COMMONWEALTH OF PENNSYLVANIA
DELAWARE RIVER BASIN COMMISSION
* * * * * * * *
IN RE: DRAFT HYDRAULIC FRACTURING
REGULATIONS

PUBLIC HEARING 3
* * * * * * * *

BEFORE: WILLIAM FORD,
Hearing Officer

HEARING: Thursday, January 25, 2017
1:00 p.m.

LOCATION: Double Tree Hotel
Philadelphia Airport
4509 Island Avenue
Philadelphia, PA 19153

SPEAKERS: Rep. Greg Vitali, Dr. Stuart
Chen-Hayes, Joy Bergey, Dr. Walter
Tsou, Peter Winslow, David Kinney,
Sylvia Metzler, Vanessa Baker,
Jonathan Lutz, Patricia Libbey, Norman
Torkelson, Geoffrey Selling, William
Moore, Shannon Pendleton, Joan Farb,
Stephanie Herron, Kim Ong, Jean-Marie
Donohue, Jean MacFarlane, Corinne
Mayland, Coralie Fryde, Clio Gates, Katie Smith, Maya Van Rossum, Alicia Dorsey, Susan Carty, Eve Miari, Harvey Chanin, Sister Kate O'Donnell, Paul Roden, Gail Heath, Carol Armstrong, Jan Filios, Theresa Heinsler, Wendy Goetz, Michelle Roberts, Naomi, Laver, Alyssa Bradley, Emily Worth, Steve Bacher, James Rapp, Edward Leydon, Bill Cozzens, Victoria Strange, Emelie Davis, Daniel Markind, Adrienne Margado, Henry Frank, Peter Hughes, David Moscatello, Mike Doyle, Bruce Birchard, Andrea Strout, Carol Ward, Carl Balis, Claudia Crane, Sandra Folzer, Sarah Caspar, Megan Desmedt, Alex Dupo, Sharon Furlong, Wesley Coolingham

Reporter: Kimberly Chatburn

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PROCEEDINGS

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HEARING OFFICER:

All right. If you would take your seats, please. We're going to begin. Good afternoon, everybody. For those that came from anywhere outside of Philadelphia, way to go. You made it here. Absolutely unbelievable. I don't think it was an easy route in.

My name is William Ford, and on behalf of the Delaware River Basin Committee, welcome to today's public hearing. I will be serving as the Hearing Officer for this proceeding.

Just to be clear, I have no affiliation with the DRBC staff. I am not a member of an environmental group. I do not own any property in the area that is at issue here today.
I am a retired Lehigh County Common Pleas Judge. And right now, I am in private practice, and I do mediations and arbitrations. So I just wanted you to know as far as non-affiliations.

The DRBC has engaged me to conduct these hearings on its behalf to provide opportunities for oral comment on the Commission's draft rules. It is my intention to provide an orderly, safe, and civil forum that allows for the creation of a clear record for these proceedings.

My comments, my introductory comments, will last only about five minutes. But there is some important information here that you will be interested in. And at the end of this, at the end of my comments, my final comment is
going to be about an
opportunity that all of you
have today, that you might not
fully realize. And I'm going
to try to emphasize that as I
close here today.

I ask that all
cellphones be turned off. In
the hearings that we had just a
few days ago, I forgot to
announce that, and there were
some interruptions as a result
of that. So thank you.

First, a few reminders
about safety. In the unlikely
event that we would need to
evacuate this space, please
make a note of the emergency
exits and plan in advance the
exit that you would use.

Also, please keep all
aisles safe and the exits clear
throughout the hearing.

Before we start, on
behalf of the DRBC, I would
like to thank our hosts, including the hotel, for this space here today. I'd also like to thank the Pennsylvania State Police, the Philadelphia Police Department and hotel security for their presence here today, and also for the safety that you are providing us. I would ask that if you can, please rise and join me in saying the pledge of allegiance.

PLEDGE OF ALLEGIANCE RECITED

HEARING OFFICER:

Thank you, ladies and gentlemen. Please forgive me as I actually read part of this because I want the make sure I'm accurate in terms of the regulations that are at issue here today.

The draft rules that are the subject of this hearing were proposed by the Delaware
River Basin Commission to amend the Commission's administrative, manual and special regulations regarding hydraulic fracturing activities, and to provide for additional clarifying amendments to the Commission's rules of practice and procedure.

A notice of proposed rulemaking, along with the text of the draft rules and supporting documents, were posted on the DRBC website on November 30th, 2017 and have been published in the Federal Register and Basin State Registers.

Information about the draft rules and the public process has and will remain available on the Commission's website throughout the process.

As I've tried to educate
myself about the issues that are so important to you, I have used the website. And I just thought it was fantastic in terms of really filling me in on the various issues and what's at stake here today.

As set forth in the notice of proposed rulemaking, by resolution per the minutes on September 13th of last year, the DRBC Commissioners directed the executive director to prepare and publish for public comment, a revised set of draft regulations to include first prohibitions relating to the production of natural gas utilizing horizontal drilling, and hydraulic fracturing within the basin.

Second, provisions for ensuring the safe and protective storage, treatment, disposal, and/or discharge of
wastewater within the basin associated with horizontal drilling and hydraulic fracturing for the production of natural gas where permitted.

And finally, regulation of the interbasin transfer of water and wastewater for purposes of natural gas development where permitted.

If adopted, the draft rules would add to the Commission's regulations a section on hydraulic fracturing in shale and other rock formations. This section would, first, prohibit high volume hydraulic fracturing in such formations within the Delaware River Basin.

Second, it would require review under the Delaware River Basin Compact of any project that involves the following. First, the exportation from the
Basin of surface water, groundwater, treated wastewater, or mined drainage water at any rate or volume for use in hydraulic fracturing of hydrocarbon-bearing rock formations outside the basin.

Or second, the importation into the basin and treatment and discharge within the basin of wastewater from hydraulically fractured oil and gas wells.

Also, this section would establish standards for the treatment and disposal of wastewater from hydraulically fractured oil and gas wells.

I'm almost at the end of the verbatim reading.

The Commission also proposes to amend its administrative manual, rules of practice and procedure, by the addition of projects review
classifications and fees related to the management of produced water from hydraulic fracturing of hydrocarbon-bearing rock formations.

Minor amendments to the project review classifications unrelated to hydraulic fracturing were also proposed.

Ladies and gentlemen, the copies of the proposed rules can be found on the website. This is one of six public hearings on this matter. We just had two of them, and I see some familiar faces from two days ago.

In addition to accepting oral comments at these public hearings, the Commission is accepting written comments through 5:00 p.m. on Friday, March 30th, 2018.

Written comments will
receive the same consideration
as oral comments. Written
comments can be submitted
online using a link that can be
found on the DRBC website. If
you do not have access to a
computer or the internet, and
you would like to submit
written comments, you may
request an exception by writing
to the DRBC at the following.
And I will say this twice. It
was pointed out at the last
meeting that some people are
not handy with computers. So
the address will become very
important to you.

Anything that you send
in should be sent to the
attention of Commission
Secretary. The address is
DRBC, P.O. Box 7360, West
Trenton, New Jersey, 08628.
That's attention Commission
Secretary, DRBC, P.O. Box 7360,
West Trenton, New Jersey, 08628.

This is significant. Today's proceedings are being videotaped. And also, they're being recorded here by a registered Court Reporter. A transcript is being created. A written transcript is being created that will become part to the decision-making record for the proposed rules.

Let's see. This is aside from the script that I have here. If you come forward, apparently some people have exhibits, a chart or something along those lines --- you're welcome to show it to me. But I'm not the one that's going to make decisions here. I would suggest that you turn things toward the camera right there. And what we show will then be displayed on the video.
that's being created here. So that's where it should be.

Also, when you come forward, I would also suggest that you direct all your comments this way so it is recorded, rather than to the audience, ladies and gentlemen. Because there's a chance that that will be missed. And also by the Court Reporter, that may be missed and you won't be able to look at your comments.

The electronic recordings are being made to enable the DRBC Commissioners to see and hear your comments even though they cannot attend all six hearings. And secondly, to allow the DRBC staff, in consultation with the commissioners, to prepare a detailed comment and response document that addresses the issues and concerns that you
raise.

Now, here's how the hearing will proceed, ladies and gentlemen. First, the Commission thanks all of you who have registered in advance either to attend or to attend and speak today. Your doing so has helped the staff to prepare for these proceedings.

At the last two hearings that we had, both of which were on Tuesday, we really had excellent substantive comments that were made. There really was not grandstanding. People were concerned about getting their substantive comments out to support their position. And that's what's suggested here today. That's what's going to make a difference her, so I will call that to your attention.

Here is the order of
speakers that I will call as time permits. First, those who registered in advance to speak today and who have not already spoken at another hearing. Second, those who registered to speak when they arrived today, and who have not already spoken or registered in advance for another hearing. And then finally, if there is anybody else in the audience who wishes to speak, whether or not they have signed up to do so. Because of time constraints and preparation for the second hearing today, you'll only be able to speak one time, ladies and gentlemen, here today.

When I call names from the registered list, from the list of registered speakers, I will try to call three names every time so that those next on the list are ready to go.
And if your name is called and you're not the one right up, you might want to move toward the front to make it easier. And I think I'm going to get some additional names here that have signed up today.

And I think it's promising that we should be able to get to everybody today.

All right.

An important point. We will start with a three minute time period limit for each speaker. You actually can say a lot in three minutes. If, in what you have prepared, you can tell that it's going to be more than three minutes, condense it. We will stick with the three minute time period. I will actually cut you off. I will do it politely, but I will cut you off in fairness to the other people, ladies and
gentlemen. You're actually cutting into their time. And comments and yelling from the audience just cuts into people's time.

Candidly, it's a matter of manners. So let's, you know, show respect for everybody that speaks here. So I don't mean anything personal when I cut you off at three minutes, but that's exactly what I'll do. All right.

If you exceed the permitted time --- I'm sorry. Let me go back for a moment. I may revise the time limit as the hearing goes on if it looks like we're going to run out of time. Okay? So we'll see how that goes. But it looks like everybody will get three minutes.

If you exceed the permitted time, you will hear a
buzzer, and I will ask you to stop speaking. If you continue, as I said, you will be taking someone else's time. You will have the opportunity to follow-up in writing if you wish, ladies and gentlemen.

While the subject matter of this hearing is something that many people are passionate about, the purpose of the hearing is not for public demonstrations.

The audience is asked to remain quiet while each commentator speaks so that the Court Reporter and recording devices can produce an accurate record. Interrupting another's testimony is prohibited. Naturally, it would be disruptive, I think, for all of us.

Speakers are asked when they come forward to start by
stating your name. And if you wish, if you're affiliated with any organization, you are welcome to state that, ladies and gentlemen. That's not required, though. But please do tell us your name.

If as part of your comments you are asked a question, please do not expect a response during the hearing. First of all, I'm not in a position to answer questions. Two days ago was a wonderful education for me. Fascinated by the subjects. So while I have an interest in this, I am not equipped to answer your questions, ladies and gentlemen.

And also, the directive for today's hearing was to hear from you. There are other processes to get information to you. But today is to hear from
you. And that's full
restriction to that. Again, no
rudeness intended, but you
won't be getting information
from this side.

This hearing could go as
long as 4:30. After everyone
who speaks who wants to speak
does speak, perhaps it
terminates early. But I think
we'll be getting very close to
4:30. If we get to 4:30, we
will stop right then because we
have to get people out and then
people in for the second
hearing.

Okay. Ladies and
gentlemen, what's next? After
all the public input is
received, the DRBC staff and
the Commissioners will develop
a comment and response document
that addresses each of the
commenter's concerns. The
Commissioners will consider
changes to the proposed rules
in response to the comments
that are received and will hold
a vote to either approve the
rules as proposed, approve the
rules with changes, or reject
the proposed rules.

The decision makers on
this and all rulemaking by the
Commission, are the
Commissioners themselves, who
may act through their appointed
alternates.

The Commissioners are
the governors of the four basin
states, Delaware, New Jersey,
New York, and Pennsylvania, and
on behalf of the federal
government, the division
commander of the North Atlantic
Division of the U.S. Army Corps
of Engineers.

And I want to make as my
final comment this point. This
really is an opportunity. The
Commissioners --- as I understand it, you have newly elected commissioners. You have newly elected governors in some of these states. So while you may think you know what their view is on the important subjects here today, I think none of us really knows for sure.

So I'm expecting that this is going to be a fair process, and that's why I stress the idea of substantive comments. They really could make a difference, ladies and gentlemen.

So this sa opportunity to be heard on the written record, the video record, and your comments here to all of us today.

All right. Ladies and gentlemen, thank you for your attention during that. And all
speakers are limited to three
minutes. And that includes
public officials and other
people who have listed certain
jobs that they have here. So
starting from person number
one, we're going make it three
minutes.

The first person that we
recognize is Representative
Greg Vitali. And then after
Representative Vitali, the next
two would be Dr. Stuart
Chen-Hayes and also Joy Bergey.

REPRESENTATIVE VITALI:
Thank you, Your Honor.
Are the acoustics right?

HEARING OFFICER:
Sounds goods.

REPRESENTATIVE VITALI:
Well, thank you, Your
Honor, for moderating today. I
would also like to thank the
Delaware River Basin Commission
for holding six hearings and
allowing the voice of the public to be heard on this very important issue.

I'm here to state primarily for the record that I support a complete and permanent ban on hydraulic fracturing in the Delaware River Basin. And I would like to say that I believe that my position is consistent with the overwhelming majority of constituents in the district I represent, to the extent they have understood the issue.

For the record, again, I represent the 166th District in Pennsylvania, which includes parts of Delaware and Montgomery Counties.

At the outset of this hearing and my testimony, I think it's important to restate the Environmental Rights Amendment of Pennsylvania. The
people have a right to clean air, pure water, and to the preservation of the natural, scenic, historic, and aesthetic values of the environment.

Pennsylvania's public natural resources are common property of all the people, including generations to come. As trustees of these resources, the Commonwealth shall conserve and maintain them for the benefit of all people.

And I think the most important phrase here is including generations yet to come because I think we in the legislature sometimes forget that. When we're correcting legislation, it's not only for the benefit of us, but generations to come.

And I am glad to see that the Pennsylvania Supreme
Court is finally taking this provision of the Pennsylvania Constitution seriously.

To date, there have been about 11,000 unconventional wells drilled in Pennsylvania. 11,000. There should be places in Pennsylvania where fracking does not occur, and the Delaware River Basin is one of those places. That watershed supplies drinking water to over 15 million people.

The Delaware River has been designated a national wild and scenic river by Congress, and it's been awarded special protection water status by the Delaware River Basin Commission. And that's because of the many valuable environmental and economic qualities this river possesses.

Drilling is a very highly industrial activity. It
can turn pristine forests into industrial sites. I have visited numerous drilling sites over the years in the course of my job. And I have seen the truck traffic, the gravel roads, the fences, the spills. It really can degrade.

_HEARING OFFICER:_

We're going to stop you at that point, Representative. Thank you very much.

_REPRESENTATIVE VITALI:_

Thank you.

_HEARING EXAMINER:_

Thank you, sir. Dr. Chen-Hayes. And after, next will be Joy Bergey. And then Walter Tsou. That's T-S-O-U. If I mispronounce it, I'm sorry. Okay. And it is Dr. Stuart Chen-Hayes, correct?

_DR. CHEN-HAYES:_

It is.

_HEARING EXAMINER:_
Okay. If you will, please.

DR. CHEN-HAYES:
Great. Good afternoon.
Thank you. I appreciate the chance to speak to members of the Commission and the general public. And I'm going to be anecdotal. I'm a professor of education in the State University of New York. I live in Newtown Township. And I'm a newly elected judge of elections on the Green party. I'm very excited. There are 11 colleagues who are now elected representatives from the Green party. We are a party that is extremely focused on people, planet, and very anti-profit. And so we are for a complete ban on any fracking-related activities in the Delaware River Basin.

Since I live in New York
or since I work in New York,
since I lived many years in New
Jersey. Now, I live --- I'm an
elected official in
Pennsylvania. I don't have any
connections to Delaware, at
this point, that I know of.

Very interested in
protecting the land, and the
water, and the people of this,
and future generations of the
those three states.

And so as an educator, I
was thinking what would be one
of the most powerful stories
that I could tell? Usually at
this time of day, I'm in a
pool. I'm a swimmer. I
certainly use water. I consume
water. I have my water bottle
with me. But I was thinking
about a story that I told my
now 14-year-old. And many
folks in the audience may be
aware of this story of water I
heard. I re-read it today as I was coming for the Commission. And it talks about how all of us, at one point in time, will drink an entire back yard swimming pool full of water. And for those of us who are swimmers, it's probably two swimming pools.

And I thought about as I read in the book that it talks about the importance of protecting the waters from pollution. And as I went through, I realized they don't say one word about fracking. And so we really are damaging the environment. And my colleague who spoke just before me gave very clear, very specific examples.

