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Testimony of Hugh MacMillan, Ph.D. **October 28, 2015**

EPA Scientific Advisory Board Public Meeting, Hydraulic Fracturing Assessment

I am pleased to be here to observe this process.

My name is Hugh MacMillan. I am an applied mathematician and computational scientist, well versed in the methods employed to model the simplistic contamination scenarios considered in the assessment.

After serving as a AAAS Congressional Fellow in the U.S. Senate, I joined Food & Water Watch as a Senior Researcher.

I am concerned about the integrity of this process, I believe that you, as scientific advisors, should be too. As you must be aware, current U.S. energy policy equates widespread fracking with energy security. This is in lock step with the interests of both the oil and gas industry and the investment banks that own the fracking industry's debt.

There is no doubt that this alignment of interests has shaped the assessment

Certainly it is telling that the EPA aborted its investigations in Dimock, Pavillion and Parker County, that it excluded these cases of contamination from the assessment, and that it refers to the impacts people have suffered as "vulnerabilities" — as if the harms are just hypothetical, and not lived every day by thousands of Americans.

To those who have been harmed, this is insulting. The assessment must include these cases of contamination.

The EPA's reliance on the voluntary cooperation of industry for access to data and wells sites is likewise telling, and it has likewise shaped the science in the assessment.

The fact that untold numbers of cases are hidden in sealed court settlements has further shaped the assessment.

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

> "The most important thing upper-level policy-makers can do to prevent public misunderstanding of their attempts to incorporate scientific advice into the decision-making process 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."[i]

By this measure, the final draft assessment does the public a disservice. It is not candid. The phrase "widespread, systemic impacts" has proven contentious precisely for this reason. It was deployed to paper over the "gaps left by the scientific uncertainties," many of which are spelled out clearly in the body of the assessment.

In effect, the phrase is employed as a multi-dimensional threshold, beyond which concern would be triggered — and yet the phrase is meaningless. It is only defined implicitly as being above and beyond existing levels of damage.

The result of this artifice is that oil and gas corporations and big banks succeed in projecting their vision for the future: decades more drilling and fracking to extract as much unconventional oil and gas as possible.

Not only will this mean more spills and leaky wells that compromise drinking water resources, and more air pollution for people living in communities targeted with fracking. It also means more climate pollution that drives global warming, bringing its own set of challenges to the provision of clean drinking water.

We argue that building sustainable energy systems in a way that creates, rather than destroys, wealth in communities, protects public health, meets energy needs affordably, and addresses climate change, requires that we instead keep as much unconventional oil and gas as possible underground instead.

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