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The real value of FracFocus as a regulatory tool: A national survey of state regulators



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HIGHLIGHTS

- Survey of state regulators calls into question some of Harvard study's conclusions.
- States are using FracFocus.org to augment their regulatory program capabilities.
- States are finding new and interesting ways to use FracFocus data.
- Important information on the use of FracFocus may be transferable among states.
- FracFocus can be used to monitor and increase compliance with state regulations.

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ABSTRACT

Over the last decade, domestic oil and gas production has increased dramatically because of advancements in the technologies associated with hydraulic fracturing and horizontal drilling. This boom generated a wave of new state laws and regulations, especially addressing disclosure of fracturing chemicals. In 2011 the chemical disclosure registry FracFocus.Org was launched to provide well-by-well chemical information to the public. Many states adopted FracFocus for chemical reporting. In 2013, Harvard Law School researchers issued a report concluding that FracFocus “fails as a regulatory compliance tool.” The report made serious criticisms regarding the utility of the registry; however, the report was incomplete because its authors never interviewed state regulators. This paper remedies that oversight. We surveyed regulators in twenty oil and gas producing states to determine how they view and are using FracFocus. The results contradict the most crucial claims of the Harvard report and indicate that states are quite positive about FracFocus and are using it in novel ways that go beyond the registry's original purpose. This paper represents the first comprehensive survey of state regulators and the first attempt to obtain a data-driven analysis of how FracFocus is being used and whether it is effective as a regulatory tool.

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1. Introduction

1.1. Hydraulic fracturing technologies and controversies

The basic technique of hydraulic fracturing (also known as “fracing,” or “fracking”) as a method by which to stimulate oil and gas wells to increase production has been in use for nearly 70 years, with the first commercial hydraulic fracturing job occurring in the late 1940's (FracFocus, 2015c). Fracturing using explosives to stimulate oil wells goes back even further, well into the 19th

century (MacRae, 2012; Energy Information Administration, 2011a). The technique involves creating fractures in the rock formations deep below the surface of a well, pumping a mixture that is approximately 98–99.5% water and sand, and 0.5–2% chemical additives into the well at high pressures, and leaving the sand (known as proppant) in place to hold the fractures open to allow gas or oil to flow (or be pumped) to the surface (FracFocus, 2015a). Horizontal drilling – a technique that allows wells to be drilled horizontally through the formation below the surface in order to capture more of the producing area from one well-pad at the surface – entered the scene on a commercial scale in the 1980's (Energy Information Administration, 1993), and in combination with hydraulic fracturing techniques has been a powerful force in the country's domestic energy boom. Indeed, these technologies have been so successful at developing natural gas reserves so

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quickly in the U.S. that researchers are looking at ways to duplicate this boom in China, where alternatives to coal are needed (Tian et al., 2014).

The rapid advances in the technologies associated with hydraulic fracturing and horizontal drilling have made it economical, in the last decade, to develop previously untapped sources of oil and gas and to substantially increase well output. For example, according to the United States Energy Information Administration, the number of producing horizontal wells in the Barnett Shale Play in Texas increased by a factor of 25 between 2004 and 2010 (Energy Information Administration, 2011b).

Despite the long history and continued use of hydraulic fracturing and horizontal drilling in the U.S. and around the world, the American public has limited familiarity with the technology, and their assessment of the actual risks can be influenced simply by the use of the word ‘fracing’ (Clarke et al., 2015). Fear of the unknown and the rapid expansion of drilling and acquisition of leases understandably has raised concern, and hydraulic fracturing has become one of the leading environmental controversies of the day. Townships and localities have spent substantial public funds litigating their authority to ban oil and gas drilling, some with more success than others. Activists across the country have called for a complete ban on the well-stimulation technique out of fear of environmental damage, perhaps not understanding that such a ban would effectively end oil and gas production in the United States because conventionally accessible reserves are near depletion or are already producing. For example, the Colorado Oil and Gas Conservation Commission has explained that “[m]ost of the hydrocarbon bearing formations in Colorado have low porosity and permeability. These formations would not produce economic quantities of hydrocarbons without hydraulic fracturing” (Colorado Oil and Gas Conservation Commission, 2015). Hydraulic fracturing and horizontal drilling are necessary technologies to a continued domestic oil and gas industry.