But the idea is that water is a finite resource. We don't get any extra. We don't have any less. And so the more
pollutants that we put in, particularly into the Delaware River, the more that we're compromising all of our health. Not only our health, our children's health, but their children's health as well. So I think about in our home, that we have multiple water filtration systems. And I have lived in two countries, and worked in five states, lived in seven. And I have never seen my water filtration systems gunk up faster than where I live right now in Bucks. And I know that we have major water quality issues already.

We are really having a lot of drama in terms of the pollutants that are already present in the water. And so there's no reason we want to be adding any more. We're really
endangering our health. When you look at the health of the oceans right now, there's report that was just made that talked about how soon we will have more plastics in the ocean than we do fish. And so since the Delaware River Basin empties into the Atlantic Ocean, it's really critical that we're protecting the ocean. 

HEARING OFFICER: Thank you very much. The Doctor --- now just one moment. The restrooms, the ladies room is right outside the door back there. The men's room is through that door and then down this way. For the men to get back in there, they have to go through the detectors again. Okay? The x-ray machine or whatever it is.
Okay. All right. And next is Joy Bergey. Ms. Bergey, please. Anybody? Thank you.

**MS. BERGEY:**

My name is Joy Bergey. I live in Flourtown in Montgomery County, Pennsylvania. And I am a lifelong resident of the river basin. I am speaking on behalf of partnership for policy integrity, a nonprofit organization that focuses on energy and environmental policy.

For the past three years, we've been investing the EPA's regulations of new chemicals used in drilling and fracking. This fall, marketplace on NPR broadcast a two-part story on our investigation.

Based on our findings...
and mounds of evidence about additional risks, we support
the Commission's proposal to prohibit hydraulic fracturing
in the basin.

We also urge the Commission to prohibit wastewater disposal, water withdrawal, and other related activities. Allowing our gas and drilling activities in our basin --- allowing oil and gas related activities in the basin would amount to a huge gamble for our drinking water and environment.

Our analysis of EPA's regulation of new chemicals proposed for drilling and fracking found in 2003 and 2014, EPA reviewed 126 such chemicals.

The agency found health concerns about more than 85 percent of these substances
including lung effects, neurotoxicity, kidney toxicity and developmental toxicity. And yet, EPA allowed most of these chemicals to be commercially manufactured, usually without health testing that could have more definitively established risks. More than half of the chemicals flagged by EPA as potentially harmful were used or likely used in oil and gas wells. Chemical manufacturers often kept the identities of these chemicals secret, as permitted by federal law. Here in Pennsylvania, drilling chemicals often do the same. Where in state law, otherwise requires them the disclose publicly the fracking chemicals they use. As a result, it is difficult or impossible for the public to
determine where many fracking chemicals have been used, even if the EPA has said that these chemicals can pose health risks.

This secrecy and other concerns range from radioactivity in wastewater to chronic leaks in underground wells makes fracking and associated activities a risky roll of the dice for our sensitive watershed. That's not worth it. Thank you.

HEARING OFFICER:
Thank you, ma'am.

MS. BERGEY:
Do you want a copy?

HEARING OFFICER:
You can submit that, if you'd like, through the written process. All right. And let me just go through the names, sir before you start. Let's see. That was Joy Bergey. And
then we're going to here from Dr. Tsou next. And then after that will be Peter Winslow and David Kinney.

Okay, sir. When you are ready, please.

DR. TSOU:

Thank you. My name is Dr. Walter Tsou. I'm the executive director of Philadelphia PSR and a former health commissioner of Philadelphia. Because time is short, I will simply allow others to explain why we should have a complete ban in the Delaware River Watershed for fracking.

My brief comments concern around potential spillage of produced flow-back for what's in the Delaware River. As a public health physician, I draw your attention to the known and
unknown harmful effects introduced from fracking waste. As noted by others, as much as 5 to 10 million gallons of water are laced with 50 to 100 different chemicals, which are used to create fracking fluid. The flow back backwater not only contains these chemicals, but also brine and highly radioactive materials like Radium 226. The risk to the produced water in the Delaware River is simply unthinkable.

Yellow Researcher last year published an article that identified over 1,000 chemicals used in fracking, of which 76 percent of the chemicals have not been studied for toxicity. Of the 240 substances that were known to have toxicity, at least 55 of them were carcinogens. Twenty (20) were known to increase the risk
of leukemia. Forty-three (43) percent were known to have reproductive toxicity. Forty (40) percent developmental toxicity. And 17 percent affected both a developing fetus or a woman's reproductive health.

Many of these chemicals act independently with structures where even a nanogram, that is to say one part in one billion, could block or stimulate the receptor site, or affect field growth, or our hormonal systems.

Because pregnancy is limited to nine months, we can measure exposure with literature on fracturing and compare it to growth outcomes. Two reports that were done recently last year showed that the proximity of growth near gas wells were associated with
neonatal health outcomes.

In Texas, they geocoded 159,000 birth records and found a 14 percent increase in pre-term birth and fetal deaths.

In Pennsylvania, they geocoded 1.1 million babies born proximal to the active gas wells based on the select date of those wells. And if you lived within one kilometer of any of those active wells, you had a 25 percent increased chance of having low birth weight babies.

Two other studies are worth noting. At Hopkins Newburg School of Public Health, they analyzed 35,000 cases from the Geisinger Health System and found a 40 percent increase of premature birth. And these large numbers all suggest that these are highly
statistically significant studies.
The fact that actually the State of Pennsylvania or the federal government has not funded any health study in this country is an abomination.

In short, there is growing evidence that fracking is bad for health. The civic duty in --- will show that there are 1,300 articles on the adverse effects of health from fracking. If you allow fracking for anywhere in the Delaware Watershed, you will have committed a public health disaster.

HEARING OFFICER:
Okay. The next speaker will be Peter Winslow. And then on deck, will be David Kinney and Sylvia Metzler. And this is Peter Winslow?

MR. WINSLOW:
Yes.

HEARING OFFICER:
Please come up, sir.

MR. WINSLOW:
Thank you for this opportunity to comment on the proposed rules for regulating natural gas development activities under 18C of parts 401 and 440. I'd also like to thank Representative Vitali for bringing forward Article 1, Section 27 of the environmental rights provision of the Pennsylvania constitution.

My name is Peter Winslow. I'm speaking today on behalf of the Philadelphia Chapter of Pennsylvania Interfaith Power and Light. We are communities of faith responding to climate disruption as an urgent moral issue.

Climate disruption
results in increasing frequency and intensity of storms and droughts, as well as sea level rise, all of which stress the Delaware River Basin, along with the ability of the DRBC to manage water resources and to protect the environment.

Reliance on fossil fuels causes and exacerbates these conditions. Climate disruption I view as the context in which all of the concerns that you're going to be hearing about for the health and safety of the people, and the protection of the environment, and the wild scenic river. Benefits of the watershed are being considered.

So we appreciate the intent of the proposed rules to protect the watershed by prohibiting high volume hydraulic fracting within the basin. And by discouraging
both exportation of fresh water
and importation of wastewater
associated with fracking
operations outside the basin.

Nevertheless, we are
apprehensive about loopholes
built into these rules.

Discouragement is a term
less open to interpretation.
And the evaluation processes of
water code section 2.30.4
allows considerable discretion.
Let's just close the door to
exploitation of the Delaware
River Basin by the fossil fuel
industry. We ask that you
tighten the loopholes and
extend the scope of your rules.

One, prohibit any export
of water from the basin for use
in oil and gas extraction.

Two, prohibit any import
of fracking wastewater to the
basin for treatment.

Three, prohibit
injection of fracking wastewater into or under the basin.

Four, prohibit the underground storage of natural gas or natural gas liquids.

And Five, beyond the ban on high volume hydraulic fracking operations, please prohibit all activities associated with hydraulic fracturing in the Delaware River Basin.

Thank you for your attention concerning this matter.

HEARING OFFICER:
David Kinney will be next. And then on deck would be Sylvia Metzler and Vanessa Baker. And this is Mr. Kinney?

MR. KINNEY:
Yes.

HEARING OFFICER:
Sure.
MR. KINNEY:

Thank you, David Kinney. I am a Mid-Atlantic policy director for Trout Unlimited. We represent 23,000 sportsmen in the four Delaware River Basin states. More than half are here in Pennsylvania.

As an organization, Trout Unlimited advocates for responsible energy development. We work to encourage policies and practices that avoid, minimize and mitigate impacts on trout habitat, cold water resources.

And the Delaware River Basin is a priority for us. We spent a lot of time and resources on the projects that restore and reconnect trout streams, especially in the Upper Delaware.

So we're working with local towns. We're working
with local communities, with local partners, local contractors.

The benefits of this work are not just better trout habitat, but it's also a boost for the outdoor recreational economy, which is key to the region up there, as well as improve the flood resiliency for local communities.

So all of that said, Trout Unlimited supports these regulations that DRBC has put forth. We recognize the authority's authority to regulate natural gas development, given the potentially enormous water impacts. We appreciate that these methods are backed up by sound science and years of study.

As others have spoken about, we do have concerns
about provisions that would allow the export of source water and the import of wastewater, and I'm going to highlight just a handful of those.

The water export section in particular doesn't spell out in any detail how these withdrawals will be regulated, such as requirements for pass-by flows.

The basic parties spent an awful lot of time negotiating about flows on the Delaware. These regulations don't deal at all with how withdrawals of potentially millions of gallons of water for hydraulic fracturing would affect overall management of the river's resources. And for an organization like Trout Unlimited, we're very concerned about that wild trout fishery.
Second, while we appreciate the stringent proposals dealing with wastewater import and treatment, we're concerned about the list of pollutants of concern. It only includes a fraction of the chemicals the EPA has documented in the fracking fluids and produced water. So we would recommend that the Commission set water quality standards.

Finally, we have concerns about how DRBC would enforce and monitor the import and export of water. There's nothing --- this is something that's not detailed at all in these regulations, and that's an oversight that should be dealt with.

Just in conclusion, a few years back, T.U. highlighted the Upper Delaware
as one of the ten special places in the central Appalachians that deserve protection, including the Satchel River Watershed and George Washington and Jefferson National Forests. A number of those places have since been protected from the impacts of hydraulic fracturing. And we think that with some improvements, that these regulations that the DRBC has set forth will go a long to accomplishing that in the Delaware River Basin. Thank you.

HEARING OFFICER:
Thank you, sir. The next three speakers will be Sylvia Metzler, Vanessa Baker and Jonathan Lutz. This is Ms. Metzler. Am I right?

MS. METZLER:
Yes. My name is Sylvia
Metzler. I'm from Philadelphia, Pennsylvania, and I'm wearing my stethoscope today because when I leave here, I'm going to work. I'm an nurse practitioner. I'm retired, but still work in health.

As a nurse and a nurse practitioner, I'm extremely concerned about the health of people. And as a nurse, it wasn't just as a human being. I'm very concerned about water. I just read about Capetown, South Africa. Their reservoir is almost empty. Water is a problem all over the world right now, potable water. Anything that we do that is going to interfere with human beings to have enough water is so worrisome. And certainly fracking and fracking related activities in the Delaware
River Basin is endangering our water.

I am connected with food and water watch. And one of our positions is we want a ban on all fracking in the Delaware River Basin. And actually, I would like to see a ban on fracking everywhere. But that's who we are speaking to today. And of all fracking related activities. That means no withdrawing water from the Delaware. That means not putting treated water back in or injecting wells.

You know, I think most of us remember that when President Bush and Vice-President Cheney were in office, they got together with the heads of the gas and oil companies. And they were able to make some very deep, and important, and dangerous in my
opinion, changes that regulations that we had that protected us are no longer in place.

One of those things is the proprietary chemicals, that these companies can put all kinds of chemicals in fracking water, and we aren't allowed to know what they are. It's bad enough the ones we know about that are endocrine disrupters that are interfering with people's health.

I've traveled through Pennsylvania in Susquehanna County several times. Three times. And talked with people there whose lives have been impacted by fracturing. Their drinking water, that they can't use their wells anymore. But their health. People who have been sick. Animals dying. Even people have died from the
effects of fracking.

And worse yet, in Pennsylvania, when they would report to the Department of Health, their worries, their concerns, they really weren't taken seriously.

So we need to protect our health. We need to protect our water supply, our air, the soil. We have to ban fracking and all fracking related activities in the Delaware River Basin. Thank you.

HEARING OFFICER:

Next three speakers will be Vanessa Baker, Jonathan Lutz, and Patricia Libbey. Okay. And this is Vanessa Baker. Okay.

MS. BAKER:

Hi. My name is Vanessa Baker. I'm here as a private and concerned citizen. And 17 million people depend on this
drinking water. So we can't afford to risk rendering it undrinkable? You're destructive and out of touch if you allow them to destroy not only our own drinking water, but that of generations and generations to come.

The half life of radium is 1,600 years. And it's been shown to be 226 to 200 times greater downstream from a fracking watershed in a study from Duke University.

Radium is, of course, a radioactive chemical. And can cause anemia, cancer, and that. So the consequences of this catastrophic decision will be deadly, deadly and long-lasting.

With a half-life of 1,600 years, that means that by 3618, only half of the radium will have decayed into the gas
radon, which also causes cancer.

Although radon has a short half-life of about four days, the radium will still be ruining our drinking water. Radium is just one dangerous chemical found to be laced in the fracking process. The EPA had health concerns about 88 fracking chemicals. And it's likely that the fracking companies will also be using secret proprietary chemicals.

This means that fracking --- that facilities will be treating unknown chemicals, which will therefore be unlikely to be removed.

This has all happened in the Monongahela where groundwater concentrations increased significantly in 2010 to 2011. These salts, when mixed with chlorine, which is
what drinking water is treated with, of course, create trichloroethylene and haloacetic acid, which are strong carcinogens even in low amounts.

A government study showed that just showering in water contaminated with trichloroethylene caused blood concentration with trichloroethylene to rise five to tenfold.

Short-term effects include central nervous system effects, cardiac arrhythmia, abnormalities of the liver and kidneys.

Long-term effects include adverse effects on all the organs previously listed, as well as respiratory disease, cancer, birth defects, miscarriages, and delayed neo-development. We cannot
ruin our precious water supply
with these deadly chemicals.
Thank you.

HEARING OFFICER:
Okay. Jonathan Lutz will be next. And then Patricia Libbey and Norman Torkelson. Okay. Mr. Lutz. Is that correct?

MR. LUTZ:
Good afternoon. My name is Jonathan Lutz. I am the associate director of the Associated Petroleum Industries of Pennsylvania, division of the American Petroleum Institute. I want to thank you for considering my thoughts here today.

I want to begin by clearly stating that our number one priority at API is to provide energy in a safe, scientifically sound manner, while also having the least
possible impact on the environment. And our members take this responsibility very seriously. To this end, our industry supports effective regulation that fosters safety and protects the land, air, and water.

Regulation and oversight are important to the U.S. natural gas industry and our industry is well regulated by both federal and state governments.

As you know, the DRBC centers its watershed management efforts on sound science. Accordingly, it is imperative that any final decision on the proposed regulations be based on science as well.

While opponents of energy production argue that well stimulation will ruin our
water resources, science clearly indicates otherwise. Unfortunately, the Commission relies primarily on two particular studies in moving these regulations forward, including the EPA's hydraulic fracturing and water resources study.

However, even this exhaustive six year, $30 billion study does not result in any significant correlation between hydraulically fractured and impaired water resources. In fact, this study indicates that hydraulic fracturing activities have not led to widespread economic impacts.

A wide variety of recent reputable studies by both government agencies and academic institutions also support the conclusion that hydraulic fracturing is not a
threat to drinking water.

Perhaps most importantly, the Susquehanna River Basin Commission's extensive real-time water quality monitoring network consistently shows that natural gas operations in the Commonwealth are not contributing to negative impacts on water quality in the basin.

However, a recent PWC study shows that oil and natural gas production in Pennsylvania supports more than 320,000 jobs in the Commonwealth, including direct industry jobs, as well as jobs in wholesale, retail, construction, manufacturing, and other sectors. The same study shows that these jobs saw roughly $23 billion in wages paid to individual Pennsylvanians in 2015.
These jobs are the cornerstone of a nearly 45 billion economic impact to the Commonwealth.

This API is a standard-setting organization. We have developed a series of hydraulic fracturing recommended practices that are continually revised and updated. These recommended practices can be found on our website. And I encourage you to explore them. Thank you.

HEARING OFFICER:
Okay. The next three speakers will be Patricia Libbey will be next, Norman Torkelson, and then Geoffrey Selling. And is this Ms. Libbey? Okay. Whenever you're ready.

MS. LIBBEY:
This is Pat Libbey.
Mine is a prayer to God because
I feel he is the best one to help us in the whole situation. Dear God, please help the DRBC gather in their decision making to tighten the regulations, to not open the Delaware River for water exportation, and to ban waste importation from our watershed. Only you know the pressure they may be under. Help them do the just thing for the world you gave us to tend and to defend.

We have heard about the probable outcomes of taking so much water from our lovely river. The harm to animal life and our recreation. The water levels that would allow ocean tides to come even further upstream than what is expected from global warming.

We have seen examples of great harm in other parts of the country from fracking
wastewater's multitudinous harmful chemicals; cancer, neurological problems, horrible rashes. And we don't want these for ourselves, our present children or future generations.

