate to be redundant so I won't. My name is Joe Levine. I'm an architect and a member of Damascus Citizens Group.

This past spring we organized a

series of interviews in Hickory, PA where we found out is the first drilling in Pennsylvania. Landowners characterized the drilling as a military campaign and were left with polluted water and air and unfarmable land. I've given you video disks...

CHAIRPERSON GENNARO: Thank you.

MR. LEVINE: ...of those interviews. They're worth seeing. The most extensive work on this subject has been led by Dr. Thea Colburn, the internationally recognized expert on the health effects of gas drilling and President of the Endocrine Exchange.

They've proven the cause and effect of chemical introduction to the ground water and aquifer systems as a result of gas drilling. Dr. Colburn told me that based upon models from Colorado and other western states, gas production upstate will cause air pollution and ozone levels in New York City to exceed federal regulations for clean air standards.

Last October--

CHAIRPERSON GENNARO: [interposing]

We knew already. Again, not to--

MR. LEVINE: [interposing] It'll be worse.

CHAIRPERSON GENNARO: Yes, it makes your point even more strongly that we're already out of compliance and this will make it worse.

MR. LEVINE: Last October Dr Colburn testified before the House Committee on Oversight and Government Reform on the applicability of federal requirements to protect public health and the environment from oil and gas development. I've given you her testimony from those Congressional hearings.

CHAIRPERSON GENNARO: Thank you.

MR. LEVINE: I think it's worthwhile that you look at that. In fact, I believe it would be worth while to have Dr. Colburn come and visit you here. She's definitely the leading expert.

CHAIRPERSON GENNARO: Counsel to the Committee wishes to make a statement on the record.

SAMARA SWANSTON: Dr. Colburn sent in detailed comments for this hearing. She was not able to make it. She was invited and her

comments will be available for the public to view.
So sorry.

MR. LEVINE: That's right. She really is the foremost authority on this. It's critically important to learn from what occurred out west even though the Commissioner said out west is different from here. Scientists and experts will tell you that out west really isn't that different from here and certainly not in Pennsylvania where this is now happening.

There are now models and a track record that can not be ignored. The northeast is the first region that has the opportunity to address this issue before the damage is done and we should take advantage of that. I just have a couple of images here to show you that I think are fairly interesting.

CHAIRPERSON GENNARO: Sure.

MR. LEVINE: You saw on the screen before, I think, one well pad. This is the first well pad that was set up. This is in the Delaware River Basin. It was stopped. It already had some problems. In fact, if you analyze this, you can see several other problems. This is a photograph

that was taken by the industry themselves to show a textbook model of the first well pad. So that's about a five acre well pad, that's typical.

The model from out west that we all like to show is this sort of moonscape from Jonas Field in Wyoming.

CHAIRPERSON GENNARO: Ouch.

MR. LEVINE: This was a pristine elk migration field that for hundreds of years these elk have been migrating through this valley over here. Of course, they really can't do it any more. This is 40 acre well spacing over here. Air pollution is so bad and the animals have become sterile.

Then if you take those and you bring those more to the east coast because everybody says it can't happen in the east. This is the Alleghany National Forest in Pennsylvania, which is starting to get cut up with well pads. So they have that single well pad, this is what that single well pad looks like. Then they're just starting to cut it apart. This is our national forest, the Alleghany National Forest.

I think this is the Salmon Run

River that's at the bottom of this Alleghany National Forest Preserve, right here. They're going to continue to subdivide this and cut it up some more. I thought this is s--

CHAIRPERSON GENNARO: [interposing]
It would be great if you could let the staff of the Committee know where we can have access to those images. They may be helpful to us in our work.

MR. LEVINE: This incredible group out in the Alleghany Forest that has the most amazing photo album on this; I think there's thousands of photos already. It's so well documented. They're just documenting it as it happens. Thank you very much.

CHAIRPERSON GENNARO: Thank you very much. Thank you Mr. Levine. I appreciate it and thanks for compiling all this good information. I thank you very much. I'm not sure my staff thanks you very much because they're going to have to go through all of that but that's okay.

MR. LEVINE: I made copies of everything for you, ten copies.

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CHAIRPERSON GENNARO: Thank you.

Thank you Mr. Levine. Mr. Downs I presume, right?

ROGER DOWNS: Right. I'm Roger Downs from the Sierra Club Atlantic Chapter. I admire your tenacity in this.

CHAIRPERSON GENNARO: Thank you.

MR. DOWNS: I will spare you the redundancies. But I will just concentrate on things I didn't actually write about. I don't mean to pick on Mr. Grannis. We fought hard for his confirmation. I have maybe a slightly different interpretation of a few things that he said.

Maybe the first part is just a clarification. But he said that any well permit that's going to come within the watershed will have full environmental review, public hearings, what have you. That's in the next nine months while we're going through this supplemental generic Environmental Impact Statement process. They plan to have that wrapped up by the summer so that after that point, when anyone applies for a well permit they only have to fill out an environmental assessment form. Because the

presumption is that most of the environmental impacts or all the environmental impacts were considered in the generic Environmental Impact Statement process.