In the past decade, the issue of the safety of the hydraulic fracturing process has been the subject of numerous government, industry, and academic studies. The EPA is currently completing a comprehensive, multi-year study on the impact of hydraulic fracturing on drinking water resources (Environmental Protection Agency, 2015a). However, the environmental impact of oil and gas development is beyond the scope of this paper.

This paper will focus on a narrow, but key area of the controversy: disclosure (to the public or to regulators) of the chemicals used in the hydraulic fracturing process. The driving fear in the recent history of fracing is the nature of these chemicals and whether they should be disclosed in ways that go beyond long-standing federal regulations governing disclosure of hazardous chemicals.

1.2. Disclosure of hydraulic fracturing fluid information

Like chemicals used across many industries in the United States, the precise chemical formula of some widely-used hydraulic fracturing fluids are entitled to trade secret protection under state and federal laws (CRS, 2012). However, when trade secrets are at issue in any industrial workplace setting, federal laws provide for a modified form of disclosure of chemical information that balances the need to protect workers and the environment against the need to protect proprietary information. The Emergency Planning and Community Right to Know Act (EPCRA) (42 U.S.C. § 11021) and the Occupational Safety and Health Administration’s Hazard Communication Standard (29 C.F.R. § 1910.1200(g)) require identification of hazardous chemicals on Material Safety Data Sheets (MSDS) (CRS, 2012). The MSDSs must be submitted to local emergency personnel and be made available to employees at worksites (EPCRA, 1986a; OSHA, 1994a). However,

these laws and regulations allow manufacturers of hazardous chemicals to make a claim of trade secret, and thereby withhold from the MSDS the specific chemical constituents that are trade secrets (EPCRA, 1986b; OSHA, 1994b). In these cases, chemical manufacturers must still report the “generic class or category” of the hazardous or toxic chemical so that first responders and medical personnel have the information they need to respond in the event of an accident, but the often substantial investment in developing those chemicals remains protected under trade secret laws (EPCRA, 1986c).

This mechanism to balance trade secret protection with worker safety and the public’s right to know has been in place since the 1980s, when EPCRA was enacted and OSHA’s Hazard Communication Standard was established. However, since the early to mid-2000s, when the number of wells using hydraulic fracturing technology increased rapidly, environmental groups have argued that increased disclosure of hydraulic fracturing fluids is necessary, even if private property rights (trade secrets) are infringed. Activists, environmental groups, and concerned citizens have at times demanded full disclosure of the chemical formulae found in hydraulic fracturing fluids at well sites, even where that information constitutes a protected trade secret under existing law. Although OSHA and EPCRA have nearly exclusively governed hydraulic fracturing chemical disclosure at the federal level since the 1980s (CRS, 2012), in the last decade states have reacted to the demands for more transparency and many have enacted laws or regulations that address the disclosure of hydraulic fracturing chemicals.

1.3. FracFocus.org background

It was in the midst of this intense debate that, in 2011, the Ground Water Protection Council and the Interstate Oil and Gas Compact Commission (IOGCC) launched a new tool, the FracFocus.org Chemical Disclosure Registry (FracFocus or Registry), aimed at providing a single, on-line database where members of the public could access information on the chemicals used in the hydraulic fracturing process on a well-by-well basis.

The GWPC is a nonprofit organization “whose members consist of state groundwater regulatory agencies which come together within the GWPC organization to mutually work towards the protection of the nation’s ground water supplies.... [Its] mission is to promote the protection and conservation of ground water resources for all beneficial uses, recognizing ground water as a critical component of the ecosystem.” (Ground Water Protection Council, 2015a). The IOGCC is a “multi-state government agency” that “works to ensure our nation’s oil and natural gas resources are conserved and maximized while protecting health, safety and the environment” (IOGCC, 2015). IOGCC members consist of the governors of oil and gas states and their appointed representatives. There are over two dozen member states, eight associate member states, and numerous foreign and domestic affiliates.

