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Remarks of Hugh MacMillan, Ph.D.
Food & Water Watch

June 14, 2016

EPA Scientific Advisory Board Public Meeting:
Quality Review of the June 2015 draft Assessment of Potential Impacts to Drinking Water Resources from Hydraulic Fracturing for Oil and Natural Gas

Thank you. My name is Hugh MacMillan.

I am an applied mathematician and computational scientist. I am well versed in the methods used by Moridis et al. in the modeling done as part of the draft assessment.

I can confirm that that modeling is in its early stages and far from predictive, as made clear in the report under quality review today.

Five years ago, after serving as a AAAS Congressional Fellow in the Senate, I joined Food & Water Watch as a researcher and analyst.

We help people and communities organize and take action against corporate abuse and government neglect when it comes to food and water.

When Congress requested the hydraulic fracturing study, it asked EPA “to carry out a study of the relationship between hydraulic fracturing and drinking water resources.”

The relationship begins with the construction of hydraulic fracturing wells and extends indefinitely through the abandonment and reclamation of well sites.

But with the top-line finding of its June 2015 draft assessment, the EPA went beyond the study of this relationship.

The agency went out on a limb and dismissed the impacts to drinking water as not "widespread, systemic" — as if that should be the threshold.

Industry argues that the dictionary definition of “widespread” should suffice, but this reinforces my point.

Imagine being among those harmed and hearing: “at least the impacts aren’t widespread, systemic.”

Even so, the review panel’s report exposes the agency for not having a clear scientific basis to support its controversial top-line finding.

The agency only defined "widespread, systemic” implicitly, as being beyond current levels of damage.

And as the panel has made clear, the EPA fell far short of quantifying the frequency and severity of the actual impacts to drinking water resources.

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In their 2008 book *Bending Science: How Special Interests Corrupt Public Health Research*, the legal scholars Thomas McGarity and Wendy Wagner wrote the following:

> The most important thing upper-level policy-makers can do to prevent public misunderstanding … is to be candid about the extent to which their final decisions rest on science and the extent to which policy considerations fill the gaps left by scientific uncertainties.[1]

By this measure, the EPA failed when it "chose," as one panelist has put it, to run with the "widespread, systemic" line.

That choice injected politics into the study and fractured the SAB review panel along ideological lines, leading to the thin dissent over the semantics of this line.

I trust that this fracture will not extend farther — out of zone — into the chartered SAB.

After all, what could be more anti-science than dissenting from a recommendation for scientific clarity?

Adding more qualifying terms before "widespread, systemic" won't fix the problems with the controversial line.

We urge you to convey the sense of the panel to the EPA with high fidelity.

The EPA's reliance on voluntary cooperation from industry for data and for access to well sites shaped the science in the draft assessment.

An untold number of contamination cases are hidden through sealed court settlements, and this also shapes the science. You will hear today from some of the people who have been impacted. Please keep in mind that they are also speaking for those under gag orders.
The EPA owes it to these people to be clear about where the science ended and the policy considerations began.

Of course, a question still remains — how has it all come to this?

Food & Water Watch built an elaborate online timeline to help everyone — including ourselves — understand the historical and political context of the study. (https://goo.gl/ZX3YiH).

Flip through the timeline and you will see how current U.S. energy policy has come to equate widespread fracking with energy security.

The oil and gas industry is not alone in pushing this vision.

For example, just six investment banks — Bank of America, Wells Fargo, Citibank, JP Morgan, Morgan Stanley and Goldman Sachs — account for $200 billion in lending exposure to the oil and gas industry.

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[1] Thomas McGarity and Wendy Wagner. 2008. "Bending Science: How Special Interests Corrupt Public Health Research." Harvard University Press: Cambridge, Mass. at 269.

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They expect to get paid back. They are banking on widespread fracking to maximize oil and gas production.

The no “widespread, systemic” impacts line was crucial to legitimizing this vision for the future.

Should we really be equating widespread fracking with energy security?

Here, widespread fracking means about ten wells per square mile throughout a targeted region.

Beyond the direct impacts on communities the problem with equating widespread fracking with energy security is the scientific consensus on our climate, and on climate pollution.

Through climate change, widespread fracking poses unacceptable threats to our food, water, health and economic security.

True energy security will only come when we are meeting our energy needs without destabilizing the climate, and without sacrificing people's health and welfare along the way.