This is especially problematic in other parts of the state where we're relying on a 20 year old document. We fought hard, the Sierra Club fought hard for the supplemental GEIS. We believe this is going to be a good process but I think moving forward it would be good to get extra public participation because ultimately the public will have no say after that process is completed. And all the well driller has to do is fill out a two-page environmental assessment form. As long as it conforms, it goes forward with no public notice.

CHAIRPERSON GENNARO: How about this whole notion of this cumulative study proposed full build out, wouldn't that be part and parcel?

MR. DOWNS: It would be wonderful. We still haven't even reached the draft scoping phase. I've heard from Department staff that they're a little reluctant. They still talk about

the impractical nature of such a study.

CHAIRPERSON GENNARO: I see.

MR. DOWNS: So we'll really have to see what that looks like but there's a lot of responsibility borne in an individual well permit and perhaps there's things that we can suggest during this process to even beyond the supplemental, once that's finalized, to bring public participation into that issue.

I like the idea of Bruce brought up in terms of clustering well development. I want to preface this by saying we agree with your statements. We think it's kind of nuts to even consider this kind of activity in the watershed.

CHAIRPERSON GENNARO: It's more than nuts.

MR. DOWNS: Secondly, the DEC has maintained that it has been permitting hydraulic fracturing techniques for decades and it has 13,000 active wells. With few reported incidences of ground water contamination. If true, this record is impressive, though wholly unsubstantiated. As the DEC is not required ground water monitoring before, during or after

1 the drilling process. It seems imperative that if
2 the Department is to assure us of this success
3 rate as a model for what we should expect in the
4 watershed, they should demonstrate this assertion
5 conclusively by conducting ground water tests in
6 existing oil and gas fields in New York State and
7 establishing pre-drilling base lines for future
8 natural gas projects.

10 I think in many parts of the state,
11 the Finger Lakes, western New York we do have
12 these pretty vast oil and gas fields that have
13 been permitted since the 1980s. It's kind of a if
14 a tree falls in the forest and no one hears it
15 does it make a sound scenario in that they're
16 relying on rural landowners to come forward and
17 say I think my well is poisoned to substantiate
18 that claim. I think it's a little disingenuous.
19 I think maybe moving forward that would be a good
20 thing to get as an assurance of this claim.

21 I will leave it at that and submit
22 full comments. Thank you.

23 CHAIRPERSON GENNARO: Thank you.

24 MR. DOWNS: Unless you have more
25 questions.

CHAIRPERSON GENNARO: No. I certainly appreciate you being here. We certainly want to stay in touch with the Sierra Club and you can rest assured that as we go down this process we'll look to you folks and work with you. But thank you so much for being here, thank you for your patience and we'll go forward together.

MR. DOWNS: Thank you. Sure.

CHAIRPERSON GENNARO: Okay. We many other witnesses that may or may not still be here. There's no possibility that we can listen to the testimony of all these folks but we'll just start calling them. Anne Marie Gartie of the Bronx.

ANNE MARIE GARTIE: Hi, my name is Anne Marie Gartie. I, like you, have been involved with the watershed for many years. I was involved with the Croten Filtration plant since 1994. And I'm the president of the Jerome Park Conservancy. I also grew up on the Delaware River. I caught a fish in the Delaware at the age of four and I own property upstate. So I understand both sides of the pipe in this story.

A number of things I just want to

say more from a political point of view than from anything. I think a lot of the issues have been covered. First we went through seven Environmental Impact Statements on the Croten Filtration plant and I think that there is a lot of parallels here where you have the fox guarding the hen house. So the people who are doing the EIS here are the people who want this to proceed so you can't expect honesty in the EIS.

CHAIRPERSON GENNARO: Right.

MS. GARTIE: So the most we can hope for is to get--

CHAIRPERSON GENNARO: [interposing]
Which is why nothing short of a ban is going to work.

MS. GARTIE: Okay.

CHAIRPERSON GENNARO: Just period - period.

MS. GARTIE: In terms of the ban, something I have to say and I want to say this not just to the Committee, to you but I want to say it to those remaining environmental groups in the room, which is that the City has a great opportunity here to bind with the people in the

1 watershed. The people in the watershed want their
2 land and their water protected even though their
3 elected officials probably want the money from the
4 gas drilling. You will find an opportunity to
5 mend a lot of fences with what has been
6 traditionally a very antagonistic situation with
7 the watershed constituents--

9 CHAIRPERSON GENNARO: [interposing]
10 I actually disagree. I think it's going to get a
11 lot worse. I think there are a lot of people that
12 want to turn their land into cash and were the
13 City to exercise its authority to put together
14 watershed rules and regulations that would
15 prohibit this activity. And if the miracle were
16 to happen that the State were actually to approve
17 those regulations, I think there'd be a price on
18 my head. That's just what I think. And--

19 MS. GARTIE: [interposing] I also
20 am a member of a steering committee upstate which
21 is called the Sea Dog, Shenangle Delaware - - Gas
22 group. I think that one of the things that the
23 City's been hammered with, with the watershed
24 regulations over the years is that the
25 supervisors, the people in power upstate are out

1 of touch with who their true constituents are. I
2 can't talk about this but that I'm willing to talk
3 offline about this.
4

5 But I think that in terms of the
6 majority of the people, if you want to talk, there
7 are landowners who want to lease. But if you want
8 to talk about the drilling--

9 CHAIRPERSON GENNARO: [interposing]
10 But by and large this is really to about the
11 people that live up there. This is about this
12 State government that is committed to doing this
13 and how do we get that State government who very
14 much wants to do it, not to do it. Where we're
15 going to find that support for them not to do it
16 is not the people that live in the watershed.
17 It's people who drink the water down here. So
18 that's my belief.