The Registry had the support of industry, which agreed to more transparency in chemical disclosures provided trade secret protections were in place. Industry had substantial investment in well stimulation technologies and remaining competitive in the marketplace hinged on protecting those investments.

Well operators and service providers across the country began submitting well data to the site voluntarily. If the identity of a chemical was a protected trade secret, the words “trade secret,” “confidential,” or similar indicator would be entered on the FracFocus form, so that anyone searching for well information on the Registry would be aware that specific information was being withheld under a claim of trade secret.

While FracFocus grew, so too did the debate regarding hydraulic fracturing. Oil and gas producing states across the country began adopting new regulations specific to hydraulic fracturing,

primarily to assure well-bore integrity and promote transparency in fracturing fluid information. Indeed, within just a few years, virtually all of the oil and gas producing states enacted legislation or regulations specific to hydraulic fracturing (Hall et al., 2013). Vigorous debates ensued regarding trade secrets. Trade secrets are valuable and legally protected private property; these property rights in trade secrets serve to encourage the development of more efficient and “greener” fracturing technologies. And yet, also true is that environmental regulators, first responders, and medical personnel need access to the information that is essential to protect human health or the environment in the event of an incident.

As state legislatures and regulatory agencies struggled to draft laws and regulations that would strike the right balance (and appease the lobbying efforts on both sides), industry advocated for the use of FracFocus by state regulators in order to serve the goals of transparency, but also to lessen the burden of complying with a patchwork of different reporting obligations across the country. States and the federal government ultimately took a variety of approaches (and are continuing to do so), with most adopting FracFocus as a mandatory method of compliance with the state (or federal) fracturing fluid disclosure obligations.

In the first two years of operation, data on tens of thousands of wells across the country were reported to FracFocus and FracFocus quickly became a critical information source. EPA “compiled and analyzed over two years of data” from FracFocus to support its study on the impacts of fracturing on drinking water resources (EPA, 2015b). The Department of Energy set up a task force to evaluate FracFocus (Department of Energy, 2014a). The consultants that developed the FracFocus database presented papers highlighting how analysis of the data available on FracFocus could be used to “bring a scientific approach to addressing many of the concerns expressed by the public, NGOs, and regulatory agencies regarding hydraulic fracturing” (Arthur et al., 2014). Indeed, as of April 23, 2013 (the date of the Harvard study discussed below in Section 1.4), FracFocus had data on 41,239 wells (Ground Water Protection Council, 2015b). As of July 2015, there is now data on 99,734 wells available on FracFocus, (2015b). Even at the time of the publication of the Harvard report, FracFocus appeared to be an important tool for the public to access fracturing fluid information and for regulators to implement chemical disclosure laws.

FracFocus continues to evolve and respond to the recommendations of regulators and other stakeholders. In spring 2013, new upgrades were made to FracFocus, which became known as “Frac Focus 2.0.” These upgrades included, among other things, the ability to search the site by Chemical Abstract Service (CAS) numbers or date ranges, a location on the chemical disclosure forms for “ingredients not listed on MSDS,” as well as internal processes to check for errors as data is submitted (FracFocus, 2013; Department of Energy, 2014a). FracFocus 3.0 is expected to launch in 2015 with additional upgrades aimed at increasing reporting accuracy, expanding search capabilities, potentially decreasing the number of trade secret claims that are submitted, and allowing easier access by regulators and the public (FracFocus, 2015d).

The Harvard Report discussed in this paper noted some of the changes made in FracFocus 2.0, for example the inclusion of non-MSDS chemicals on the FracFocus disclosure form, but concluded that the FracFocus reporting forms did not go far enough (for reasons that are beyond the scope of this paper). At the time of this survey, FracFocus 2.0 was in use, and at the time this paper was submitted for publication, FracFocus 3.0 had not yet been released.