Please help the DRBC to make decisions on these issues that would protect us, not cause harm, that would keep beauty and health in our River Valley and not cause disease and death. Refresh the Commission in their long listening and help them make things right for the benefit of all.

God, please bless all who are with us here today. Give us courage, strength, understanding, and love. In Jesus' name, we ask this. Amen.

HEARING OFFICER:
Thank you, ma'am. The next speakers will be Norman Torkelson, Geoffrey Selling, and then William Moore.

MR. TORKELSON:

I'm Norman Torkelson, and on behalf of the Lower Delaware Wild and Scenic River Management Council, we offer the following comments.

The Wild and Scenic Rivers Act was passed by Congress in 1968 with the goal of protecting the free flowing condition of designated rivers that are to be managed in a way that protects and enhances the values that prompted their initial designation.

In 2000, we were designated a wild and scenic river segment. From just below the water gap to just above the tide water, our segment represents numerous and diverse
partners, including the states of Pennsylvania and New Jersey, Bucks and Northampton Counties in Pennsylvania, Mercer, Huntingdon and Warren Counties in New Jersey. And this very own Delaware River Basin Commission.

The National Park Service, the Delaware River Green Way Partnership, the Delaware and Lehigh Courier Commission, and well over two dozen river communities and organizations who formerly endorsed us who have a memorandum of understanding.

Partners agreed to participate in the cooperative implementation of our management planning to protect and enhance those levels that led to our designation. We applaud the DRBC for banning hydraulic fracking in the
Delaware River Watershed. However, we insist that allowing any fracking-related activities are inconsistent with the goals and the objectives of our management plan.

Disposal of fracking waste within our watershed has the potential to effect the water quality of millions of people who should have a reasonable expectation, and the right to clean water, a clean environment for now and future generations.

We also are concerned that exported basin waters could support unwanted, unneeded, and unsafe projects that would only further degrade our beautiful Delaware River.

Green amendments are gaining more and more momentum across our nation. Since the
early '70s, Pennsylvania has had a constitutional green amendment.

Recent litigation won a watershed legal victory that not only protected PA communities from ruthless frackers, but affirmed the constitutional right of people in the state to a clean and healthy environment.

New Jersey also has introduced legislation for the same.

The tide is turning. Instead of changing rules to allow for additional environmental degradation, we expect the DRBC to be looking to continue its work to protect our watershed for the benefit of all.

Therefore, we are supporting expanding the DRBC fracking plan to include a
total and complete ban on
hydraulic fraction and related
activities for extracting
natural gas in the Delaware
River Basin. Thank you.

HEARING OFFICER:
Thank you, sir. The
next speakers would be Geoffrey
Selling, then William Moore,
and then Shannon Pendleton.
And is this Mr. Selling?

MR. SELLING:
Yes.

HEARING OFFICER:
Okay. When you're
ready, sir, please.

MR. SELLING:
Thank you for the
opportunity to speak forcefully
against hydraulic fracturing in
the Delaware River Basin. My
name is Geoffrey Selling. I'm
a retired science teacher, a
volunteer with several of the
watershed organizations that
are part of the Delaware River Watershed initiative, upstream cluster, a stream keeper with one of those organizations, and a Pennsylvania master watershed steward through the Penn State extension service.

I'm here as a private citizen, not representing any of those organizations. However, through this work, I have learned a great deal about the Delaware River Basin.

In all seasons, I spend at least one day, and sometimes more each week in the Delaware River Watershed making observations, taking measurements, and working to improve the riparian health of many of the Delaware River's feeder streams.

Thus, I know firsthand, as well as from reading and research, how impaired many of
the Delaware River Basin's waterways are.

I strongly oppose the hydraulic fracking process and any expansion of it, as it damages both our land, as well as the waterways available. There have been numerous incidents and environmental damage from fracking, and further impairment of the water quality in our already compromised basin.

Indeed, the William Penn Foundation has allotted $44 million in its Delaware River Watershed initiative to improve the water quality in the Delaware River Basin.

Formal research from the Chair of Chemistry at Rice University has shown that fracking wastewater contains barium, chromium, copper, mercury, arsenic, antimony, as
well as cancer-causing compounds such as toluene and ethylbenzen.

A single fracked well can use over 2 million gallons of water annually, much of which becomes toxically-laced wastewater. A study out of Duke University from last year showed that in Pennsylvania alone, there were 1,293 spills of fracking wastewater in a ten year period, about 130 spills each year.

This is ultimately the water that we and our children drink, in which we wash our babies, and in which we cook. We all live downstream from other places. And what happens on the land upstream and in the water spreads throughout each watershed, compounding the damage as the water flows downhill.
Therefore, I oppose fracturing in general and the use of our Delaware River water for fracking outside the Basin. There are many ways to produce additional energy. Further damage to our waterways and the water in them should not be considered a viable option. Thank you.

HEARING OFFICER: Okay. The next three speakers would be William Moore, who will be next. And then Shannon Pendleton. And then Joan Farb. Okay. And this is Mr. Moore?

MR. MOORE: Yes.

HEARING OFFICER: Good. Okay.

MR. MOORE: Thank you for this opportunity to address the Commission. And I am someone
who grew up in the oil industry. And back in 1930,
when the spindle top well blew up in Texas, my father was a kid.

And later on, he became a petroleum geologist. And when that thing blew up, you could tell where all the stuff that came from beneath the ground went, because you could see it. If you got water and put it on top of it, you could see it.

What comes out fracking comes into the pipelines, into the trucks, into the refineries. But other things that come out of fracking, which many, many people here have already been discussing, will end up in the water. And so far as I know, the state of Pennsylvania where I live doesn't have any system. And
doesn't want to spend any money on active and accurate testing of the waters in this state.

I do know that in Texas and Oklahoma, and all along the basin wherever fracking occurs, you have a higher, a much higher much higher incidence of earthquakes occurring. And when that strata is broken and breaks occur, the breaks in the strata continue further. So even if it's not in the Delaware River Basin, that stuff can get into our water.

We don't need to have any water from the Delaware River Basin taken out and used for fracking. And we certainly don't want to have any wastewater from a fracking process introduced into the Delaware River Basin. And I call upon the governors of Delaware, New Jersey,
Pennsylvania, and New York to direct their representatives on the basin to ban fracking, ban the use of water from the Basin in fracturing, and ban the introduction to the Basin of water that is a byproduct of fracking. Thank you very much.

HEARING OFFICER:

Thank you. Shannon Pendleton will be next. And then Joan Farb. And then Stephanie Herron.

MS. PENDLETON:

Thank you. My name is Shannon Pendleton. And I want to thank the DRBC, Your Honor, for the ability to make a public comment.

My public comment is as a private citizen and a mother. I would like you to call for a complete and total ban on fracking and all fracking-related activities,
especially any water or
wastewater distribution back
into the Basin.

My experience in
learning about hydraulic
fracturing comes from living
downstream from where
wastewater was dumped above my
water supply.

And we're now in
Pennsylvania, which is not
anywhere near a fracking site,
but the water had been trucked
and dumped upstream of my water
supply. And I read that in the
Associated Press one day, and
started to do my homework. And
became very afraid to drink my
water because I understand from
the industry I work in that our
wastewater treatment facility
plants have absolutely no way
of dealing with the chemicals
that come out of that
wastewater. And even if they
knew what was in it, which they do not, they wouldn't be able to treat it.

So any of you can understand what it's like to be in your home and be afraid of your own water. It's very, very scary.

I work with as an architect, and I do zero-imaging design, regenerative design. I understand the construction industry. I understand how water infrastructure works. And what the best and brightest in the private industry, the nonprofit sector, and our governmental agencies are doing.

I do a lot with advocacy work in this area. I do it for profit myself, and I understand what a lot of the non-profits do because I volunteer with
many of them in Philadelphia.

And this energy source
that we're going through all of
this for is completely
unnecessary. We have a lot of
other opportunities for energy.
And we have a lot of other
opportunities for a healthy way
to live and use our water.

So I'm not going to use
all of my time, so that others
can speak. I appreciate the
time you've given us. And I
urge you to make the right
choice and give a regenerative
energy plan a chance. Thank
you.

HEARING OFFICER:
The next three speakers
would be Joan Farb, then
Stephanie Herron, and then
Nancy Harkins. Your name is
Joan Farb?

MS. FARB:

Yes.
HEARING OFFICER:
Ms. Farb, please.

MS. FARB:
I'm Joan Farb. I want to thank the Commission for having these hearings in order that residents like myself can speak about the proposed regulations for 2018.

It is imperative that there is a complete and permanent ban on natural gas drilling, and fracking, and all related activities, which include wastewater processing and discharges from fracking and water withdrawals from drilling and fracking.

Why a ban? Because there are many, many significant scientific studies showing detrimental impacts to public health and to the environment from these processes.
For example, the Concerned Health Professionals from New York and the Physicians for Social Responsibility assessed 685 peer-reviewed papers on gas drilling and fracking. They found that the majority of these studies shows substantial correlation between fracking and illnesses such as cancer and also pollution in air and water.

Also, fracking has used 5 million to 10 million gallons of water per well, and presently, there is a trend to an increase to 10 to 20 million.

This tremendous withdrawal of water would go against the DRBC water code policy of protection and preservation that states the waters of the Delaware River
Basin are limited in quality. And the basin is frequently subject to drought warnings and drought declarations due to limited water storage supply and stream flow during periods.

Therefore, the policy of the Commission is to discourage the exportation of water from the Delaware River.

In addition, a DRBC special protection water regulation covering the entire Delaware River is not allowing any reduction in the quality of the water in any manner.

These regulations remind me of Benjamin Franklin who is considered our first conservationist. And he helped created the Philadelphia Water Commission. Franklin once said when the well is dry, we know the worth of water.

Thus DRBC, don't let the
well go dry for 17 million
people in the Delaware River
Basin. Ban fracking completely
and all related activities.
Thank you.

HEARING OFFICER:
Stephanie Herron will be
next. And then Nancy Harkins.
And then Attorney Kim Ong. And
let's see. Ms. Herron, when
you are ready.

MS. HERRON:
Okay. My name is
Stephanie Herron. I'm with the
Delaware Chapter of the Sierra
Club. I am here with some of
our volunteers to testify on
behalf of our over 8,000
members in the state of
Delaware.

First off, I want to
thank you and thank the DRBC
for allowing us this
opportunity to comment. I also
would like to thank the DRBC
for listening to our voices. We've been, you know, at these DRBC hearings for the past seven or eight years, or in some cases more, calling on the DRBC to make smart, sound science-based decisions that protect our health and our future.

I want to thank to DRBC for hearing our voices and for hearing the overwhelming body of scientific evidence, and calling for a ban on drilling in our watersheds.

I'm a little confused, however, how at the same time the DRBC would be moving to potentially allow wastewater disposal from fracking in our watershed.

You know, I live in Delaware, and we are at the bottom of the Delaware River Basin. And it doesn't matter
to us, at the end of the day, if our water is contaminated by drilling upstream of us, or by wastewater disposal upstream of us as one of the previous speakers said. At the end of the day, if it's not safe to drink, it doesn't really matter how it was contaminated.

So I would call on the DRBC to completely close the door on that potential for contamination of our drinking water, and our swimming water, and our recreation water, which is the driver of our economy and fully close the door on any opportunity for fracking wastewater to get into our water supply.

Furthermore, wastewater withdrawals would also have a potentially very serious impact on Delaware and those of us in the lower basin. Obviously, we
have seen drought conditions in recent memory. And we know that these are going to continue to be more unpredictable, and more common as climate change continues. Furthermore, I'm very concerned, and the Sierra Club is very concerned out of our commitment to the principles of environmental justice and the principles for democratic organizing.

If it's not safe to do here, it's not safe in our community, then it's not safe to do anywhere. And so for us to say that water could be taken from our water supply in the Delaware River Basin, which is not only concerning from a water quantity perspective, it's deeply concerning from an environmental justice perspective. If it's not safe
enough to do here, it's completely in violation of the principles of environmental justice for us to send water other places for fracking. And so I would call on Governor Carney and the governors of all the agencies, and the federal government representatives on the DRBC to support a full and comprehensive ban on all fracking-related activities in the Delaware River Basin. To do anything less is simply unacceptable and putting us at unnecessary risk. Thank you.

HEARING OFFICER:
Thank you. Next will be Nancy Harkins, and then Kim Ong. And then Jean-Marie Donohue. Nancy Harkins? Nancy Harkins not here.
All right. Attorney Kim
Ong? Ms. Ong, when you're ready. All right. Thank you.

MS. ONG:

Good afternoon, Judge. My name is Kimberly Ong. I'm an attorney at the Natural Resource Defense Council. I'm here on behalf of myself and the over 70,000 NRDC members who live in Pennsylvania, Delaware, New York and New Jersey.

Thank you for giving us a chance to speak today about this incredibly important part of the landscape. And Commission Staff, thank you for helping draft a fracking ban on the river basin.

I'd like to make three points. First, NRDC strongly supports a ban of the Delaware River Basin. Fracking can and has contaminated air and drinking water, ruined
landscapes, caused earthquakes, harms human health, and contributed to climate change. Over 600,000 jobs or more than $12 billion in annual wages rely on a clean and protective river basin for survival. Factoring in ecosystem services, over $16 billion are in peril if the River Basin is opened for fracking.

The potential value of the natural gas industry, a mere 3.3 billion dollars per year, pales in comparison at nearly a fifth of the economic value of a frack-free basin.

Second of all, we strongly support a ban. The effectiveness of a ban is undermined if the wastewater, one of the most toxic aspects of the fracking process, can still be transported, treated,
and disposed of in the river basin. The fracking process yields wastewater containing over 1,000 contaminants that can cause significant harm to human health and the environment.

Here's a partial list of the chemicals that are found in fracking wastewater. While some of these chemicals are benign, such as water and citric acid, many of these chemicals are toxic to humans and animals and are radioactive and corrosive. They can also imperil ecosystems by depleting oxygen or causing algorithms.

And there is no safe way to handle, treat, and dispose of fracking wastewater. As we've seen just next door in Susquehanna County, even when there are strict regulations in place, where there's
wastewater, there are spills. And these spills pollute our water, destroy our habitats, and make people sick.

Third, these regulations should not allow for the withdrawal of fracturing elsewhere. Unlike other water uses, almost none of fracking water can be returned to the basin after use, depriving every basin of the use of that water for more beneficial purposes like drinking, farming, and fishing.

Thank you again for taking the time to hear us out today. The decision as to whether or not to permit fracturing and fracturing wastewater in the river basin is likely one of the most important decisions the Commission will make in the upcoming years.
We ask that you do the right thing and approve the rule with changes. Make the ban a full ban that bans fracking, fracking wastewater, and the withdrawal of water for fracking purposes. Thank you.

HEARING OFFICER:
The next three speakers --- I'm sorry. Is Nancy Harkins here? No. Next three speakers will be Jean-Marie Donohue. And then Lena Smith. And then Jean MacFarlane. Ms. Donohue?

MS. DONOHUE:
My name is Jean-Marie Donohue. I am with Water Spirit. Water Spirit is the spirituality empowerment program that educates and advocates on water issues. We are sponsored by the Sisters of St. Joseph for Peace, which is a growing Catholic order of
nuns, but we are inclusive of people of all faiths.

    Water is life. We fully support a ban on fracking on the Delaware River Basin watershed and a ban on the storage, processing, and discharge of fracking wastewater, a full ban on the export of water out of the watershed for fracking purposes.

    Clean, safe water is a human right and a right for the 15 to 17 million people who get their drinking, and bathing water, and swimming water from the Delaware River Basin.

    As you know, the Delaware River Basin watershed has a special protection water status, a designation that prohibits the degradation of the water. Fracking, and fracking waste, and the export
of the water for fracking is synonymous and equals the degradation of the water.

Therefore, all of these practices should be banned. We personally feel at this point, for the past seven to eight years, that you could actually fill this room with the paper of the scientific studies of the disastrous health effects of fracking on human health.

We particularly and the Sisters of St. Joseph's of Peace would like to give voice to the children and infants that live in this area, that live in the Delaware water basin and draw their bath water from there, their drinking water. And they brush their teeth with this water.

We would like to cite one particular 2015 study from the Radiation and Public Health
Project that was funded by the Pittsburgh Foundation. It was the health hazards to fetuses, infants, young children in heavily fracked areas of Pennsylvania in eight counties. They found that the rise in infant mortality rates in heavily fracked counties was 13.9 percent greater than the rest of Pennsylvania. The rise in cancer incidents from ages zero to four in heavily fracked counties was 35.1 percent greater.

We find it to be a moral and ethical outrage that you would think that it was safe to bring fracking waste into the Delaware River Basin Commission that serves 15 to 17 million people, and these children whose small bodies cannot handle these chemicals.

Thank you for your time.
And we call for a full ban.

HEARING OFFICER:

We will pick up in the order that I mentioned. But we're going to take a little break. All right. Okay. Thank you.