19 This is not so much a political
20 exercise. Because New York City DEP works in a
21 certain way when it's dealing with the hearts and
22 the minds of the people that live in the
23 watershed. And it deals in a different way when
24 they're dealing with State government. DEP is
25 justifiably afraid of State government because

State government, if it wanted to, could squash DEP like a bug. They don't have that same fear of the people that live in the watershed.

If DEP is taking on a developer like with the Bellaire project. They're all great guns, they're going after this project. They want to see this thing go down or whatever when they're dealing with the people that live in the watershed. But when they're dealing with State government they're afraid and they know that-- DEP is an insect compared to State government and this insect does not want to get swatted. State government has within its ability to smash DEP like a pancake. It's like everybody knows that.

The state has the keys to the FAD, the filtration avoidance determination. So this is not about the people that live in the watershed. This is about a regulatory entity like DEP who knows that it has met its match and more in the combined power of the state legislature and the executive. All of state government wants this to happen and DEP is looking around saying what chance do we have.

MS. GARTIE: There is finding cause

1
2 for the people of the State. I think that that's
3 what I was trying to get at so it's not so much
4 the DEP has common cause. I have one last
5 suggestion and that is while I understand that
6 there is a jurisdictional issue about the
7 watershed and what you can speak to and what you
8 can't speak to. There's also a sensitivity that
9 can be voiced where you don't have to say, like
10 Eric Goldstein from the NRDC said today, which is
11 that well the watershed is only four point
12 something percent of the state so we want you to
13 protect this 4.4%. But do whatever you want; you
14 can go rape and pillage the rest of the State.
15 Well that's not a good way to have common cause--

16 CHAIRPERSON GENNARO: [interposing]
17 Number one, that wasn't his statement. The
18 distinction that he was trying to draw is that
19 areas within New York City's drinking water supply
20 watershed are inherently different than areas
21 outside New York City's drinking water supply
22 watershed. NRDC really wasn't here to speak to
23 what goes on outside that green line. It's just
24 to focus everyone's attention on what goes inside
25 the City's drinking supply watershed.

To the extent that this activity is to proceed within the watershed, we're going to lose filtration avoidance. We're going to lose water quality. We've got to spend \$20 billion on a filter plant. In terms of what happens outside the watershed, just like what happens throughout the rest of the country. With environmental safeguards, was his statement, was the only way that this should proceed. He was drawing a distinction between what goes on inside the watershed and what goes on outside. That's a distinction that I support.

I think what goes on inside the drinking water supply of 9 million people is critically important. That's not to abandon what takes place outside there. But I don't want to see a situation where people are basically on the same team or at each other's throat. I think we should all focus on the scope of this hearing, which is what goes on specifically inside the City's drinking water supply. Outside that area, not my jurisdiction. Not that I don't care it's just that it's not my jurisdiction.

I've got to protect the water

1 supply for 9 million people. That's what I'm
2
3 going to do. Drilling in the watershed is going
4 to take that away and I can't let that happen. So
5 that's our common cause. But we got to move on.

6 MS. GARTIE: Okay. I appreciate
7 your position and I just wanted to let you know
8 that another way of bonding with the rest of the
9 people is what's good for the New York City
10 watershed is good for the State's watershed. In
11 that sense maybe the DEC is more in tune with the
12 whole state because every place is somebody's
13 watershed. You can step right outside of that
14 line and you're in the Susquehanna River Basin
15 Commission instead of the Delaware River Basin
16 Commission. People drink from that watershed,
17 animals and everybody relies on it--

18 CHAIRPERSON GENNARO: [interposing]
19 Right. That's a different hearing, that's not
20 this hearing.

21 MS. GARTIE: I was just trying to
22 offer some--

23 CHAIRPERSON GENNARO: [interposing]
24 No, that's fine. I certainly--

25 MS. GARTIE: --perspective that

1 COMMITTEE ON ENVIRONMENTAL PROTECTION 205
2 wasn't offered from anybody else. That a way of
3 having common cause with the state to try to build
4 momentum for the protection of water supply so
5 that's all.

6 CHAIRPERSON GENNARO: Here, here.
7 No, I certainly appreciate that Ms. Gartie and
8 thank you very much for coming. Thank you for
9 your fights with regard to Croten as well.

10 MS. GARTIE: Yeah. You understand
11 this but the Croten with just 10% of the City's
12 water supply is going to cost \$3 billion. So the
13 other 90% by simple math is \$30 billion.