1.4. Harvard law school concludes FracFocus is a failure as a

regulatory tool

On April 23, 2013, researchers at Harvard Law School's Environmental Law Program, Policy Initiative, published a white paper titled “Legal Fractures in Chemical Disclosure Laws: Why the Voluntary Chemical Disclosure Registry FracFocus Fails as a Regulatory Compliance Tool” (Konschnik et al., 2013) (hereinafter referred to as the “Harvard Report”). The Harvard Report cited three primary failings in the FracFocus tool: 1) the timeliness of FracFocus' notification to state regulators when a submission is made to FracFocus; 2) the lack of state-specific submission forms that take into account the varied state disclosure requirements; and 3) the lack of a mechanism within the Registry by which to challenge trade secret claims made on submissions to FracFocus (Konschnik et al., 2013).

The Harvard Report spread swiftly through the environmental and industry communities, and garnered widespread national media attention. The report itself, however, soon attracted negative attention. Media, industry representatives, and state regulators recognized a major shortcoming: the Harvard Law School researchers reached their conclusion about the value of FracFocus without interviewing regulators who were actually using the tool to support their regulatory programs. The report cites one telephone interview by a law student with a Colorado regulator as to whether he was aware of the requirement that forms be submitted to the state and to FracFocus, and one interview with a Pennsylvania regulator regarding the information that is submitted to the state on state forms, apart from FracFocus forms (Konschnik et al., 2013). There apparently were no discussions regarding timeliness of reporting, trade secret claim procedures, or state-specific forms with these two or any other state oil and gas regulators. Fundamental questions remained: Were state regulators in fact limited in their regulatory programs by the lack of state specific forms, the timing of disclosures, or the absence of a method for challenging trade secret claims within the Registry? The experience of the government regulators is absolutely central, and that is precisely the question this paper seeks to address: what do regulators across the country think of FracFocus and how are they actually using it? Has it in fact “failed as a regulatory compliance tool” as the Harvard Report claims?

The most appropriate way to find out is to directly survey the regulators. Accordingly, we developed a survey of eleven questions aimed at discovering how states were using the tool, their general impression of the tool, and to elicit open ended feedback from state regulators regarding FracFocus.

The survey was sent to regulators in twenty states with oil and gas development and listings on FracFocus, with 14 states responding, a response rate of 70%. We targeted regulators with responsibility for enforcement and compliance with chemical disclosures rules, well reporting rules, or FracFocus submissions in their respective states. We emphasize that all of our written and oral contacts with the state regulators were neutral in terms of our own evaluation of FracFocus. Overall, the data contradicted the Harvard Report's conclusion that FracFocus ‘fails as a regulatory tool.’ Regulators had a positive view of FracFocus and indicated it was a useful tool in regulatory programs. Different states are using FracFocus in different ways. Indeed, regulators indicated they were using the information available on FracFocus to support their regulatory programs in novel ways perhaps not imagined by FracFocus' creators. This paper discusses the results of that survey, how states are using FracFocus, and the impressions regulators have of FracFocus as a regulatory tool.

2. Methods

We compiled the survey using Qualtrics online software and

sent it via email to the targeted regulatory officials for each state in which more than ten wells appeared on FracFocus as of spring 2014. These included Alabama, Alaska, Arkansas, California, Colorado, Kansas, Louisiana, Michigan, Mississippi, Montana, New Mexico, North Dakota, Ohio, Oklahoma, Pennsylvania, Texas, Utah, Virginia, West Virginia, and Wyoming. A minority of these states currently do not require mandatory reporting to FracFocus in their regulatory programs (although they do require disclosure of fracturing fluid information), and approximately two states were in the process of adopting regulations that would require the use of FracFocus, which had not yet taken effect at the time of the survey. However, we intentionally included these states in order to capture any use that state regulators may be making of the then voluntary reporting to FracFocus that was already occurring in those states. Importantly, the states surveyed included the top oil and gas producing states in the nation (EIA, 2013) and those with the most proven hydrocarbon reserves (EIA, 2014).

Prior to sending out the survey, we contacted as many states as possible by phone and e-mail to assure that the survey was directed to the regulator with the most familiarity or experience with FracFocus or chemical reporting from well operations in that state. We informed these states (by phone or email, as well as in the cover letter accompanying the survey link) that more than one person in the agency could take the survey. We then left it up to the state agencies to identify the appropriate person(s) to take the survey. Our survey records demonstrated that each responding state only submitted one survey.