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(WHEREUPON, A SHORT BREAK WAS TAKEN)

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HEARING OFFICER:

All right, ladies and gentlemen. We will resume. We will pick up. Please take your seats. Okay. We're ready for the next three speakers. And they will be Lena Smith, Jean MacFarlane, and then Walter Jeranek. Ms. Smith, please? Lena Smith? Okay. I'll call her name again. How about Jean MacFarlane? Oh, Lena Smith will not be here? Or will she be here?

AUDIENCE MEMBER:
She can't come.

HEARING OFFICER:
She can't? Okay. Thank you. And this is Jean MacFarlane.

MS. MACFARLANE:
I'm Jean MacFarlane. I live in Havertown, Pennsylvania. It's downstream. I spent many summer weekends escaping the record summer heat that we've had in Philadelphia recently, swimming, kayaking, and tubing in the clean, cool, pristine water of the Upper Delaware River.

The proposal to permit fracking discharge or storage in the watershed would basically turn this vital river into a toxic waist dump.

The discharge will contain known carcinogens and naturally occurring radioactive materials that cannot be
treated. The Allegheny River is plagued by downstream pollution from fracking discharge.

A study released three weeks ago by Duke University found levels of radium in the Allegheny River sediment is about 650 degree --- excuse me, 650 times higher below water treatment plants than it is at sampling sites upstream.

In addition, according to the Pennsylvania DEP, 80 percent of water withdrawn from the water will be used in fracking --- to be used in fracking will be trapped underground. It will not return to the hydroelectric cycle. That is the natural movement of moisture from evaporation, condensation, precipitation, and collection in aquifers and rivers.
In addition to providing people, animals, and plants with water, it also moves nutrients, pathogens, and sediment in and out of aquatic ecosystems.

The safety assurances of the oil and gas industry are really a joke. Last summer we saw aquifers punctured and well contaminated in West Pikeland, PA. In November, residential yards were flooded with drilling mud caused by frack-out.

The influence of the oil and gas industry is powerful. And the DRBC ban must --- have been one fragile barrier that has been protecting us. The DRBC must continue to protect the watershed by clearly stating in the regulations that no water withdrawal for fracking, and no disposal of
wastewater be permitted in the basin.

HEARING OFFICER:

Next will be Corinne Mayland. And then after her would be Jennifer Coffey and Coralie Pryde. All right. Is this Corinne Mayland?

MS. MAYLAND:
I'm Corinne Mayland.

HEARING OFFICER:
Corinne. Excuse me.
Okay.

MS. MAYLAND:
So my name is Corinne Mayland. I live in Lansdale, Pennsylvania; a municipality within the Delaware River Basin. I strongly support the
proposal to ban fracking in the watershed. I ask the Commission to go further and ban water withdrawals for fracking or fracking-related purposes.

As for the disposal and discharge of wastewater associated with fracking production, I ask for either an outright ban or at least a moratorium.

In regards to the fracking produced water by a CWT, I applaud the Commission's efforts to increase the quality standards for monitoring this type of water. But I believe it doesn't go far enough. The Commission can't be confident in their monitoring proposal to deliver safe water quality, if they don't really know what it needs to be monitored for.

For years, other
agencies have fought to have companies disclose their composition of fracking fluid additives. The EPA wanted to do prospective studies and produce the water composition. But the oil and gas industry so whittled away the study's scope that it will not be acceptable.

The DRBC proposes to use the results of the EPA list as the basis of approvals of concern. That's not enough. We all know that chemicals remain undisclosed because they were deemed confidential business information.

The EPA confirmed this, stating that non-disclosure occurred along the majority of the wells reporting to frack... Lichen leaking out of just a handful of chemicals is no big deal, but many chemicals
are hazardous at levels in the parts per million. So looking to the EPA published list is indeed necessary, but it is not sufficient.

Therefore, I don't believe it meets the DRBC Commission of basing its decision on sound science. I ask that the Commission either ban the discharge of fracking-produced water by CWT, or impose a moratorium on it pending further scientific data. That data should be multiple independent studies regarding the composition of produced water.

So management of the water resources in the Delaware River Basin promulgates having a long view. This Commission responsibly took the time to get the data that now supports the draft ban of fracking the
watershed. I believe it's also enough to support banning water withdrawals for fracking or fracking-related purposes. As for the disposal and discharge of wastewater, either ban it or impose a moratorium so the Commission can again take the time to get the data.

So in regards to the supposed data that Mr. Lutz was citing, the Susquehanna River Basin's remote water quality, that's just one system. That report is a preliminary trend analysis. It tests surface water only, not groundwater wells. Only 39 of the 59 monitoring stations have actively fractured wells. Since small samples, even smaller --- only six leading indicators are tested at every station. And their conclusion that they have not detected
impacts on the quality of the basic water. That's not synonymous with no impacts —.

HEARING OFFICER:

Thank you. Jennifer Coffey would be next. And then Coralie Pryde. And then Clio Gates. I'm sorry. I think I mis-said your name. It's Jennifer Coffey, C-O-F-F-E-Y. Is she present? All right. Then Coralie Pryde would be next. All right. And then after Ms. Pryde would be Clio Gates and Katie Smith.

Okay. When you're ready, ma'am. Thank you.

MS. PRYDE:

I'm Coralie Pryde. And I'm speaking for the League of Women Voters of Delaware. We believe that it is absolutely necessary that the DRBC vigorously protect the waters of the Delaware River.
The watershed supplies drinking water for some 16 million people. It supports a myriad species that create a healthy balance of aquatic life in the Delaware Bay and along the Atlantic coast.

And it directly supports almost $5 billion in annual wages from the region it goes through. In Delaware alone, nearly 16,000 jobs bringing in about $340 million annually are directly dependent on having a clean, healthy Delaware River.

The Delaware League is concerned that the DRBC's draft fracking regulations will protect neither the quantity nor the quality of water in the Delaware. Leaks from fracking present numerous dangers to our precious water and our environment.

More than 1,000
chemicals have been used in fracking in various combinations. Only a few, about 20 percent, have been tested. Many of them are generally poisonous neurotoxins, carcinogens. The others haven't been studied. The identity of many fracking components aren't exposed. And fracking wastewater also contains hundreds of hazardous materials that are reached deep from within the earth.

The League is particularly concerned of radioactive elements including radium, thorium and uranium are prevalent in Marcellus shale waste.

Because these radioactive elements have a very diverse range of physical and chemical properties, it is
very difficult to separate these from other waste.

There are currently no methods that are economically feasible to purify the two to three million gallons of waste produced in fracking just one large horizontally built well.

Disposal of solids in municipal landfills will inevitably result in contaminating the river. Radium is taken up by micro-organisms, then they are ingested by animals further up the food chain.

For Delaware, this will endanger the health of species as diverse as oysters, and swordfish and great blue herons. If the water is contaminated, the effects on Delaware's economy and the quality of our life will be devastating. Once it is
contaminated it will not be clean again.

HEARING OFFICER:
Thank you, ma'am. Clio Gates will be next. And then Katie Smith. And then Maya Van Rossum. And is this Ms. Gates?

MS. GATES:
Yes.

HEARING OFFICER:
Go ahead.

MS. GATES:
Good afternoon. My name is Clio Gates. And I'm an intern at the National Resources Defense Council. I would like to thank the Commission for giving us the opportunity to share our thoughts with you concerning the proposed ban of fracking in the Delaware River Basin.

Over the past several weeks, I've looked closely at the effects of fracking on the
health and environment of the Susquehanna River Basin, an area directly adjacent to the Delaware River Basin.

Since 2003, the Susquehanna River Basin has been open to fracking. We only need to look there to see how fracking and its wastewater may effect the Delaware River Basin.

Through my research, I concluded that fracking simply cannot happen without accidents. Wastewater spills into water bodies. Gas wells blow out. Both fracking fluid and methane contaminate drinking water.

And these accidents, despite seemingly strict regulations on fracking and its wastewater, happen routinely on an almost weekly basis. It's no wonder four miles of the
Susquehanna River were downgraded by Pennsylvania's Department of Environmental Protection because they failed to meet water quality standards.

I'll share with you just a few of the many incidents I came across in my research. In Dimock, 8,000 gallons of fracking fluid spilled into wetlands from faulty supply pipes.

The spill polluted streams and resulted in a massive fish die-off. Residents' drinking water turned brown and flammable. After showering, Dimock residents experiencing dizziness and headaches and suffered from skin sores.

In Bradford County, a well spilled thousands of gallons of fracking fluid into
a tributary of the Susquehanna River. The spill took 12 hours
to contain and seven families
who live in the area had to
evacuate their homes.

Finally, in Wyoming
County, a well spilled hundreds
of thousands of gallons of
fracking wastewater into the
nearby area. The mixture of
sand, water, hydrochloric acid,
and thousands of other toxic
chemicals spewed out of the
well at a rate of 25,000 to
over 30,000 gallons per hour.
The spill took 18 hours to
contain. Multiple families had
to evacuate and the road to the
site was blocked off.

These are just a small
sample of the accidents that
happened next door in
Susquehanna. But they
demonstrate the toxicity of
fracking, whether that be the
drilling of wells or the
handling of and transportation
of wastewater.

We cannot afford to make
the same mistake in the
Delaware River Basin. And I
implore the Commission to enact
a full ban on fracking,
inclusive of fracking
wastewater and water transfers
in the Delaware River Basin.
Thank you.

HEARING OFFICER:

Thank you. Katie Smith
will be next. And then Maya
Van Rossum. And then Alicia
Dorsey. And Ms. Smith, if you
would?

MS. SMITH:

Good afternoon. My name
is Katie Smith. And I'm here
on behalf of the Pineland
Preservation Alliance, a
nonprofit organization
dedicated to the protection of
the New Jersey Pinelands. Part of which fall within the Delaware River watershed. I am here to support a complete ban on fracking, specifically to urge the Commission to ban export of water and the receipt of fracking wastewater in amendments.

These activities are currently banned under the moratorium and they should remain prohibited. The DRBC already discourages both the exportation of water and the importation of wastewater into the basin.

It is time for these sentiments to become policy. The Basin experience is not infrequent drought and water scarcity partially due to over allocation of water by state governments.

In New Jersey, 12 of 20
watershed management areas will experience water stress if current allocations are fully utilized.

Each fracked well requires approximately 4.5 million gallons of water, and some require up to 20 million gallons of water, water which is permanently removed from the hydrologic cycle.

It's inappropriate for New Jersey and the rest of the Basin to allow diversions for fracking.

The New Jersey Pinelands is positioned in the Kirkwood Cohansey aquifer, an unconfined 17-trillion gallon aquifer. Withdrawals from unconfined or surface aquifers not only impact future availability for human consumption, but create immediate impacts on wetlands and riparian ecosystems.
Fortunately, there are rules in place to protect the Pinelands from water export, but other areas do not have these protections.

DRBC currently requires assessment of diversions based on drought flow, which is insufficient to properly protect wetlands, riparian systems, or the biotic communities that rely on them.

For these reasons, a complete ban on export of water is required. Further, the Commission admits that the basin waters have limited assimilated capacity and limited capacity to accept conservative substances without significant impact.

Conservative pollutants such as salt and metals are frequently found in wastewater.

A significant risk when dealing
with produced water waste is the proprietary nature of the fracking fluid, which makes it incredibly difficult for the DRBC to properly regulate these effluents.

Additionally, the requirement that companies — background levels prevents areas of contamination from recovering.

For these reasons and the many more that have been mentioned today, I ask you to put forth a ban on fracking, the export of fracking — export of water for fracking to be dismissed. Thank you.

HEARING OFFICER:
Maya Van Rossum would be next. And then Alicia Dorsey. And then Steve Bacher. Ms. Van Rossum, when you're ready, please.

MS. VAN ROSSUM:
Good afternoon. My name is Maya Van Rossum. I'm a Delaware River Keeper, and we are seeking on behalf of the Delaware River Keeper Network.

Nobody is safe if we allow drilling and fracking for gas from shale in our watershed. If the fracking industry were allowed to advance in our watershed, we will be signing up for devastating and irreversible harm to our water, air, health, economy, and communities.

Up to 23 acres of land would be damaged for every well pad, including forests, wetlands, and needed water recharge areas. We would sacrifice billions of gallons of water to this industry. We would be increasing methane in the atmosphere, magnifying the pace and impact of climate
instability resulting in more floods and droughts to our watershed.

Where fracking happens, water wars are real. We do not want them here.

We do not want our farmers, our eco-tourism business owners, our voters, our fishers, and everyone who depends upon water, which is frankly all of us, to have to be battling with the frackers for water.

But that is what will happen if we allow fracking in our watershed. And that is also what will happen if we allow these regulations to advance as written. Because while they advance the long promise of banning fracking, they include the opportunity to bring frack wastewater into our watershed for disposal, and to
suck water out of our basin in order to support and do fracking elsewhere.

More fracking anywhere means more toxic wastewater and fresh water needs, which means increased pressure on and use of our watershed to renew fracking that is devastating communities elsewhere.

Frankly, this is both an untenable and an immoral stance for the Delaware River watershed to take.

Fracking anywhere also means more pipelines, and compressor stations, and gas export facilities inflicting more harm on our natural resources and communities, both within the watershed and beyond. Too many have already suffered at the hands of this infrastructure.

And so the Delaware
River Keeper Network supports that portion of the regulatory proposal that bans fracking in the Delaware River watershed. But to be fully acceptable, the Delaware River Basin Commission's regulations must say no entirely to every aspect of the fracking industry, including the wastewater and the water withdrawals, so that we cannot allow our watershed to become a sacrifice zone, nor allow our watershed to be used to sacrifice others, including future generations who will be saved or sacrificed by the decision that we are making today. Thank you.

HEARING OFFICER:
Thank you. Alicia Dorsey. And then Steve Bacher. And then Susan Carty. Okay. Ms. Dorsey?

MS. DORSEY:
Yes.

HEARING OFFICER:
That's a very
well-behaved baby.

MS. DORSEY:
Thank you. So I'm
Alicia Dorsey. This is my
granddaughter, Katie Dorsey.
We are testifying today with
hopes that we can achieve a
complete and permanent ban on
natural gas drilling, and
fracking, and all related
activities including water
waste processing, and discharge
from the water withdrawals,
from drilling and fracking
operations through the Delaware
River watershed.

I, along with others,
have been advocating for
approximately --- the dig for
fossil energy is causing major
damage to our health when
allowing these fracking
companies to dump their waste into the Delaware River Basin. A ban on fracking in the Delaware River Basin would limit water pollution.

I'm begging you to protect our natural environment and source of life. We need the Delaware River Basin to be fossil waste-free. And we are depending on you, our Commission, our Delaware River Basin Commission, to protect our natural resources at the Delaware River Basin.

My granddaughter and the rest of my grandchildren, along with the rest of us in Pennsylvania, have a right to clean air and clean water. We have laws to govern the quality of our air and our water. And these laws, along with the moratorium, need to be enforced.
After exhaustive studies, the state of New York prohibited fracking based on environmental and public health analysts.

The New York Department of Health conducted that the overall weight of evidence demonstrated that the likelihood that adverse health outcomes and environmental impacts on fracking could not be prevented, leading to the governors decision to ban high volume hydraulic fracking in the state.

The State of Maryland also currently banned fracking after years of study based on potential or at-risk public health and environmental impacts. And it's really for my grandchildren that I'm here. Because these effects will affect us right now, but it's
more or less for the future of
my grandchildren and their
health and their safety.

HEARING OFFICER:

Thank you, ma'am. Steve
Bacher will be next. And then
Susan Carty. And then Karen
Melton. Mr. Bacher,
B-A-C-H-E-R. I might be
mispronouncing it. Not here.
I'll call that name again.
Susan Carty, please. Okay.
Ms. Carty, when you're ready.
All right.

MS. CARTY:

All right. Thank you.
I do have a letter that was
sent. I'm the President of the
Pennsylvania League of Women
Voters. And I do have a copy
of the letter from January 2017
that was submitted to the River
Basin Commission from four
state leagues. I'll pass that
on shortly.
HEARING OFFICER:

Good.

MS. CARTY:

Okay. Again, I'm Susan Carty, President of the League of Women Voters of Pennsylvania. The Pennsylvania League has been deeply involved with issues related to shale gas activities and oversight for several years.

Over the last ten years, we undertook a series of in-depth studies on the issues covering environmental and economic impacts, regulations, permitting, and most recently, health impacts.

Our position supports, quote, the maximum protection of public health and environment, in all aspects of Marcellus shale natural gas production, site restoration, and delivery.
And therefore, we are here today to appeal to you with a deep interest in the proposed rule that is under consideration.

The League strongly supports the Commission's proposed prohibition of high volume hydraulic fracking given its determination that the risk to the public health and water quality are significant.

The decision also is consistent with the findings and policy of the New York Department of Environmental Conservation, which found that there are no feasible or proven alternatives that would adequately avoid or minimize adverse environmental impacts, and which prohibits high volume hydraulic fracking in the upper portion of the basin.

We believe that
establishing a uniform basin wide policy to maximize the protection of water quality and the public health is of critical significance.

In light of the Commission's cautious and protective decisions on high volume hydraulic fracturing, we're concerned that the proposed rule appears to offer a degree of leeway in handing of fracking related wastewater. We appreciate the rule proponents which close a loophole in the federal regulation. And we support the Commission in placing stricter conditions on wastewater treatment at these facilities.