14 CHAIRPERSON GENNARO: Scary
15 thought. Alfred Magnus.

16 ALFRED MAGNUS: I'll be very brief.

17 CHAIRPERSON GENNARO: Thank you.

18 MR. MAGNUS: I'm a New York City
19 resident but I also own land within the watershed.
20 I'd like to address three points that I haven't
21 heard addressed by City officials before today.
22 On the issue of compensation, I won't argue about
23 whether it's required or not. But if compensation
24 is required where drilling is banned, let's do
25 some quick arithmetic.

1 The Marcellus Shale formation is
2
3 thought to have 70 billion cubic feet of gas in
4 place per square mile. The Utica formation, which
5 nobody has mentioned today is another 30 billion.
6 It's considered that 20% or more of that gas is
7 recoverable. The minimum royalty allowed in New
8 York State for a landowner is 12.5%. And 900
9 square miles of privately owned land in the
10 Catskills and Delaware watersheds. There is gas
11 selling for \$8.00 per thousand cubic feet or more.
12 A lot of arithmetic there, work that out, that is
13 \$18 billion in compensation to landowners of the
14 Catskill watershed. So just think about that. I
15 think New York--

16 CHAIRPERSON GENNARO: [interposing]
17 \$18 billion.

18 MR. MAGNUS: \$18 billion, 1-8
19 billion. I think New York City needs to do a much
20 better estimate than I've just done there in five
21 minutes or in one minute. Okay. Second point,
22 there's been very little mention of techniques
23 such as closed loop drilling. Many of the
24 incidents that were reported from Colorado and New
25 Mexico would never have happened if closed loop

1 drilling had been required. One of the witnesses
2 did recommend that that should be required
3 everywhere in New York and that's an excellent
4 idea. It would make tremendous difference to the
5 volumes of water involved.
6

7 My third point is that it sort of
8 seems unreasonable. I realize it's your
9 jurisdiction but we're talking about different
10 restrictions for the New York City watershed than
11 for people who get their water from the Sesauqua
12 Hannah River. All of Harrisburg and Philadelphia
13 gets it from below the watershed in the Delaware.
14 There are millions of people who do not get their
15 water from the watershed but still get it from
16 rain that falls in New York State. They don't
17 count? That seems a bit wrong.

18 CHAIRPERSON GENNARO: Again, not
19 that they don't count - not my fight.

20 MR. MAGNUS: It's not your fight,
21 okay. Let me just finish. I believe that it is
22 critical that the drinking water supplies of all
23 those affected, whether served by the New York
24 City system or not, be carefully protected.
25 Therefore the State then should develop and

1 enforce vigorous rules for protecting that water.
2
3 I haven't heard any persuasive argument by New
4 York City officials that the rules within the New
5 York City watershed should be significantly more
6 stringent than elsewhere. And certainly nobody
7 has made a convincing argument that only New York
8 City water deserves the protection of an outright
9 drilling ban.

10 CHAIRPERSON GENNARO: Thank you Mr.
11 Magnus. I would be very supportive of any other
12 entity in this state that did not want to have its
13 water supply compromised. Presumably, hopefully,
14 they have elected officials that will advocate
15 vigorously for them. It's my only hope that
16 that's what will happen. But I have to focus on
17 doing what I'm trying to do for my own
18 jurisdiction, which is going to be hard enough to
19 get done in the face of a state government that is
20 hell bent on making this happen. So thank you Mr.
21 Magnus. Josh Fox. Just make sure the mic's on
22 and speak right into it.

23 JOSH FOX: Okay, there we go.
24 Thanks. First of all thanks very much for holding
25 this hearing. I can't tell you how many people

1
2 around the country that I've met. Need a person
3 like you to hold hearings like that. It hasn't
4 happened. My name is Josh Fox. I'm a filmmaker.
5 I live both in New York City and across the river
6 from the watershed area in Pennsylvania.

7 I heard about this in May, got in
8 my car, drove 6,000 miles around the country
9 interviewing people and documenting well pad sites
10 and abuses in Texas, Colorado and Wyoming. My
11 findings I've just thrown them up all online;
12 interviews, documentation and footage at
13 waterunderattack.com. There is over an hour and a
14 half of interviews there.

15 CHAIRPERSON GENNARO: It's Mexican
16 Heritage night.

17 MR. FOX: It's cool.

18 CHAIRPERSON GENNARO: At the--

19 MR. FOX: [interposing] I'm kind of
20 with it. My primary focus in the film was the
21 health effects. The fracking fluid chemicals
22 cause an incredible amount of damaging health
23 effects including what was most severe and a real
24 concern for the workers on these sites, peripheral
25 neuropathy. I know that this isn't a concern of

1 New York City if people are working upstate but
2 within four weeks you've got people who have brain
3 damage, four out of five people I interviewed had
4 brain damage. Rather severe effects; paralysis
5 over their entire bodies, loss of a sense of smell
6 which I would say is pretty severe effect.
7

8 It's my understanding, not to
9 elaborate on points that people have already
10 brought up, is that filtration is a moot point.
11 When you have over 275 different chemicals in the
12 fracking fluid, there's a large percentage of
13 those that can't be filtered for. They're too
14 small; there are no filters made for them. They
15 contaminate in very small amounts as one of the
16 people on your panel said.