We initially contacted these state regulatory agencies using information obtained from state agency websites and from FracFocus, which maintains a list of state contact information, along with a neutrally worded explanation of why we were requesting the information. The survey was anonymous in order to encourage frank answers and protect the individual respondents.

The survey asked specific questions, but also allowed room for regulators to draft their own reactions to FracFocus. Many contributed substantial detail regarding their programs and their use of FracFocus. Some of them included identifying information in their answers which we have omitted to protect the privacy and identity of those responding. Some respondents chose not to answer specific questions and that was taken into consideration in reporting of results.

Our intention was to obtain comparable data on such critical factors as the timeliness of FracFocus' notice to states when it receives reports on wells, the use of FracFocus to support regulatory programs, the states' views of the role FracFocus plays with respect to trade secrets, integration of FracFocus data with state maintained data, and the overall sense of the utility of FracFocus for state regulators charged with enforcing state chemical disclosure rules. A list of the survey questions and response options is included in Appendix A.

3. Results

3.1. Survey questions and responses

3.1.1. Timeliness of state notification

The question of whether FracFocus provides timely notice of data submission to the states may be critical to the usefulness of the data and certainly to the state's ability to determine if time sensitive disclosure obligations are being met. Accordingly, we asked the state regulators if FracFocus notified them when FracFocus received submissions from well operators and if that notification is timely.

The survey gave respondents a choice of "very timely," "timely," "not so timely," "extremely poor," and "other," with this last option

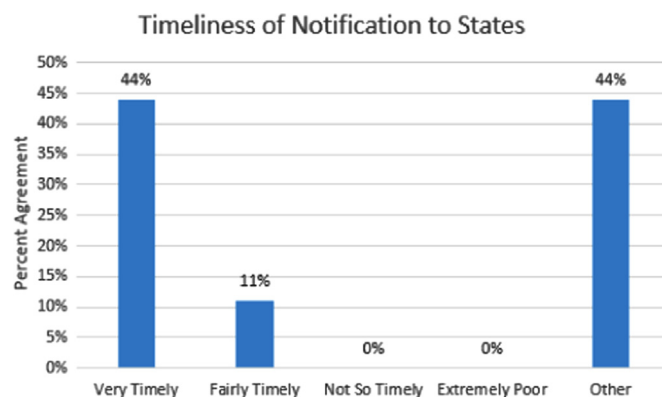


Fig. 1. Total number of states responding: 9.

allowing respondents to enter a written explanation. Nine states answered this question. The results of this survey question are shown in Fig. 1. Four replied that it was "very timely," one that it was "timely" and four states answered "other." No state indicated FracFocus' was "not so timely" or "extremely poor." In the "other" category, multiple states explained that they pull the information directly from FracFocus and do so on their own schedule. Hence, as one state explained, "so it is timely, but on our schedule." Another state in the "other" category which responded to this question did not use FracFocus.

These results appear to be in direct conflict with the Harvard Report's opinion that "FracFocus does not notify a state when it receives a disclosure from a company operating in that state. Nor can most states readily determine when a disclosure is made" (Konschnik et al., 2013).

3.1.2. Use of FracFocus to support state-specific regulatory programs

The second conclusion of the Harvard Report was that the lack of state-specific reporting forms on FracFocus "creates barriers to compliance" because "companies are left to figure out how to account for state requirements not requested by FracFocus" and "too often ... do not provide the additional information." (Harvard Report p.5). This study's survey was aimed at state regulators and their use of FracFocus, not the reporting companies; accordingly, we did not ask states about the FracFocus forms themselves, but instead sought information from the states regarding whether and how they were able to make use of data that was being reported to FracFocus (on the current, generic forms) to support the regulatory programs (that may vary from state to state).

The survey asked states whether they use FracFocus to download well data directly from FracFocus to state computer systems for use in individual state regulatory programs. As shown in Fig. 2, half of the respondents indicated that they use FracFocus in this way.