We hope to see clearer detail on the permitting conditions that the Commission intends to impose for projects involving treatment and
discharge of wastewater within the basin.

We believe that the maximum protection of public health and the environment need to be applied to handling of produced waters, as well as to high volume hydraulic fracturing operations.

We thank the Commission for the opportunity to comment today on these rules. And we hope that we will be able to feel confident in your decisions in the future.

HEARING OFFICER:
Thank you, ma'am.

MS. CARTY:
Thank you.

HEARING OFFICER:
here. Okay. Let’s see. That was Susan Carty. And then Karen Melton would be next. Karen Melton? I’ll try that name later. Margery Schab? Margery Schab? Okay. Margery Schab. All right. Eve Miari, MIARI? If you come forward, ma’am. You will be next. All right.

I want to make sure I have this right. Karen Melton is not present. Margery Schab is not present. Okay. This is Eve Miari. And then after that is Harvey Chanin. And then Sister Kate O’Donnell.

All right. Ms. Miari, please when you’re ready.

MS. MIARI:

My name is Eve Miari, and I’m an advocacy coordinator with the Clean Air Council. The council is deeply concerned that DRBC’s proposed
regulations leaves open the possibility that industry could withdraw water for fracking operations and treat or dispose of fracking wastewater within the basin.

In order to protect the Delaware River watershed and the health and safety of all who live in this region, the regulations must be strict and specific and must hold up against the powerful, private interest of the oil and gas industry. The regulations must clearly state a complete ban on fracking, extraction, disposal, and storage.

The Delaware River watershed provides a significant source of clean drinking water for 15 to 17 million people. Extraction of these waters for fracking essentially amounts to a theft.
of a natural resource shared by millions.

The proposed regulation should clearly state that no water can be removed from the Delaware River Basin to support fracking operations. It should be the policy of DRBC not to issue such permits under any circumstances.

According to the EPA, there are more than 1,000 known chemicals, a serious and well-documented public health impact, that are used in fracking. And many more are considered proprietary and have not been disclosed.

DRBC or DEP cannot effectively and continuously test for thousands of known substances, let alone unknown chemicals, the content of which may vary day-to-day and well-to-well. The reality is
that there is no reasonable testing program that would ensure the public health and safety of our citizens.

The council is concerned that disposal of fracking wastewater may lead to higher than acceptable levels of radioactive material in the watershed.

A 2013 study from Duke University indicated that fracking wastewater disposal can lead to an accumulation of radium and stream sediment. Samples from Western Pennsylvania rivers and creeks downstream of treatment plants had levels of radioactive material 200 times higher than samples taken upstream.

The council is concerned that DRBC's proposed regulations did not include a specific ban on the use of
injection wells for storing contaminated fracking waste. Fracking wastewater storage, including the use of injection wells, should not be permitted in the Delaware River Basin under any circumstances. And this should be explicitly stated in the regulation.

The risk of ground and surface water contamination is too high and the risk to public health unacceptable. And there is no real possibility of effective remediation.

In summary, the waters of the Delaware River Basin are a precious protected resource that millions of people depend upon for drinking and other uses.

In Pennsylvania, citizens are guaranteed by Article 1, Section 27, the right to clean air and pure
water. The Delaware River Basin Commission, as a trustee of these resources, has an obligation to uphold these rights and protections.

As a lifelong resident of the Delaware River Basin and as a mother of two small children whose health and well-being depends upon clean, safe, drinking water, I strongly urge the DRBC to enact a complete ban on all fracking operations in the Delaware River Basin, including extraction, disposal, and storage. Thank you.

HEARING OFFICER:

Thank you. Harvey Chanin. He's here? All right. And then Sister Kate O'Donnell will be after him. And then Paul Roden. Okay. Sir, if you would please, when you're ready.
MR CHANIN:

Good afternoon. My name is Harvey Chanin. As a lifelong Philadelphian, I am asking you to protect our water supply. And for our transcriptionist in Philadelphia, water is spelled W-O-O-T-E-R. I'm sorry.

Considering that one percent of the earth's water is drinkable, how we manage water will define our future and the future of the planet. Since 99 percent of the water is groundwater, how we look after our aquifers is the most critical component.

Although not directly addressing the regulations, the rules may allow the injection of wastewater within the basin. The injection of wastewater does not treat waste or remove contaminants. It simply moves
the potential for the toxic wastewater to cause environmental and water resource pollution and water quality degradation from one place in time to another.

Even if treated, dumping fracked wastewater is dangerous because it contains over 600 different toxic chemicals, many of them carcinogenic.

Also, the danger of radioactive wastewater is a potential to contaminate drinking water or enter the food chain through fishing and farming.

The New York Times recently found never reported studies by the EPA, and a confidential study by the drilling industry that all concluded that radioactivity and drilling waste cannot be fully diluted from the rivers
and other waterways.

It makes no sense to ban fracking, but allow the toxic waste to be dumped in the watershed. We need a permanent ban on all fracking, and a renewed focus on using renewable energy resources.

I'm a retired public school educator. And for a while, I was a science teacher in a K through 8 school. And I remember well how my kids responded to a lesson in how the water and environment is being degraded.

We taught the course about our individual responsibility to protect the environment. But the kids wanted to know what the government is doing to protect our air and water.

I remember well what one student asked me. Quote, why
would the government knowingly permit corporations to dump crap into the water and air? I answered unfortunately, not all people are interested in welfare.

All too often, in a capitalist society, profits come before people. If the Eagles can make it to the Super Bowl, then I guess we can count on you to keep our water safe. Thank you very much.

**HEARING OFFICER:**
Sister Kate will be next. And then Paul Roden. And after Mr. Roden will be Gail Heath. Okay. Sister, please.

**SISTER O'DONNELL:**
Okay. I am sister Kate O'Donnell of the Sisters of Saint Francis of Philadelphia, a congregation of over 400 women. I thank you for the
opportunity to be here today to
publicly speak to a revised set
of draft regulations.

    Our Franciscan charism
calls us to be strong
proponents of ecological
consciousness with sustainable
development goals and the care
of creation.

    We believe that
prohibition of hydraulic
fracturing and other shale gas
activities within the basin is
of upmost importance and a
necessity.

    Protecting and
conserving the water resources,
and promoting comprehensive
practices for water management
is vital in a region that has
seen many negative impacts of
shale gas expansion and
exploitation in the state of
Pennsylvania.

    And I think this is

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worth repeating. The key is in our Pennsylvania Constitution, article 1, section 27. The people have a right to clean air, pure water, and to the preservation of a natural scenic, historic, and aesthetic values to the environment.

Excuse me.

Pennsylvania's public natural resources are the common property of all the people, including the generations to come.

The Commission knows that the socioeconomic value of the Delaware River Basin is beyond description, and the Commission also knows that exposing it to any of the byproducts of natural gas waste and other greenhouse gas emissions would be illogical and detrimental to the life of the River Basin.
It is imperative that any regulations related to the Delaware River Basin would further protect the water and human right to water for the millions who need access.

This river basin has been the economic engine for over 400 years. Excuse me. And continued regulation and monitoring is vitally important for future generations.

I applaud the DRBC for taking extensive steps and time to address regulations and presenting them at this and other hearings in our region.

We don't want the beauty of the basin to be exposed to toxicity as in butane, methane, ethane, and other excessive greenhouse gas emissions that are associated with hydraulic fracturing and the extensive infrastructure that this
industry requires.

HEARING OFFICER:
Thank you, Sister.
Okay. Next is Paul Roden. And then Gail Heath. And then Carol Armstrong.

Okay, sir. When you're ready, please.

MR. RODEN:
Good afternoon. My name is Paul Roden. I live in Lower Makefield Township in Bucks County.

I am here today to call on the Delaware River Basin Commission to ban fracture --- excuse me. I have allergies. The compounds that are in the fracking fluids are radioactive. They're deadly. They're toxic. How can you ban fracking and accept the fracking waste? It seems crazy and stupid to me.

You have volatile
organic compounds, which only
can be separated by activated
carbon or charcoal. My
municipal waste Authority,
Morrisville Municipal Waste
Authority cannot handle the
existing domestic waste, let
alone handle industrial waste
from fracking. This is insane.

The fracking industry is
exempt from the clean water and
the clean air, safe drinking
water and other environmental
acts. How is that possible?
Well, money talks, BS walks.

So how can the DRBC
regulate it when they have no
inspectors or monitors to do
this? This also seems stupid
and insane to me.

So it's unsafe to allow
drilling of natural gas with
fracking pollutants in the
Delaware watershed. We have to
rely on the wisdom of the
Commissioners to uphold their vows and oath of office to the Compact and fulfill their mission to protect the water supply.

And if we have problems with droughts, and we couldn't even have the re-enactment of Washington crossing the Delaware in the winter, what's going to happen in the summertime if they're drilling 100,000 gallons a day? This also seems stupid and insane to me.

So this is all unsafe. New York State has seen the wisdom and banned it. So why should we allow it on this side of the river? This also seems stupid and insane.

So we have to fulfill the oath of office to the constitution of the Commonwealth of Pennsylvania,
which has also been alluded to
in previous speakers. But I
will say it also again.

Article 1, Section 27,
it states that people have a
right to clean air, pure water,
and to the preservation of the
natural, scenic, historic, and
aesthetic values of the
environment.

Pennsylvania's public
natural resources of the
Commonwealth are for all the
people, including generations
yet to come. As a trustee of
these resources, the
Commonwealth shall preserve and
maintain for the benefit of all
the people.

So in conclusion I ask
the DRBC to do the right thing,
ban fracking forever in the
Delaware River Basin. Thank
you.

HEARING OFFICER:
Is Karen Melton here?

Karen Melton? Is Margery Schab here? That concludes the list of the people that signed up previously or before today. And then for today's list, Gail Heath will be next. And then Carol Armstrong. And then Jan Filios. And Ms. Heath, is that you?

MS. HEATH:
Yes.

HEARING OFFICER:
Excuse me, one second.

MR. RAPP:
I didn't hear my name called.

HEARING OFFICER:
What's your name, sir?

MR. RAPP:
I haven't heard my name.

HEARING OFFICER:
Say your name.

MR. RAPP:
Rapp, R-A-P-P.
HEARING OFFICER:
Say again?

MR. RAPP:
Rapp, R-A-P-P.

HEARING OFFICER:
I have not gotten to
your name yet. And I'm not
sure that it's down here yet.
I don't see your name here.

MR. RAPP:
I was previously signed
up.

HEARING OFFICER:
Okay. We'll see if we
can get to it. And I'll check
as the speakers are going here.
Okay? Okay. Ms. Heath,
please.

MS. HEATH:
Yes. I'm Gail Heath.
I'm a resident of Wilmington,
Delaware and I'm a member of
the Delaware Chapter of the
Sierra Club. To have a ban on
fracking, but allow the
withdrawal and discharge is absurd. The danger will still be the same. As many speakers have made clear, there is no way to remove many of the hundreds of toxic chemicals in fracking waste.

Delaware has spent decades cleaning up the Delaware River to re-establish native population of aquatic wildlife, such as the endangered Delaware species of Atlantic sturgeon. These toxins will destroy native aquatics. And impact the livelihoods of 160,000 jobs depending on the clean water. Not to mention our own health.

Withdrawals will cause low river levels, especially in dry summers resulting in salty ocean water moving further up the river. This is to the detriment of oysters and other
vital aquatic species that people, as well as our abundant birds and wildlife, depend on. Wells in Southern Delaware can become contaminated with salt, as well as fracking chemicals.

In conclusion, a ban on fracking but allowing withdrawal and discharge does nothing. Only a total ban of all aspects of fracking is acceptable. Thank you.

HEARING OFFICER:

Thank you. That was our 38th speaker. Mr. Rapp, you are listed here. Carol Armstrong will be next. And then Jan Filios. And then Theresa Heinsler.

All right. Go ahead when you're ready.

MS. ARMSTRONG:

Thank you.

HEARING OFFICER:

Thank you.
MS. ARMSTRONG:

I'm Carol Armstrong. I live in the Delaware River Basin. I'm a neuropsychologist, scientist, and healthcare provider. I'm also a massive watershed steward and volunteer with the excellent environmental organizations that protect our clean water and biological diversity, which go hand-in-hand and without which, they would be lost.

My comments are in support of the DRBC's moratorium of all gas drilling, hydraulic fracturing, water controls, and discharges throughout the Delaware River Basin.

I am hopeful that the DRBC will rule that these bans are full and permanent in order to restore and conserve our
beautiful, exceptional,
congressionally designated
national wild and scenic river,
the Delaware, and the National
Delaware estuary, because of
their irreplaceable beauty,
source of drinking water, and
ecological productivity that
earned them protections from
commercial interests that
threaten them, despite
regulations.

Once this is damaged,
the balance cannot be restored
or recovered.

The DRBC has recognized
that water volumes needed for
fracking can adversely effect
aquatic ecosystems, river
channels, riparian resources
and wetlands.

The entire non-tidal
Delaware River is protected by
DRBC's federal protection water
regulations that state that the
water quality cannot be diminished in any way. DRBC policy is being broken by permitting drilling and fracking, such as the importation of wastewater into the Delaware Basin.

Further, drilling and fracking could not be done safely or without environmental contamination. The method of dilution and sequestration will only --- will and have resulted in slow and continuous decline in groundwater and surface water quality.

The EPA documents that seven to nine percent of the water projected for fracking is permanently removed from the water cycle.

Findings are that 80 to 90 percent more of water is used in Marcellus and other sites is fresh water and
developing methods for fracking are requiring increasing volumes of fresh water.

There is a shift in social opinion, which is merging most clearly in new generations of voters, that the value that comes from environmental rights must not take second place to the values that come from commercial development.

The risk for human health and nature, the concerned health professionals of New York, and the Physicians for Social Responsibility reviewed at last count 685 peer-review papers investigating gas drilling and hydraulic fracturing.

The 2016 Fourth Edition of their review showed a great majority and growing consensus of scientific evidence that the
risks of this type of activity include earthquakes, adverse impacts on water, on air, on agriculture, on public health and safety, on property values, on claims, disability, and on economic vitality.

They, quote, uncovered no evidence that fracking can be practiced in a manner that does not threaten human health, end quote.

The long-term effects are unknown because government resisted inquiries, especially about long-term risks. For example, the introduction of hundreds of new chemicals in fracking, most of which are not now and never investigated for long-term effects on humans and ecology is extremely concerning.

There needs to be monitoring of the changes to
water supply in the hydrologic cycle and analysis of how water removal and discharge from fracking is affecting our water resources. A scientific study with resulting knowledge about the health of our environment is one of the most important contributions I can think of for future generations.

HEARING OFFICER:
Jan Filios will be next.
And then Theresa Heinsler. And then Wendy Goetz. Is this Ms. Filios?

MS. FILIOS:
Yes.

HEARING OFFICER:
Whenever you're ready.

MS. FILIOS:
Thank you. Yes. Jan Filios. I'm a Bucks County resident and property owner. I concur completely with the previous speakers.
The Pennsylvania Constitution states that people have a right to clean air, pure water, and to the preservation of the natural, scenic, historic, and aesthetic value of the environment.

As trustees of these resources, the Commonwealth shall preserve and maintain them for the benefit of all the people.

There is a race against time to provide us with clean energy. We have painfully discovered that hydraulic fracturing for natural gas can be permanently harmful. It pollutes our air, our bodies, our land, our water, our wildlife, and our values.

The wastewater is no less toxic. Taking our river water for fracking is unacceptable. There is no
place in a healthy environment for any of these activities. No place.

In addition, fracking and its wastewater can cause economic degradation. Tourism in our Bucks County is thriving. Our fishing, our vineyards, our blueberries, our barns, our bed and breakfasts, our restaurants, our water recreation, all depend on an ample supply of clean air and water. Toxins and tourism don't mix. Thank you for this opportunity.

HEARING OFFICER:
Thank you. Next would be Theresa Heinsler and then Wendy Goetz. And then Michelle Roberts.

MS. HEINSLER:
Theresa Heinsler. Money is power, but knowledge is also empowering. Fracking, I
believe, is a death knell, not just to the Delaware River Basin, but to the oil industry itself. Why would the biggest profit maker in the U.S. resort to such a costly extracted method resulting in such a poor quality product? Is it because the U.S. consumes 20 percent of the oil, only having two percent in the U.S.? Partially, yes. But also because oil and gas is a non-renewable resource. Oil and gas from Texas and Oklahoma are rapidly depleted. The 2,000 wells or more in the Gulf of Mexico are also being depleted.

Oil and gas sees the depletion, but not the solution. Why? Because it also means the gas industry is in the death knell itself. Is this why the conservation of
resources or developing clean energy are not being recognized? Why they cannot see it as nails for their own coffin. They prefer to see it as nails in our coffins.

The Delaware River Basin is already a victim of oil and gas. How? Because of the many refineries, the oil tanks that line the Delaware, of the pipelines that run through, at least I know, Heinz Refuge, which is adjacent to the airport. And also by the airplanes who use the Delaware as a partial landing for the airport, the Philadelphia Airport.