17 I know we talked a lot about
18 filtration over and over and over and over again.
19 And it's cool because it's a point about the money
20 that it would cost. But I don't think that there-
21 - when you go through Thea Colburn's list. I did
22 interview Thea Colburn as well. There are no
23 known technology for those kinds of filters. I
24 don't know how it would be done.

25 CHAIRPERSON GENNARO: Right.

MR. FOX: That's my question to you in making that point.

CHAIRPERSON GENNARO: Hopefully, it won't come to that point. I think many of these chemicals are volatile and they could try to volatilize them off. There are different stripping techniques or whatever, none that I want to feed to my daughter. So Mr. Fox, thanks very much.

MR. FOX: I have one other point about inspectors.

CHAIRPERSON GENNARO: Sure.

MR. FOX: In all the pad sites that I visited and I visited hundreds and hundreds, I didn't see a single inspector out west. The problem is that the EPA has been told hands off. The 2005 energy bills as we know with all the exemptions, this responsibility is going towards the states. And the states just do not have those inspectors.

I walked right up to sites that were leaking directly into streams. I've seen methane in the ground water. The evaporation pits have fine misters and sprayers, this is standard practice. When you're talking about deep well

1
2 injections you're saying it's 8,000 feet under the
3 ground. But this is a myth because 50% of that
4 fracking fluid comes back up on to the surface and
5 is in a pit.

6 The pit, you've got to deal with
7 that produced water somehow. One of the ways they
8 deal with it is they stick an evaporation sprayer
9 in the center of the pit and spray that stuff up
10 into the air and it just goes where ever it wants
11 to go. It goes on to the grass, it goes on to
12 cattle ground. This is the primary health effect.
13 So this is spraying all over the state of Wyoming.
14 This is spraying throughout Colorado. And this is
15 what will be happening here because there are no
16 inspectors and there are no standards.

17 You can not implement a rule about
18 whether or not it's an injection well or if it's
19 an evaporation pit. So this is what's going to
20 happen because this industry, as far as I've seen
21 and I've seen this up close, will break any rule
22 that nobody's watching. The issue of inspectors,
23 I think, is a huge one and that would be an
24 effective tool I think.

25 I also wanted to know if there is

1 anyone in Philadelphia that's occupying the same
2 position as you are. Because for those of us on
3 the Pennsylvania side of the river, that watershed
4 and that reservoir is. I would encourage you to
5 be a leader on this and to try to spread that
6 around because New York City is got to be where
7 the buck stops, right? I would really hope that
8 there is a way for you to take what you're doing
9 here and spread it to Texas, to Wyoming, to
10 Colorado and especially to our neighbors in
11 Pennsylvania and Philadelphia.
12

13 CHAIRPERSON GENNARO: We're getting
14 a lot of people. Every other day a new major
15 publication calls me. I got New York Magazine
16 called me the other day. We're in the New York
17 Times about it. We had the DEC Commissioner here,
18 I wasn't exactly easy on him. I'm getting very
19 energized on this issue. I'm not going to give up
20 until we win and that's that.

21 MR. FOX: All right. I won't take
22 any more of your time.

23 CHAIRPERSON GENNARO: Josh, thanks
24 very much.

25 MR. FOX: Thanks very much.

CHAIRPERSON GENNARO: I appreciate you being here. Let the counsel to the Committee know about your film activities and your web site or whatever. We want to be--Okay. You should speak to my Director of Communications, Shams Tarack.

MR. FOX: Yes, I spoke with Shams. I'm looking forward to interviewing you at some point. Thanks.

CHAIRPERSON GENNARO: Okay. Thank you, Josh. Jane Cyphers.

JANE CYPHERS: I'm going to pass. I will send you my transcript.

CHAIRPERSON GENNARO: Thank you, Jane. I'll just state for the record, which didn't pick up your statement that Ms. Cyphers is taking a pass on testifying. So now I have two reasons to like you. One is that your name is Jane, the same as my sister and you've graciously passed on the willingness to testify. So thank you, Jane. Jane's supposed to be a common name, like Dick and Jane or whatever but it's really not. How many Janes do you know? One? You're a Jane. Okay.

One of my sisters is Regina and that is thought to be an uncommon name. My other sister is Jane, that is this very common name. I know more Reginas than Janes, I'll just mention that. I'll say that on the record and 100 years from now people reading this testimony it's going to be, there is some silly chairman talking about the difference between Jane and Regina and whatever. 100 years from now if they get this far into the transcript then that really is someone that has got-- The future's probably a boring place if that happens.

It looks like Ross Gould. Okay. So we have Mr. Gould's statement. Ray Levine. Okay. All right. Carol E. Lawson comma--I'm sorry.

CAROL E. LAWSON: I'm going to be very brief.

CHAIRPERSON GENNARO: whatever you say if it's not at the microphone it won't be picked up on the record.

MS. LAWSON: Okay.

CHAIRPERSON GENNARO: So whatever you say should be put on the record.

MS. LAWSON: I'm going to be very brief. If I may--

CHAIRPERSON GENNARO: [interposing]
Just say your name for the record.

MS. LAWSON: My name is Carol Lawson. I'm a life long resident of New York City. I was born here, educated here. I currently work as a speech language pathologist. I'm a child development specialist and I do early intervention in the home in New York City but now in Queens. I treat children who have been compromised by complications from prematurely, children, newborns, toddlers, children who have birth defects, who have syndromes. I treat very sick children. What I do is I teach them to swallow. I teach them to suck. I teach them to feed.

I think the main point I want to really make is that aside from all of the obvious that these children develop in wombs that are made up of water. The amniotic fluid, they swallow it as they're developing. It goes through their lungs. And then of course we have to consider the effects of all of these chemicals that we've been

hearing about all day on this process and the outcomes. That's what I see.

I would like to just make the point that the combined early intervention services in New York State and New York City cost the taxpayers \$451 million a year. We're talking about a filtration plant and I have to say that from what I've understood and studied, even if we were to build a water filtration plant we would not get everything out. It's going to go into these little vulnerable children and they're going to eat it. They're going to swallow it. They're going to bathe in it. They're going to try and develop in it.

This is an astonishing figure because it's lurching towards half a billion dollars a year that we're looking at. So there are huge health care costs that haven't been really talked about here. I just want to raise that as a very serious environmental issue. We are facing a major health care crisis if this occurs in the area of New York City. Our population density is too great.

There are too many children in this

1 city, too many adults in this city who have
2 compromised lung systems, who have asthma. We're
3 not just talking about the waterborne, which we're
4 heard a lot about today. But we're also talking
5 about the airborne pollution. I hope that this
6 Committee will expand its concerns beyond just the
7 watershed to what we're doing about regional air
8 pollution once these volatile organic compounds
9 enter our air and our weather systems. We get a
10 lot of weather from the west and the south west
11 and this is where these wells are going to be.
12 Thank you.

14 CHAIRPERSON GENNARO: Thank you
15 very much Ms. Lawson and thank you for your
16 dedicated service to our children. It's nice to
17 know that you operate in Queens; my borough.
18 Thanks very much. Pat Carvulo, Pat Carrulo.

19 PAT CARRULO: Pat Carrulo. You
20 can't say it in English, you have to roll the R's,
21 you all know.

22 CHAIRPERSON GENNARO: It looks like
23 a V. It was like, C-A-R-V and I'm like where am I
24 going with then and then I realized it was Carrulo
25 I got.

MR. CARRULO: I scribbled it on the wall earlier.

CHAIRPERSON GENNARO: Do you have a sister Jane? No? Okay.

MR. CARRULO: Thank you very, very much for your tenacity and for your consideration here. I'm a founder of many organizations over my lifetime and presently Damascus Citizens.org. There was another representative here.

CHAIRPERSON GENNARO: Yeah. There are a lot of people here from Damascus. Is that you?

MR. CARRULO: I am one of the founders and there are several other founders in the room. But please recognize the name as a very significant player. Our web site gets 120,000 hits each month. We have our You Tube channel which now has almost 10,000 views. I helped Adobe build PDF. I was born in New York City as you can tell by my accent. After 9-11, my wife a teacher of 30 years and myself, again I helped Adobe build the PDF technology, we ran to the hills. I think that's somewhere stated in the Bible as a good strategy. But we've subsequently found

Halliburton. I'm very specific about saying Halliburton has followed us there.

Thank you Councilman for your tenacity again because make no mistake, this is a frontal assault on the integrity of not only your water system but the entire nation. We are talking to people from all over the country regarding this. We've retained Richard Lippis, the lawyer who argued Love Canal case so we're ready for before, during and after scenarios. But let me say this to you.

We are on the ground, we have a mailing list of some 5,000 names. I want to report to you that there has been confirmed 1,400 leases just in the northern part of one county of our upper Delaware watershed. The air particulates can travel as much as 200 miles so many of them from the activity in our area will end up in your water supply. Let me say to you this.

That we intend, if need be, peaceful, civil disobedience because we wouldn't even be here today talking. You wouldn't even need to hold this hearing if not for the, in a

sense, total federal deregulation. Now we are also working with several towns in the state of Pennsylvania who have been sued by the gas and oil industry. The state Supreme Court will hear a case in just several weeks. So really the industry has dismantled from the top any regulatory protections and is now intimidating and dismantling from the bottom. So your efforts are greatly appreciated but we are on the ground and we're working very hard, consistent with your goals.

CHAIRPERSON GENNARO: Thank you very much Mr. Carrulo. I'm almost ashamed to say that until today I didn't know Damascus Citizens.

MR. CARRULO: That's fine.

CHAIRPERSON GENNARO: Now I do. I would ask Shams Tarack, my communications person to make sure that he's in touch with you and that we're fully apprised of all your activities.

MR. CARRULO: I can assure you that we have now, about nine months, been working on this. It was I who told Abram Les Garden from - - public ate to call you. It was I who told David France to call you.

CHAIRPERSON GENNARO: Oh, I see.

MR. CARRULO: From the New Yorker so in other words we have some very talented, very savvy, very smart and very hard working people on the ground.

CHAIRPERSON GENNARO: Right, Les Garden.

MR. CARRULO: And we are moving.

CHAIRPERSON GENNARO: Les Garden is very good.