I live here and I can vouch for it. They go over it continually like every two minutes or so at times.

And what is not generally known is that
airplanes have to carry by law an extra supply of fuel for emergency landings. But they need to discharge that fuel before they land. And to where? No one knows. I hope it's not in the Delaware, at any rate, I want to say ---.

HEARING OFFICER:
I must stop you, ma'am at this point, okay. Just like everybody else.

MS. HEINSLER:
Okay.

HEARING OFFICER:
Okay. Thank you very much.

Wendy Goetz will be next. Then Michelle Roberts. And then Naomi Laver.

MS. GOETZ:
Thank you. My name is Wendy Goetz. I'm a citizen of Freeland Heights in New Jersey and I would like to ask you to
wear a mile in my bra. Our
country has taken a correct
turn in protecting people from
harassment and physical harm.
I'm here today to ask and
demand that we take the correct
turn here, too.

As a constituent, I know
that special protection water
regulations must be kept in
place and honored for the
river, the basin, the
watershed, the people, and the
planet. Our fourth speaker
today spoke concerning the
unborn as well.

The Delaware watershed
holds all the people's and the
planet's generations in its
mouth. So wear a mile in our
bras.

As an older woman, as an
older mother, I took a chance
at having a child. I waited
until I was having the ability
the respond to a child's needs. With these types of industries and practices, we can no longer respond.

Fracking and all related industries and activities, including water withdrawals, and frack-based water remediation, and the D-minus infrastructure takes away our human rights and abilities to respond.

The shale gas industry has received unprecedented extensions from environmental and public health laws and do not even have to disclose their chemicals.

Governor, wear a mile in my bra and protect all of your citizens by not allowing the gas and shale industries in the river, the basin, or the watershed.

Army Corps of Engineers,
wear a mile in my bra by
claiming your ability to
respond and strengthen our
national security of water
protections.

Claim your ability to
respond by energizing a sane
renewable energy economy.
Claim your ability to respond
by reducing the risk of
disastrous water contamination
event. It is your stated
mission. Do your job.

I thank the DRBC for
doing their job. I commend
them for having the banning
fracking regulations. Thank
you very much. As a mother, a
wife, a human, and a
constituent, I am razor-focused
on justice and equality. You
all are employed by me, by us,
paid for by our tax dollars,
not dirty energy platforms. We
need an even ground for
sustainable future for the generations, people, and planet. You must provide that.

So wear a bra in the mile, for a mile in all the bras of all the mothers who will not be able to respond to their children's basic needs; clean air, water, and soil.

Thank you very much.

HEARING OFFICER:
Michelle Roberts is next.

MS. ROBERTS:
I have to follow that?

HEARING OFFICER:
Hold on. Michelle Roberts will be next and then Naomi Laver. And then Alyssa Bradley. Okay. Michelle Roberts, please.

MS. ROBERTS:
Hello. My name is Michelle Roberts. I'm the national co-coordinator for the
Environmental Justice Health
Alliance for chemical policy
authority, known as EJHA. I'm
also the director of outreach
for coming clean. I'm a
weapons biologist. I have a
background in energy and
environmental policy.

Water is life. Water is
sacred. These particular
waters along this route have
been the realm of many of the
people that I serve. Those who
bought themselves into freedom.
Harriet Tubman, our native
brothers and sisters who were
forcefully removed from the
lands that they call their own.
Now, they survive.

The people that I
represent were unfortunately
impacted by the entire spectrum
of the oil and gas extraction
industry. And that must stop.
No longer must we bear the
burden, people of color and the poor. It must be an all right and outright ban. Not just the Delaware River, but across the nation.

We are currently under political times where public health and the environment are under assault. This is indeed an even deeper egregious assault called environmental genocide for the folks that we represent.

The states can't even handle what the feds are about to put down and they know that. So having additional egregious behavior is unconscionable.

We call upon the moral and courageous, the courageous moral authority of each and every governor to honor that of mother earth and her children. Water is the life blood to the mother. And the children who
are living disproportionately should not be.

So we call, and not only call, we demand as voters, as people of color and the poor, who --- actually many of the folks that I represent probably aren't in this room and some of them are.

But what we say together, we stand for the rights of mother earth and her children. And indeed, I leave you with the fact that water is life. Water is sacred. And we will be praying that your moral heart and courage is pricked to stand for the true justice that some folks say this country was created to be.

So we call for the human rights of those left behind, but in addition to that, those standing in privileged stations right now holding it down for
their properties. Enough is enough. No more will my people bear the burden of discrimination and harm. Right on.

HEARING OFFICER:
Naomi Laver, please come forward. And then Alyssa Bradley. And then Emily Worth. Okay. Ms. Laver, please.

MS. LAVER:
Hi. My name is Naomi Laver. And I'm a high school junior at Germantown Friends School.

Many passionate speakers we've heard today have offered undeniable evidence that fracking is extremely dangerous for our already deteriorating environment and should not be permitted anywhere.

Fracking and the processes involved with fracking in the Delaware River
Basin pollute our drinking water putting all humans and animals who depend on that water at risk.

We need to be doing everything we can to preserve our water, not putting frack waste into it.

Therefore, I believe that the Delaware River Basin Commission should instate a full and permanent ban on fracking including banning fracking wastewater disposal and water withdrawals.

To me it's simple. Clean and safe water is an absolute necessity and a human right. Anything less than a complete ban on all aspects of the fracking industry that put our water at risk of serious contamination is completely unacceptable.

As a member of the
rising generation, I am calling on the DRBC to ban fracking and all fracking-related activities now for the safety of my generation and future generations to come. Thank you.

HEARING OFFICER:
Alyssa Bradley. And then Emily Worth. And then Thomas McCaney. And this is Ms. Bradley.

MS. BRADLEY:
Hi. My name is Alyssa Bradley. I'm the energy organizer for Clean Water Action. We have over 150,000 members within the state of New Jersey, but we are a national organization that has consistently and loudly opposed fracking from day one.

Everyone here has said basically all there is to say, but since this is only one of
two very inconvenient ways of submitting public comment, you're just going to have to sit through my redundancy. I'm sorry.

I would really love to say thank you for proposing a ban on high volume hydraulic fracking in the Delaware River Basin. But you know what? I am not going to. Because the rest of the proposed rules renders that ban useless. You know, let's lay this out. If we're proposing --- if the DRBC is proposing a ban on fracking because of the damage it can do to the basin, but still allowing the dangerous byproduct wastewater to be treated and disposed of in that same Basin, that's a distinction without a difference.

We need the Commission
to do its job and protect the Delaware River on which 17 million people rely on for their drinking water. Governor Cuomo, Governor Murphy --- really happy to have your governor working, by the way. Governor Wolf and Governor Carney, if you allow wastewater discharges and water withdrawals in the Delaware River Basin, you are ignoring the science. You are ignoring the dangers. You're knowingly doing irreparable harm to the Basin that it is your job to protect and to the people who you swore to serve.

It is past time. Ban fracking and completely ban all fracking-related activities in the Delaware River Basin. Not tomorrow, not next year, now. Thank you.

HEARING OFFICER:
Thank you, ma'am. Emily Worth will be next. And then Thomas McCane.

And then Jonathan Lutz.

**MS. WORTH:**

Hi. My name is Emily Worth. I'm the national organizing codirector for food and water watch. And I'm speaking here today with the tens of thousands of members that we have in New York, New Jersey, Pennsylvania, and Delaware.

We're here today. We've been involved in this fight for protecting the Delaware River Basin. And I remember actually standing in Trenton when the Commission made the wise decision not to allow fracking or any of its associated activities in the Delaware River Basin.

And since that time,
what we've seen is states like New York and Maryland ban fracking. But also hundreds of studies that demonstrate the harm that has been really ultimately described here today.

So we're here today with a simple message for the Commission and for Governor Cuomo, Governor Murphy, and Governor Carney and Governor Wolf, that we need to protect the Delaware River watershed and the drinking water source of 17 million people by banning fracking, but also fracking waste and the water withdrawals from fracking in other places. This is really the only way that we can prevent the harms for this river basin.

And I would like to take just a minute to focus on the risks allowed by fracking
wastewater processing through these draft regulations. As you have heard from many of the other speakers, there are countless studies that now show that there's no safe or effective way to treat and discharge the highly toxic materials found in the fracking wastewater.

Studies have found more than 750 different chemicals are used by the industry, many of which are not regulated, many of which don't even have proper safety assessments. But we do know that those include known carcinogens and chemicals, and many others that cause harm to human health and the environment. The waste also includes naturally occurring radioactive materials.

And in fact, as others
have mentioned, a study released just in the past week --- that's how much research has come out on this issue. It was conducted by researchers at Duke University. And they found that levels of radium, again, a known carcinogen, in the river sediment in the Allegheny River in Western Pennsylvania are about 650 times higher below water treatment plants than at their same heights upstream. And some of this came from treating actually conventional oil and gas waste, but as the leading researcher said in the newspaper, quote, the clear message of the study is that any brine containing radioactivity should not be discharged into the environment.

So the question we have
here today is why would the
DRBC now move to allow the
processing of fracking waste in
the Delaware watershed? It
just makes no sense.

And so we are here today
to call on Governor Wolf,
Governor Cuomo, Governor
Murphy, and Governor Carney to
protect your residents' 
drinking water by banning
fracking and all associated
activities.

We will not settle for
this compromise you put
forward. We will only accept a
full ban on fracking. Thank
you.

**HEARING OFFICER:**
Okay. Steve Bacher was
not in the room when I called
his name. But if he's here,
come forward.

**MR. BACHER:**
Thank you very much for
the opportunity to speak. My name is Steve Bacher. I'm a cofounder of 350.org Bucks County and Bucks Environmental Action. I live in Lower Mayfield in the 8th Congressional District of Pennsylvania where I am a candidate to run for Congress, as a matter of fact.

And I just would like to share with you that, as I'm sure many speakers have said already, we would like a complete ban on all aspects of fracking, not just the drilling. We can't be taking water out of the Delaware that's going to hurt the ecosystem.

It's going to impact our drinking water. We can't be dumping poisons into the river basin, which will eventually get into all of our drinking
water. In fact, the whole ecosystem, as well as our people's drinking water. The only way to keep our drinking water safe for these 17 million people who depend on the river is to keep all aspects of fracking out of the Delaware River Basin. Thank you.

HEARING OFFICER:
Thank you, sir. Thomas McCaney. I might be mispronouncing your last name. But it looks like it's M-C-C-A-N-E-Y. Okay. No response on that. Mr. Rapp will be next. And then after Mr. Rapp is Edward Leydon. And then Bill Cozzens. Okay. When you're ready, Mr. Rapp.

MR. RAPP:
I'm Mr. Rapp, an impacted property owner in Pennsylvania. A resident of Jackson, New Jersey. And
firstly, I would like to call on my new governor to uphold the Compact with the Delaware River Basin Commission and disallow the dumping, and storage, and water withdrawals proposed.

So good afternoon. I stand before the Delaware River Basin to demand that they not amend the comprehensive management plan. So not to adopt proposed 18 CFR part 440 and 4011.35. Proposed, the introduction of frack waste into the basin is a violation of the Congressional Compact with the American people. The Commission must enforce the comprehensive management plan and defend against the industrialization of this precious American commodity. Do not be influenced by the industry's claims of
multi-billion dollar inflow into Pennsylvania. And the fact that they have claimed not to have led to widespread negative impact.

All you need to is go to at the places where they are fracking currently and you will see plenty of negative impact.

With almost 10,000 public complaints filed with the Pennsylvania Department of Environmental Conservation, it has been a life-altering public health hazard in Pennsylvania. 685 peer-review studies conclude that there is evidence of negative impacts on water, air, and human health with over 300 documented cases of private well water contaminations caused by the oil and gas operations in Pennsylvania alone.

The well pad ban is much
appreciated and widely supported, but to allow the frack waste to be emptied into the watershed is a violation of the comprehensive management plan. Nor was the frack waste considered when the draft environmental impact statement prepared in 1986 by the national park service.

The DRBC considered --- the citizens advisory council and many of the public and private interests. It wasn't considered because it didn't exist. Fracking didn't exist.

I also have here the environmental impact statement. I was wondering whether the industry has one of those that we can get a newer copy of now that we know how fracking influences our environment.

So I call on the governors not to break with
their clear mission of conservation for recreation, and the preservation of the historical significance of the Delaware and its role that it played in the founding of our great nation.

This will be the greatest miscarriage of justice that ever has been inflicted on the American people. Thank you very much.

HEARING OFFICER:
Edward Leydon will be next. And then Bill Cozzens. And then Victoria Strange. Okay. Sir, when you're ready please.

MR. LEYDON:
Your Honor, thank you very much for the opportunity to speak. I'm speaking as an individual and as a resident of Solebury Township, Bucks County, Pennsylvania. It's
about an hour north of here
where my family and I have a
small farm. And just to bring
this down to my individual
level, our farm has a lot of
water on it. We have a spring.
We have two streams that flow
through our farm. We have a
pond. And we also have
groundwater that's very close
to the surface. We have a very
shallow well where we have
gotten our water for 40 years.

According to the oil and
gas industry, I should be able
to sell the rights to fracking
on the land that I own because
we're on a shale formation.
And there might be oil and gas
there, but as we all know,
there's a ban on fracking in
the Delaware Basin. And that
has been decided that that's
really not a good idea.

But looking at these
regulations, the proposed rule that has been issued, there are two exception here that say that I can ask, I as an individual property owner, can ask for review and approval by the DRBC for their interpretation and discretion for approval to sell the water from my farm, the surface water or the groundwater, to people who want to take it out of this area for fracking either Marcellus shale or somewhere else.

Now, I can ask for that and so can anyone else in my position who has the land, and who has the water to sell.

Secondly, I can ask for the review and approval, and their interpretation and discretion for approval of the transport, treatment, storage, and disposal of wastewater from
fracking. I look here on the summary and it's called produced water, which I think is someone put a euphemism in there for hazardous and contaminated wastewater.

So maybe I can even get that water back and set up a wastewater treatment facility on my property. I have enough acreage. I can do that. I can treat it. I can store it. I can transport it all here in Solebury Township, Bucks County, Pennsylvania where fracking is not permitted. As everyone before me has indicated, that is a contradiction.

So I say that if you leave the doors open with these proposed rules and regulations, it is going to happen. People like me and other landowners are going to apply for and
argue that they have a right to sell water, to dispose of water, to try and treat the water, although I don't believe it can be treated. And as somebody quoted Ben Franklin about the value of water, when you don't have it, when you don't have good drinking water, you realize the value of water.

**HEARING OFFICER:**
Thank you, sir.

**MR. LEYDON:**
Thank you.

**HEARING OFFICER:**
Bill Cozzens will be next. And then Victoria Strange, and Carol Weston-Young. Sir, when you're ready.

**MR. COZZENS:**
Good afternoon. My name is Bill Cozzens. I'm a resident of Philadelphia and a member of Germantown Friends
Meeting in the Germantown section of Philadelphia. The meeting approved a minute after meeting for business back in the late part of 2017.

As such, the statement that I'm going to read represents the feelings of more than 200 members of our Quaker meeting.

Germantown monthly meeting at the Religious Society of Friends, Quakers, urges the Delaware River Basin Commission to ban the extraction of gas via hydraulic fracturing, and related water extraction and disposal activities in the Delaware River watershed.

Moreover, Germantown Meeting urges Pennsylvania Governor Wolf to instruct his representative on the Commission to vote in favor of
permanently banning fracking
and fracking-related activities
in the watershed.

Fracking in the Delaware
River Basin would represent a
significant threat to the
purity and safety of the water
supply to millions of residents
in Eastern Pennsylvania, New
Jersey, New York, and Delaware.

Also, the primary
product of fracking natural gas
or methane is a significant
contributor to climate change
either at the well or as it's
piped to market. Moreover,
natural gas when burned, also
contributes to asthma,
emphysema, and other damaging
respiratory illnesses having an
especially significant impact
on children and the elderly.

Opening the Delaware River
Basin to fracking would
exacerbate these problems.
Viable alternatives to burning fossil fuels, for example, solar and wind power, particularly of electricity, are far preferable because they are much less detrimental to the environment. And would create job growth in our region.

Friends, Quakers believe that we are called by God to protect the health and wellbeing. We are also called on to protect the environment both now and for future generations. Expansion of fracking directly contradicts these elements. Thank you.

HEARING OFFICER:
Thank you, sir. Victoria Strange will be next. And then Carol Weston-Young. And then Emily Davis. Ma'am, when you're ready. Thank you.

MS. STRANGE:
Okay. Thank you for this opportunity to speak. I just wanted to add a short comment as a wildlife ecologist and a lifelong Pennsylvania resident who recognizes the importance of the Delaware River watershed system as a unique fresh water tidal system. It's unparalleled across this country and a vital resource for the wildlife communities that use this region as a year-round, and a stopover habitat.

We have already designated the Delaware River to an extreme degree, to the point where many sections are completely unrecognizable from what they were before human settlement. We must consider the evidence that we've gathered as to the adverse affects of hydraulic
fracturing.

Many compounds of which are extracted from shale formations, as well as those that are injected during the fracking process which have the potential to negatively impact the Delaware watershed if Pennsylvania chooses to be involved in the transport and treatment of these hazardous compounds.

We do not need to increase more pressure on our biological diversity and ecological functioning of this region. And there is too much risk of contamination and detriment from the disposal process.

Not only are these persistent environmental concerns important, but there is evidence that the flow-back water contains compounds which
have negative impacts on humans
such as neurotoxins and
carcinogens, as we've heard
from many of the other
speakers.

Residents have the right
to protect their drinking water
from being compromised by the
transport and treatment of
fracturing wastes. And I
support a complete ban of
hydraulic fracturing and
related activities in the
Delaware River Basin. And I
urge the Commission to do the
same. Thank you.

HEARING OFFICER:
Thank you. Ms. Carol
Weston-Young will be next. And
then Emelie Davis. And then
Daniel Markind. Is Carol
Weston-Young present? I will
call her name again. And then
Emelie Davis would be next.
You're Ms. Davis? Start by
saying your name.

MS. DAVIS:
I am Emilie Davis.

HEARING OFFICER:
Thank you.

MS. DAVIS:
I'm a resident of Philadelphia and a member of the Sierra Club. The extraction of hydrocarbon gas, more commonly called natural gas through hydraulic fracturing is a dangerous process and all parts of the process should be banned.

I'm going to speak to one particular issue that withdraws water from the Delaware watershed.

First, water is a substance without which humans cannot live. The fuel, hydrocarbon gas, is mostly methane, which has a global warming potential of about 32.
Hydrocarbon gas is not necessary for our lives. Our species can live without this gas, as we have for thousands of years.

Many human have died from lack of water or from contaminated water. Not one has died from lack of hydrocarbon gas.

There is a finite amount of water on our plant, the same now as when dinosaurs roamed the natural world. Water is truly a recycled substance. The dinosaurs drank the same water that we're drinking.

But when water is used for fracking, some of it is thrown away forever. And that which comes back is polluted with so many chemicals that not even the corporations that put those chemicals in can get them out.
Finally, in Pennsylvania, there has been a long history of fossil fuel extractions. And those who have profited from it have not shown to be good corporate citizens.

In the United States, there are 1,303 supervised sites. The states with the most supervised sites are New Jersey, California, and Pennsylvania. Together, New Jersey and Pennsylvania have about 16 percent of our supervised sites. Most of these sites were initially created because a corporate citizen disposed of its waste improperly.

The corporations that are currently extracting natural gas are demonstrating that they want to follow this tradition of making the rest of
us to pay for their fracked fuel with our dollars. And more importantly our health. Why should we give any corporation our water when corporate track records show that they did not take care of the water they've already taken? Thank you.

HEARING OFFICER:

Thank you. Daniel Markind will be next. And then Adrienne Taffoni-Margado. And then after that, Henry Frank. Okay. Sir, please.

MR. MARKIND:

My name is Daniel Markind. I'm an attorney here in Philadelphia. I work in the energy industry. And I've really looked at it. I have never however taken a dime from the energy company. And I have no loyalty to any of them. I do, however, very much support
the process of hydraulic fracking.

I'm sure it will surprise many of you that I agree a lot with what many of you have been saying. I believe there is a unique obligation to protect the Delaware River watershed, therefore, I am sympathetic to many of the statements regarding the need for regulations, the need for setback, etcetera in the Delaware River Watershed.

However, I think a complete ban is extremely over broad. And I believe it's an improper use of weapon. And it is improper, they may find in your favor today, you may not like tomorrow.

I fear the energy industry will travel. I believe in the affected
regulation. But I fear the
government also. If you take a
look at the greatest
environmental disasters in the
human history, they've been
caused by the federal
government. The ROC in what
used to be the Soviet Union,
the air in Beijing.

If you look at our
country, take a look at the
Animus River in Colorado or
what's happening right now with
regard to the Oroville Dam,
O-R-O-V-I-L-L-E, north of
Sacramento. Almost the
greatest environmental and
potentially human disaster in
our country's history came very
close to happening last
February over a government
built, owned and operated
project, entirely by the
government.

If the DRBC is so
concerned about the possible leakage of banned substances into the river, what's the response of the chemical plants right along the river? Do you just want to Google it? Just go to chemical plants near the Delaware River.

There's been a lot of religious imagery that's been given today. Well, let me give you some of mine. Human beings are imperfect. Therefore, everything done by human beings will be imperfect.

It will always be easy to be against things because there will always a negative downside. As a human being, you will accomplish nothing, but you'll always be ready.

You're going to tell me what you're against. I didn't hear what you're for. If you oppose the hydraulic
fracturing, fine. Tell me how you intend to power the economy and don't give me this generalization with renewable energy.

How are we going to transmit it? How are you going to generate it? How are you going to store it? It's called renewable for a reason. It's not necessarily environmentally viable.

And if you look at all the way through, it may be even worse than hydraulic fracturing. Thank you.

**HEARING OFFICER:** Thank you so much.

**AUDIENCE MEMBER:** The solution's fragile.

**HEARING OFFICER:** Sir, please, you're out of line. Okay. Next will be Adrienne Taffoni-Margado. I'm sure I mispronounced it.
MS. TAFFONI-MARGADO:
No. You did get it.

HEARING OFFICER:
Oh, okay. Okay. Henry Frank will be after that. And then Peter Hughes. Okay.
Name, please?

MS. TAFFONI-MARGADO:
Adrienne Margado.
Wrightstown, Pennsylvania.
Bucks County. I love synchronicity. Yesterday is local little Newtown patch had a --- they shared the environmental working group's paper on potentially unsafe levels of radium in Pennsylvania drinking water. And then two days before that, Duke University came out with the study of radioactivity from oil and gas wastewater persists in Pennsylvania streams' sediments.

So, you know, there's a
lot of that I know comes naturally. But when you start drilling it, and raking it up, it just lifts it to higher levels. And it becomes unsafe for everyone.

But I just want to share a few fun facts with everybody today. Okay? So water is the oil of the 21st Century. That's Andrew Weber, CEO of Dow Chemical Company.

Multibillionaires and elites are rapidly racing to control the world's water supplies. Morgan-Sachs, JP Morgan Chase, CitiGroup, and other financial institutions are making huge investments in water infrastructure.

This I got this morning. The Bush family has purchased 100,000 acres which sits on top of an enormous freshwater aquifer. And this aquifer is
larger than Texas and California combined. I thought well, why? Why would they want to do that?

Credits you see estimates that two-thirds of the world's population is likely to live under water stress conditions by 2025.

California and the western U.S., as well as Brazil and other parts of South America are experiencing historic drought conditions.

Meanwhile, many states in the U.S. have now made it illegal to collect rainwater.

Companies like Nestle who believe water is not a basic human right are foraging available freshwater resources at unprecedented rates and was caught recently stealing 6 million gallons of water per year from national forestlands.
The bottled water industry is making 22 billion a year bottling municipal water. Water utilities are increasingly becoming privately owned. For a typical household, privately owned water service costs 1,500 percent more than public water service.

Because corporations are driven by profits and not the public good, criminalization will likely result in lower environmental standards. Government cannot be trusted when it receives evidence by the police in the Flint, Michigan scandal in which officials approved land-contaminated water for over 100,000 residents. So these statements all lead me to believe and feel that our water supplies are in
great jeopardy. So why would we consider allowing elicit contamination to occur in a scenic water basin that supplies water to four states and 17,000 (sic) people?

Let's be part of the solution and not part of the problem. The real war will be fought not for oil, but for water. Thank you.

HEARING OFFICER:

Real quickly. Somebody, when you came through security, dropped their key fob. So I wanted to make sure you got home.

Henry Frank. And then after him it will be Peter Hughes. And then David Moscatello

MR. FRANK:

Henry Frank. Your Honor, welcome to Philadelphia.

HEARING OFFICER:
Thank you, sir.

**MR. FRANK:**

I'm a member of the Keystone Trade Association, the Sierra Club, and many others. But my remarks are my own responsibility. I'm like the fellow who got married for the third time who said he's hoping for a good experience.

The history of the Commonwealth of Pennsylvania going back to the 1700s is a cooperation among the industries, the government, and the government agencies which benefited a few people who made a lot of money. Some people who made a little bit of money, such as jobs. Temporary in many cases. And the rest of us, as the military says, is collateral damage. That's from the 1700s.

It started with the
timber industry, clear cut the state, and it's taken us 100 years to approximate what was there before.

The coal industry up in Hazleton, you can see the slag heaps. And now, the fracking industry. They'll take whatever money the can get out of us and they'll leave. And we'll be left with the clean-up.

I'm only asking the Delaware River Basin Commission to please defy history and be responsible and not allow fracking and anything related to fracking in the Delaware River Basin.

Now, I would like to leave you with an old curse. Used to be the curse was may you swallow on umbrella. And when it reaches your belly, make it open.
I revise that curse.

May you have a fracking structure on your head. May it be drilled down through your head, your neck, your torso, and your belly. And when it gets into your belly, may it be filled with secret ingredients until you explode. And so when I say to the industry frack you, that's what I mean.

HEARING OFFICER:

Is Carol Weston-Young here? No? Okay. And then Thomas McCane? All right. Next will be Peter Hughes. And after Peter Hughes is David Moscatello. And then Mike Doyle.

Mr. Hughes, when you're ready, please.

MR. HUGHES:

I'm Peter Hughes. I'm with the Valley Forge chapter of Trout Unlimited. And most
of the things I was going to
say have already been covered,
including from the previous
guy. Thank you.

The extraction industry
has a horrible track record
across the country, but
particularly in Pennsylvania.
And whether it was coal, or
timber, or the oil in
Pennsylvania, they absolutely
left a horrible state of the
environment in the wake for the
taxpayer and volunteer groups
to clean up after. That's one
issue.

The other issue is it's
never a good idea
scientifically to move water
from one watershed to another.
It's an awful thing to do.
Scientifically, you can't
justify it, particularly when
that water coming back in is
filled with contaminants. And
we have nowhere really to store it.

There is a settling pond in the Upper Midwest. Recently during a cold snap, a lot of the water and other things were frozen, except for this. And snow geese landed on this settling pond and all died as a result of that.

We really have no way to deal with the contaminants coming out of that.

Now, the other point I'd like to make is to address the lawyer who came and said his piece. And I think he left. No, there he is. Right here. He didn't mention the Exxon Valdez spill, the oil industry spill. And he didn't mention the recent, more recent problem we have in the Gulf of Mexico.

They were not government issues. They were an oil
industry issue. And you can't trust the gentleman from the oil industry to look after and police themselves. Thanks.

HEARING OFFICER:
David Moscatello will be next. And then Mike Doyle. And then Bruce Birchard.

MR. MOSCATELLO:
David Moscatello. I'm a Philadelphia resident and a member of the Southeastern Pennsylvania Group of the Sierra Club. And I'm speaking as a private citizen.

I would like to thank the Commission for the opportunity to testify today on behalf of the Delaware River and the millions of Americans who depend upon it.

I've loved the Delaware River since I was a boy growing up in New Jersey, especially
when I first canoed on the
Upper Delaware in New York
State. I remember scooping up
a cup of water while floating
down the river and drinking it
directly from the river. As a
microbiologist, I wouldn't try
that today because I know about
giardiasis, beaver fever.

I still enjoy the river
to this day. From paddling the
reservoirs, to fishing in the
Catskills, to tubing the river
in the Bucks County, to
exploring the wetlands along
the Delaware Bay.

As beautiful as it is
still, it's a shadow of its
former productivity. A mere
century ago we were a 1,000
pound sturgeon. We're nearly
extinct now.

I applaud the
Commission's decision to ban
fracking in the Delaware River
Basin. I must protest any water withdrawals for hydraulic fracturing, and especially any disposal of fracking waste or produced water in the basin.

The extensive fracking taking place throughout much of Pennsylvania, particularly in nearby areas, is already fragmenting forests, reducing stream flows, and impinging water quality, and polluting groundwater as shown by proven well contamination.

The only sensible reason for us to withdraw water from the Delaware and its tributaries is for drinking and bathing.

Even if hydraulic fracturing was not exempted by the Safe Drinking Water Act and the Clean Water Act, the belief that the Safe Drinking Water Act, the EPA, or the
Pennsylvania DEP are fully protecting us from contaminated water is dangerously naive.

The absence of regulations covering some of the components in fracking waste fluids cannot be taken as evidence as there's no risk. But is rather due to the power of the industry over our legislature and Congress that has prevented the EPA from actually analyzing and regulating the vast majority of chemicals in use.

Only 30 new chemicals can be monitored by the EPA every five years. And since there are over 80,000 chemicals in use, that means that at this rate, the vast majority will never be studied.

Well, okay. We'll only take 16,000 years to study them all. Assuming no new ones are
created.

So it's simply ---
excuse me. Treatment plants
can't handle the wastewater.
So it's simply not enough to
discourage water withdrawals,
and the disposal of fracking
waste to the Delaware Basin.
Both must be unambiguously
prohibited. The resource is
too vital to risk. Thank you.

HEARING OFFICER:
Thank you. Mike Doyle,
please. And then Bruce
Birchard. And then Andrea
Strout.

MR. DOYLE:
Thank you very much. My
name is Mike Doyle. And I come
here as candidate for the
legislative district, the 170th
legislative district.

I knew I had to come
today to express my concern
that the Delaware River Basin
Commission was possibly going to allow one thing while not allowing the other.

And first, let me backtrack and say that we are here in regards to protecting Mother Earth. It is sacred. And water is life, as a speaker said earlier.

It is important that we are stewards here and we maintain that stewardship. There are people that have laid their lives on the line.

Native Americans that laid their lives on the line to fight for this most sacred source of life. And we sit here today from our privilege discussing whether it is good to allow waste or just ban fracking completely.

When people that are from the land are willing to lay their lives down for that
protection, we have to look and see what we are doing as a society. Right now, Mother Earth is laying sick and dying in her bed. And what we choose to do is instead of giving her medicine, we choose to inject her with poison.

If your own mother was there, I ask the Commission, the Delaware River Basin Commission, if your mother was sitting sick in a bed, would you inject her with poison? Or would you give her medicine that would allow her to live.

It is important that we maintain this. And that we allow the people to speak because if we continue to let corporations dictate how we live on this planet, this planet will soon die.

I come here as someone who has witnessed this
firsthand. And to the River Basin Commission, and to you, Your Honor, and to everybody here that allows us to speak today, many thanks. We thank the Creator.

And I'm very concerned that Oomcheemaka is not given her respect. I'm sad to say that we put corporate interest in front of human interest. And it must end. We must go back and understand what is sacred in life. We must protect what is sacred. We must all. Thank you very much.

HEARING OFFICER:
Bruce Birchard, please. And then Andrea Strout. And then Marta Guttenberg.

MR. BIRCHARD:
Well, good afternoon. My name is Bruce Birchard. I live in Delaware County. I've lived there since --- my life
has been wrapped around the Delaware River. I was born in Easton Hospital in 1945. And I have lived my entire life, with the exception of a couple years in Chicago, within a few miles of the river.

In the mid-1950s, I went to Boy Scout camp. I learned to canoe. In those days, late-1950s, you might see a few dozen canoes on the river. It wasn't --- you know, there weren't many people doing that.

I bought my first canoe when I was 15 years old for $50 and fixed it up. And I've been doing it ever since. I don't think there has been a summer in my life since the late 1950s when I wasn't in the river, on the river, and then camping beside the river.

Now, though, there are thousands and thousands and

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thousands. I mean, there are
hundred of thousands of people
who enjoy the Delaware River,
which include the Upper
Delaware and down past the
water gap.

So I mean, there are
canoe liveries that rent out
hundreds and hundreds, a couple
of thousand, or 1000 or more
canoes to people who come to
enjoy the river. And that is
not counting the people with
kayaks and also all those
people tubing. And all the
people who come just to swim in
the river or camp beside the
river, or hike, or bike beside
the river. So there is an
economic interest in
maintaining the Delaware River
Basin.

But it's not just
economic. I have taken Sunday
school kids. I have taken
young adults. I've taken many people out for weekend trips paddling and camping on the river.

I remember one Sunday school class where we were paddling from Dingmans Ferry down to Walpack Bend where we were going camping. And all the kids wanted to go in the river.

And then one girl who was really very overweight said I want to swim across the river to Pennsylvania and back again. And she assured me she was a good swimmer.

So I got in the canoe. And all the adults watched the other kids. And I accompanied her across the river and back. She was so proud.

The next morning we woke up in fog over the river. And the sun burned through. And it
was like heaven. Let's not
sacrifice this.

**HEARING OFFICER:**

Andrea Strout, please.

Ms. Strout is coming forward.
And then Marta Guttenberg, and
Carol Ward.

**MS. STROUT:**

Thank you. My name is
Andrea Strout. I live in
Buckingham Township. I am here
as a private citizen. I
apologize for not having any
prepared remarks. I didn't
know I wanted to speak actually
until I got here today. And
then I really felt I wanted to
very strongly. But I'll be
very brief.