MR. CARRULO: Abram and I spoke with him again yesterday. But in a sense to an earlier point, we're really here fighting for our lives. And the industry is intended on really outsourcing all the true costs. The true costs are in fact catastrophic and witnessed by the number of permits that are already confirmed--I'm sorry. Leases that are already confirmed.

CHAIRPERSON GENNARO: Leases, right.

MR. CARRULO: The scale will be in terms of tens of thousands so your work is very important. We also are working very hard to protect the source of water for an additional 17

million in Philadelphia and elsewhere. We thank you very much for your hard work.

CHAIRPERSON GENNARO: Thank you Mr. Carrulo. I appreciate that very much.

[Applause]

CHAIRPERSON GENNARO: Nice town, Philadelphia, and we do go there sometimes for the history. We eat at City Tavern there in Philadelphia. It's just like this old--

MR. CARRULO: [interposing] Don't drink the water.

[Laughter]

CHAIRPERSON GENNARO: No. I drink the beer that's brewed by Ben Franklin or something, that's what they serve there. Stewart Root. Okay. Stewart's not here. Aaron Berlinger. Okay. James Herman from right around the corner, Dwayne Street. Okay. I can't read this. Ken Baer, was he here all day. I didn't know you were here in the stack Ken.

KEN BAER: What am I supposed to do?

CHAIRPERSON GENNARO: Oh gees.

MR. BAER: I'm going to give you an

abbreviated testimony. Most of it's been--

CHAIRPERSON GENNARO: [interposing]
Sit down, Ken. Sit down. I thought you just
observed me because what we have, we have this
stack of witness slips that are for organizations
like Sierra Club or whatever. Then there's a
stack of like--

MR. BAER: [interposing] It was an
education being here all afternoon and listening
to more important testimony. I'm going to provide
you--

CHAIRPERSON GENNARO: [interposing]
I'm going through my explanation here for you.

MR. BAER: Well you don't have to.

CHAIRPERSON GENNARO: I look for
your name in sort of what we call the
institutional stack, people that are representing
organizations. Then there are the people
representing self. So I just didn't expect for
you to be in that stack. This is Ken Bear from
the Sierra Club. Every environmentalist in the
northeast United States knows him. Had I known
that--anyway. Okay. Forgive me. Ken.

MR. BAER: That's all right. My

name is Ken Bear--

CHAIRPERSON GENNARO: [interposing]
Known to some people as Hungry Hiker but only if
you know him very well. Okay? Inside joke.

MR. BAER: My name is Ken Bear. I
reside at--

CHAIRPERSON GENNARO: [interposing]
You know what? I can't. Is the mic on?

MR. BAER: I provided you with my
full testimony--

CHAIRPERSON GENNARO: [interposing]
No. I don't think the mic is on, Ken. Hit the
button.

MR. BAER: Okay.

CHAIRPERSON GENNARO: Now you're on
the record now.

MR. BAER: My name is Ken Bear. I
reside at 91 6th Avenue in Brooklyn. I provided
you with my full testimony, hard copy and I will
only read the last three paragraphs of it so that
I don't cover the points that you and Speaker
Quinn previously mentioned.

New York City has enough of a
problem dealing with potential development in our

1 watershed. We need to be forceful and convincing
2 that renewable sources of energy are a practical
3 solution to our country's energy woes. And that
4 drilling for gas in New York City's watershed will
5 create mind-boggling problems. We do not want to
6 spend billions of dollars on another filtration
7 system.

8
9 New York City's water supply is a
10 precious resource. We must not allow our
11 mountains, streams and watershed to be despoiled
12 by development or gas drilling. I support the
13 bill that Assemblymember Brennan will introduce
14 banning energy drilling in the five counties that
15 comprise the New York City watershed in upstate
16 New York. Thank you.

17 CHAIRPERSON GENNARO: Thank you,
18 Ken. I just a special note of gratitude for not
19 only you being here today, for the entire day but
20 all of your advocacy and organizing that you've
21 done to make Sierra Club and the environmental
22 community in general in New York City be the
23 potent force that it is. If we had more people
24 like you, Ken, the government would be afraid of
25 us. So thank you very much for being here. Thank

1
2 you for your advocacy and we know that you're our
3 partner as we go forward in this.

4 MR. BAER: Thank you very much
5 Councilman Gennaro.

6 CHAIRPERSON GENNARO: You bet. Sue
7 Kaplan. Well you've already testified so we're
8 not going to allow that but anything that she has
9 or anything that you have on her behalf can be
10 submitted to the record. Thank you.

11 Ronald Morosav. M-O-R-O-S-A-V,
12 Morosav, anybody here by that name? That's all
13 the witnesses that we have. Let me just do two
14 things.

15 First I always sometimes make
16 mention of words that introduced on the record
17 that have never been used on the record before in
18 my committee. So we add the word fracking to the
19 Lexicon of this committee. That word has never
20 been uttered for the 18 years that I've been
21 associated with this committee.

22 It appears that we have a witness
23 that was unrecognized before. For some reason we
24 have a lot of slips and so we have a lot of
25 witness slips. What do we have here? I

1
2 apologize, yes we do have a slip for a James
3 Barth; it was not put before me. Mr. Barth please
4 come forward. Shame on me, you're a Queens
5 resident and everything.

6 JAMES BARTH: A neighbor of yours.

7 CHAIRPERSON GENNARO: Pardon?

8 MR. BARTH: A neighbor of yours.

9 CHAIRPERSON GENNARO: In a little
10 town that we know as Queens, USA.

11 MR. BARTH: I wore my suit.

12 CHAIRPERSON GENNARO: Okay. And
13 you're dressed in a jacket, that's more than I can
14 say for myself. You'll be the final witness Mr.
15 Barth. I appreciate you being here. Also a
16 member of Damascus Citizens so please.

17 MR. BARTH: As you see, it's very
18 brief and I'll even be much briefer. My name is
19 James Barth and I live in Jackson Heights. Also
20 my wife and I have a house just across the river
21 in Pennsylvania within the Delaware River Basin.
22 That's really besides to say how much I followed
23 and appreciate especially your strong statements,
24 which I included in here. Your quote to
25 Applebaum.

CHAIRPERSON GENNARO: Oh yes, in the New York Times.

MR. BARTH: In the New York Times. The first point is this is utterly inconsistent with the drinking water supply. And the only answer is a full ban - period. I would like to say that jurisdictionally speaking, you had Bob Tudor here from the DRBC and you have the DEC here. You referred to Emily Lloyd of the DEP and you have your committee. Within the DRBC we will also add to that equation the PADEP and the Governor Rendell, Governor Paterson, I think Mayor Bloomberg sits as well as a representative at the DRBC. So everybody here in New York and you are very well represented within the DRBC.

If I could just say that to put in your mind an image of the New York City watershed is a big part of the upper Delaware River Basin. Although it is north and the east of Hancock and the tunnels come down, you still have the entire Delaware River coming down, which is a special protection waters, wild and scenic and so forth. It's coming down.

I'd like you to think of how you

1
2 can influence those players that you're already
3 intimately in contact with, the DEC and so forth.
4 Because nothing's really going to happen-- the
5 Delaware River Basin Commission covers that area.
6 And you are perhaps, New York City, is a major
7 player within there so please work with those
8 people who can make an impact upon the broader.

9 I quoted Carol Collier in her
10 testimony to Congress within there. I won't read
11 it but she carefully explains that connection of
12 the geographic boundaries of the water. So thank
13 you very much.

14 CHAIRPERSON GENNARO: Thank you Mr.
15 Barth. I certainly appreciate your testimony and
16 your willingness to stay around so long and give
17 us the benefit of your views. I was quite
18 impressed with Mr. Tudor, I think his name was
19 from the Delaware--

20 MR. BARTH: [interposing] Bob
21 Tudor, yeah. He's the Associate Director or
22 whatever.

23 CHAIRPERSON GENNARO: And he looked
24 like the kind of fellow that-- if he's a
25 representative of that entity, of them, these are

people that I believe that we can work well with.

MR. BARTH: With no disrespect to him, he's not you. He doesn't have that. They need all the help they can get. You have a great focus and I'd appreciate your using that talent to push those people. Thank you.

CHAIRPERSON GENNARO: No, thank you. It's not only my--it's my job. I've been with this committee for the last 18 years. I was the environmental policy advisor for the City Council for many, many years. I'm a trained geologist.

I was here in the early years when we were trying to figure out how we're going to filtration avoidance done. But I didn't come all this way and become chairman of this committee and grow all this much older and get this much fatter just to see everything go away. I just won't have it and that's all there is to it.

We're going to do what we need to do with regard to the Bloomberg administration. We're going to light a fire under them. We're going to do legislative resolutions that are calling upon them to do the kind of rule making

1 COMMITTEE ON ENVIRONMENTAL PROTECTION 232
2 that's necessary to ban this. We're going to be
3 supportive of the legislative effort to try to ban
4 this. We're generally just going to make a lot of
5 noise and just leave no room for the people who
6 want to advance this to hide.

7 What, are you going to keep
8 throwing it against the wall until it sticks? At
9 the end of this we're going to save the New York
10 City watershed and all the watersheds in this
11 area. I'm not going to let people be seduced by
12 what they hear at these conventions; drill baby,
13 drill. It's just not something that we can afford
14 to do and compromise the quality of the watershed
15 that has always nourished this town. If I have
16 anything to say about it, we'll always nourish
17 this town unfiltered forever.

18 [Applause]

19 CHAIRPERSON GENNARO: With that
20 said--

21 MR. BARTH: [interposing] Thank you
22 very much and please keep giving us good quotes to
23 use.

24 CHAIRPERSON GENNARO: Okay. You
25 bet. Thank you all very much. I appreciate you

being here all the time. With no other witnesses wishing to be heard, I thank you all for being so patient and being so informative and helpful to us. With that, this hearing is adjourned.

C E R T I F I C A T E

I, Amber Gibson, certify that the foregoing transcript is a true and accurate record of the proceedings. I further certify that I am not related to any of the parties to this action by blood or marriage, and that I am in no way interested in the outcome of this matter.

Signature Amber Gibson

Date September 25, 2008