I just want to thank all
the people who did come
prepared with facts and
figures, and wonderful stories
like the one we just heard.
Thank you for you eloquence and
passion. I share it.

I would like to add my
voice to those who are calling
for a complete and total ban on
fracking and fracking-related
activities in our wonderful
precious basin.

And to also mention that
I speak for so many friends and
neighbors who couldn't make the
long slide out to the airport
today. Thank you.

HEARING OFFICER:
Thank you. Marta
Guttenberg. Marta Guttenberg
is not here. All right. Carol
Ward?

MS. WARD:
Yes.

HEARING OFFICER:
And then after Ms. Ward
will be Carl Balis and Claudia
Crane. Okay. You're second,
sir. Thank you. Okay. This
is Carol Ward?
MS. WARD:

It is.

HEARING OFFICER:

Okay. Thank you, ma'am.

MS. WARD:

My name is Carol Ward.

And I'm a member of the food and water watch. I've been involved with the fracking issue for several years. And what I'm going to say is my own view. I don't speak for food and water watch. I speak for myself.

Fracking is not really a benign process. My two major concerns with it are health and environmental considerations. These considerations are urgent as so many people have said in this room.

Once a stream, aquifer, or a river is polluted by fracked wastewater or chemicals used in fracking, they are
never the same.

Companies who do the fracking use some or all of 3,062 known chemicals. And I'll just repeat a few of them: benzene, boron, diesel fuel, chloralamide, ethylene glycol, hydrochloric acid, sodium hydroxide.

I felt so bad for Dimock, upstate Pennsylvania, and some of the people whose farm animals died immediately upon drinking one part of a fracked water pool.

And I felt bad for the people that got continuous seizures from --- they didn't even know that the water they were drinking up there was fracked and contaminated.

Fracking fluid that is pumped out of the ground contains radioactive minerals that can kill animal and plant
life. Negative effects after ingesting or touching fracking fluid can do damage to skin, eyes, sensitive organs, respiratory systems, gastrointestinal system, liver, brain and cardiovascular.

I'm concerned about the reproductive aspect. Babies borne to women who live within ten miles of natural gas wells can be born with congenital heart defects, as well as possibly defects to the brain and spinal cord defects.

For these reasons and because concrete wells in fracking can crack, and pipes burst, and their contamination of wells, methane can cause explosions. And for all these reasons, I favor a complete ban on the fracking of the Delaware River Basin. And this must be permanent. Because the
population is just too high
along the banks of the Delaware
River to lose this precious
resource.

Our health depends on
keeping the river safe. Thank
you for hearing my remarks.
And thank you for making
available a chance to speak.

HEARING OFFICER:
Thank you, ma'am. Carl
Balis. And then Claudia Crane.
And followed by Sandra Folzer.

MR. BALIS:
My name is Carl Balis.
And I live in Glenolden,
Pennsylvania, which is only a
couple miles from here. I
don't have really too much to
say here because everything
that needs to be said has been
said by about 50 or 60 people
before me.

I just basically want to stand as one more person who
lives in this area who endorses everything they have said.
Just to be one more voice.

To me, the main thing that went through my mind as I listened to all of them was common sense. That after a point, you didn't need any scientific studies or any great knowledge, or deep thought. You just know that when you're putting tons and tons and tons of chemicals into the environment can only have one effect. And that is not good.

You know, it has to be a negative effect. You know, you don't have to be an -- as I was thinking to myself, if you have the common sense of a tree trunk, you can figure this out. Because it is obvious. It's one of those self-evident facts. Sort of like in the Declaration of Independence
when they wrote we hold these
truths to be self-evident.
Well, it's almost the same kind
of thing. It is self-evident.
   And the other thing that
went through my mind. It
wasn't talked about too much
today. But it was briefly
mentioned. And I read about it
before. Is that if this whole
process is so safe as the
fracking industry will tell
you, then why is it when you
ask them what chemicals are you
using, their response is we're
not going to tell you? Doesn't
that tell you something right
there? Do you need to know any
more than that when someone
responds to you in that manner?
   Okay. It's safe. But
we won't tell you what
chemicals we use. And they
even have a law passed saying
that they cannot be compelled
to tell you.

So again, using that old
tree stump, with the analytical
reasoning powers of a tree
stump, you sort of know
something's not right here.
You don't even need to go any
further. It's almost like you
can say to them I think we're
done here. It's over. Because
if it's so safe, then they
would tell you the chemicals
that are used.

Again, it's just one of
those self-evident things. You
know someone is not telling you
the truth. They're lying to
you.

So for all of those
reasons, I, again, second,
third, fourth, and fifth all of
the things that have been said
here.

I hope that the Delaware
River Basin Commission will
reject any kind of fracking or
fracking-related activities.
Thanks.

HEARING OFFICER:
Claudia Crane. And then
after Ms. Crane will be Sandra
Folzer and Sarah Caspar.

MS. CRANE:
Good afternoon. My name
is Claudia Crane. I'm an
registered nurse retired.

First of all, I want to
thank all of people who have
spoken before me and will speak
after, a few more, I guess,
calling for a complete ban.

And I especially want to
thank the young people who came
out, the high schoolers, and
the people of color who came
out today to speak. In today's
case, women.

Very often, it's only
white people of a certain age
and income who can afford the
time and energy to come to
hearings like this, which makes
me ponder what I and others can
do to enable people of color
who share my concerns for the
planet to participate.

I think it's terrific
that the new proposed rules
prohibit fracking in the
Delaware River Basin. It's not
so wonderful that providing
means to allow the Commission
to export its waters. Surface
or other waters, including
wastewater for the purpose of
fracking elsewhere. And they
also provide means to allow the
community to accept fracked
wastewater from outside the
Delaware Basin.

The Commission has
nicely laid out many good
reasons why fracking is not
healthy for children. So why
would the Commission even think
about facilitating other jurisdictions to frack? Even if fracking was somehow benign in other regions, as the Delaware River Basin where uniquely and singularly vulnerable, giving away our water to be permanently sullied elsewhere, or accepting sullied water into our own environment, is just plain wrong.

Wrong, because there is no way to clean it up. This is not organic sewage that can be mixed and slurried and composted. We all know that.

I cannot support anything that encourages or enables the expansion of the use of natural gas because it is another climate changing fossil fuel.

I look forward to the day that the Delaware River Basin Commission can turn its
attention away from anything about fracking and turn and direct its attention to promoting actions that enhance and preserve our Delaware River Basin, providing the finest example of promoting the health of our planet from our corner of the world.

There was --- I want to add there was a speaker, I think her name was Joan Farb. She said the industry is seeking to allow using more water per gas well, she said. I can't help but wonder if this is not a simple attempt by industry to dilute the harmful substances, so that the so called slick water and the wastewater produced --- so as to render them less detectable. Pollution is not the solution for pollution. Thank you very much.
HEARING OFFICER:
Sandra Folzer, and then
Sarah Caspar. And then Megan
Desmedt.

MS. FOLZER:
Hello. I'm here as a
private citizen for the most
part because I drink water. I
think there are probably a few
other people who drink water as
well from the Delaware River.

Also, I have a farm in
Tioga County, which is next to
Bradford County. And I've
visited farms where the cows
have stillborn calves because
of the pollution nearby. I
have seen the dirty water. I
do worry about my well as well.

And given that there has
been so much said that's been
said about why we cannot clean
the wastewater, that's a given.
I think people have given
enough facts. I don't have to
go about that.

But I want to say that I believe that we cannot trust the fossil fuel industry to regulate itself or have our best interests. All you have to do is read the newspaper. Every week, at least once a week, you hear about a spill. You hear about an explosion. You hear about something. If you're looking and if you read the small print different places. Even in Pennsylvania, we had more than 4,000 violations. We've had many violations.

And if the industry is so caring about the private citizen, then why do they have gag rules? Why do they, when they try to help somebody —— I know even in Pennsylvania, we've had people who have had their wells ruined. And
they're dependent upon the companies. They can't afford to bring in clean water for themselves, these water buffalos. So in order to get money from the industry, they have to take a payment and they have to file -- they have to promise that they will not speak about all the injuries that they have suffered.

If this is so common, then why is it so safe? I think that it's a given that we need to take a look at that.

And finally, what I wanted to end with is why would we want to allow wastewater to be put in our drinking water? Why? What would be the benefit given we know that it can't be cleaned. It's radioactive. There is not one good reason I can think of for allowing wastewater into our water
system. Thank you.

HEARING OFFICER:

Thank you, ma'am. Sarah Casper, and then Megan DeSmedt, and Alex Cupo.

MS. CASPAR:

My name is Sarah Caspar. And I thank you. And I thank everybody who has hung in here and for what you all said. I am only going to confirm that what you have said is true.

I worked for EPA for 16 years in this region. I saw everything that has been talked about. We cannot allow it because it doesn't work. We cannot allow self-regulation because it's too big a temptation for people to abuse that privilege.

So that's why agencies like EPA, DEP, et cetera have been created. So regulations are meant to protect us and to
protect those who are need the regulation from doing the wrong thing.

It would be wrong to permit, have the wastes from fracking to go into the Delaware River. They are wastes that are untreated. Because they are untreated, it has been the tendency for these fracking companies to dispose of them in streams and rivers, thereby polluting our streams and rivers, from which our wildlife survives, from which we fish, et cetera.

So this is my one recommendation. Please don't permit that. It's an invitation for all kinds of hell to happen. Thank you.

HEARING OFFICER:
Megan DeSmedt.

MS. DESMEDT:
Good afternoon. And
thank you for the time to speak here today. My name is Megan DeSmedt. And I'm the clean water director with Environment America. We are a citizen based environmental advocacy group with presence in states across the country.

And I'm here today in particular to represent our 1.5 million members, supporters, and activists across the country including almost 300,000 here in the Delaware River Basin.

And also organizations --- our state organizations, Penn Environment, Environment New Jersey, and Environment New York. And I'm also here as a resident.

I live with my family in South Philly just a couple miles away.

So today I'm here to
deliver a message from our supporters and from myself. We applaud your proposal to ban fracking of the Delaware River Basin and protect drinking water for over 15 million people, as well as the habitat for countless wildlife.

And the special places that we like to go hiking, fishing, swimming, and boating, I can't wait for warmer weather and get out with my family. So we can get out and enjoy some of the precious life, the wildlife refuge, River Creek, the places that people all across the watershed love to enjoy.

And I'm very pleased to see that the DRBC and the governors of some of the basin states moved to ban fracking, recognizing that the public is demanding protection for our
health, our environment, and the drinking water for over 15 million people.

    Here in Pennsylvania, we've had 65 drilling companies that have committed more than 6,200 violations of Pennsylvania's environmental laws. And there's a growing mountain of evidence that's in reference today, that shows that fracking threatens our air, our water, our land, and our health. And considering the gas industry's track record of pollution in Pennsylvania, to ban is absolutely the right move.

    While we support the DRBC's move to prohibit fracking across the watershed, we also call on the DRBC to strengthen the proposal to ensure that our watershed is protected from the dangers
inherent in all the activities related to fracking.

So the disposal, storage, treatment, or discharge of fracking wastewater as well as water withdrawn from the basin for fracking or really any purpose. If water is being taken out of the basin, it doesn't really matter what they're going to do in terms of impacts that are seen.

These activities pose a very serious threat to water quality and the health of the basin and must not be allowed. And we are looking forward to working with you to strengthen the proposal as the process moves ahead.

Since efforts to allow fracking in the Delaware River watershed were first broached nearly ten years ago, our
organizations have played a key role in highlighting both the risks of fracking, and the public support contributions from its residents to protect the basin from this harmful activities.

And given the harm caused by fracking and the risk it poses for our environment and health, it's not surprising that tens of thousands of people have wastewater opposition discussions in the past. And we want to see that continue, vigorous public engagement moving forward. So thank you.

HEARING OFFICER:
Okay. Thank you. Alex Cupo. Alex Cupo? Okay. Thank you. Okay. So would you start by saying your name, please?

MR. CUPO:
Alexander Cupo.
HEARING OFFICER:
Thank you. Okay.

MR. CUPO:
Which you have correct.

HEARING OFFICER:
Okay. Good. Thank you.

MR. CUPO:
Thank you very much. So
my name is Alexander Cupo. And
I am the Southeast PR
coordinator for Penn Future.

Penn Future is a
Pennsylvania statewide
organization dedicated to
protecting our environment and
supporting a clean energy
economy in Pennsylvania.

We thank you for holding
these public hearings. The
comments I make today are in
addition to the comments that
we will be submitting through
our organizations.

My colleague commented
earlier this week about Penn
Future support on the DRBC's proposed ban on fracking operations in the basin, which is absolutely necessary to protect the Delaware River's unique water resources, recreational and industrial tidings, and the drinking water of over 15 million people.

However, the DRBC must also ban the use of Delaware River water for fracking outside the basin. A single fracked well uses 5 to 10 million gallons of water with 10 to 20 million gallons requiring more the norm.

The amount of water from the basin --- removing the amount of water from the basin upsets the balance of water available for the protected uses and other uses in the basin.

But the DRBC are already
struggling to maintain
sufficient levels in ---. It
is incomprehensible that they
would allow such an export to
occur in the first place.

The DRBC must also ban
the transport, storage,
treatment, or disposal of
fracking wastewater within the
Delaware River watershed. The
potential risk to water quality
of the Delaware River from
these activities is too great.
And the threat to the drinking
water of Philadelphia and so
many other residents, including
myself, is too real.

To allow this within the
basin would be absurd. And to
say that it is also absurd that
the DRBC would ban fracking,
but allow for the treatment and
disposal of the extremely toxic
fracking wastewater to occur in
the first place.
Because there is no way to regulate water transfers or the treatment of fracking wastewater within the Delaware River Basin, while sufficiently protecting the Delaware River's resources, the DRBC must not allow these activities to take place. Thank you.

HEARING OFFICER:
Thank you. The last two people, each one has two minutes because we are almost at 4:30. And these people have spoken previously. Sharon Furlong. Is she here?

MS. FURLONG:
Yes.

HEARING OFFICER:
Okay. Well, unfortunately, you're only getting two minutes, ma'am.

MS. FURLONG:
Sharon Furlong with Environmental Action, Sierra
Club. We seem to take water for granted here in the wet Northeast of the country. But I've walked where there is no water. Places where water can kill you if there is a sudden storm. Where suddenly, it disappears into the ground, only to reappear a short distance away.

Where water looks pristine, but it is dangerous to drink because it has been fouled. And weird, strange, unnatural colors because of acid leaching coming from long-abandoned mines where companies were allowed to just walk away from their responsibilities. And our government let them. Just let them walk. Water is magical because water is life.

You, the DRBC, are protectors of water. And in
doing so, you are protectors of lands, and plants, and everything around it.

Therefore, how can there even be a hint of a proposal to abandon your significant role of protector, and open up this intricate system that so mimics the arteries, veins, and capillaries of our own bodies, to the possibility of being the catch-all of polluting contaminating frack water.

How can this Commission even consider allowing such a toxic brew to come close when most of the components of this ugly water are unknown? We don't even know their names.

And why are you willing to take this risk? You and only you stand between an industry devoted to profits, and shareholder happiness. And all of us. Companies come and
go, but water remains. And so does our need of it because without it, we all die.

So will you be true to your heritage and be the first of Commissions of this nature, and stand against a Goliath and what it wants? Because what it wants is to do what it pleases with our water, our lands, and our lives. Who do you stand for? Who do you stand with? What do you want your legacy to be?

HEARING OFFICER:
Wesley Coolingham.

MR. COOLINGHAM:
Thank you for this second opportunity to speak. I want to address, as I did at the other hearing, we were told there was a special interest to protest this. And someone from the industry again today said I want to know what you're for.
We are for clean water.
We are for healthy communities.
We are for building a just transition away from fossil fuels and toxic legacies. A legacy that has pushed on our communities. I am going to read from the new regulations. Controlling future pollution by prohibiting such activity in the basin is required to effectuate the comprehensive plan, avoid injury to the waters of the Basin.
That's a really important line in these regulations. That's referring to the ban on hydraulic fracking in the region. Thank you. Thank you, Delaware River Basin Commission for doing the right thing, making that good decision on time.
Later in the regulations, though, talking
about it's the policy of the Commission that there's no measurable change in the existing water quality. Effluents shall not create a menace to the public health or safety.

Those are all good regulations. It's just an editing thing. People read this and see discouraged, and not know what that means. It's much easier if you put the word prohibit. Not here, not ever. Thank you.

HEARING OFFICER:

Ladies and gentlemen, you were terrific. I mean, as following the rules, thank you very much.

Remember if you are parked in the hotel parking lot, the hotel will be opening the locks, the locks exit B to allow for free parking. The
gates will be open for only about 20 minutes, though, ladies and gentlemen.

So thanks for everything, ladies and gentlemen. And all the best to you.

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WHEREUPON, HEARING WAS CONCLUDED AT 4:30 P.M.

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CERTIFICATE

I hereby certify, as the stenographic reporter, that the foregoing proceedings were taken stenographically by me, and thereafter reduced to typewriting by me or under my direction; and that this transcript is a true and accurate record to the best of my ability.

[Signature]

Kimberly Chatburn,
Court Reporter