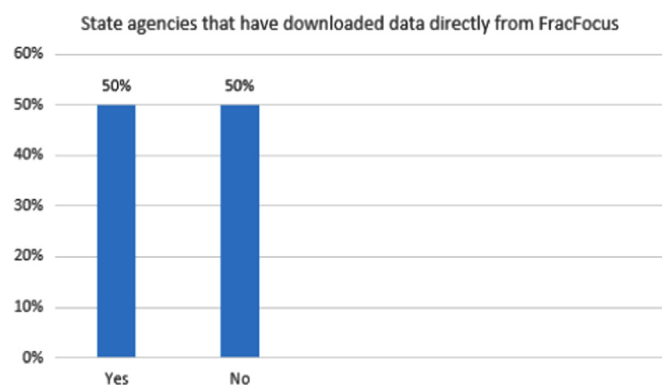


Fig. 2. Number of states responding: 14.

Percent of states that use FracFocus as a means to gather information about chemicals used in the hydraulic fracturing process

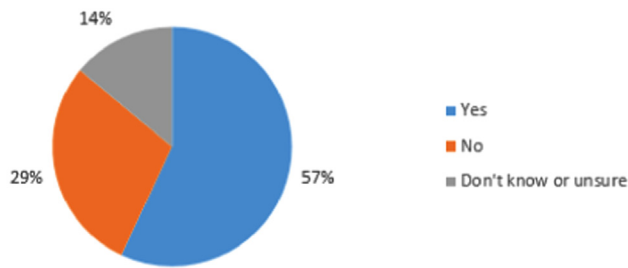


Fig. 3. Number of states responding: 14.

We also asked state regulators if they used FracFocus to gather information regarding the chemicals or water volumes used in the fracturing process. With respect to chemicals, 57% indicated that they do use FracFocus to gather such information, 29% answered they did not, and 14% answered they did not know or were not sure (Fig. 3). Data on water volume was less represented. Thirty-six percent of the states indicated they used FracFocus to obtain such information, 43% indicated they did not, and 21% indicated they did not know or were not sure. See Fig. 4.

In addition to asking prescribed questions, the survey asked open ended questions aimed at understanding how states have used FracFocus to support their regulatory programs. The following responses indicate that states have used FracFocus in ways that often go beyond chemical reporting compliance. Indeed, these findings may be some of the most significant and surprising of this study. We have corrected minor spelling and grammar errors. Ten separate states, indicated by paragraph breaks below and key statements highlighted in bold, reported that:

“FracFocus has been a tool to provide information to the public about different hydrological fracturing processes throughout our state. It is also useful when public record requests come in to generate all important information for each citizen.”

“Our state required documents do not tell us the date or dates of Frac treatment, FracFocus captures that information and our state has found that information helpful in studies of earthquake issues in our state. The information will also be utilized in the reports to our agency regarding complaints of water contamination.”

“FracFocus provides a readily available resource to provide hydraulic stimulation data to interested parties.”

“Our technical staff use Fracfocus to cross-check the validity

Percent of states that use FracFocus as a means to gather information about water volumes used in the hydraulic fracturing process

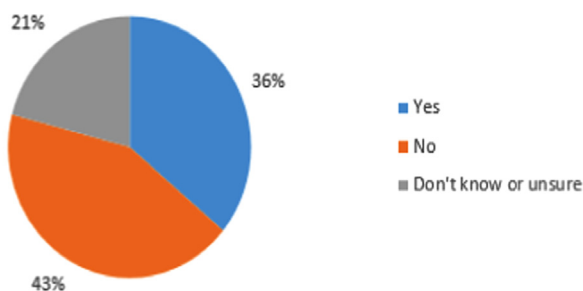


Fig. 4. Number of states responding: 14.

of the data submitted to us by the operator.”

“MSDSs have been submitted to our agency directly; however, a few companies ... submit their information to FracFocus.org. It has been helpful for us to direct concerned citizens to FracFocus to view MSDS that have been posted on the website. ...I personally have obtained information from FracFocus to create an informational pie chart regarding the chemical constituents of hydraulic fracturing fluids.”

“We ... use FracFocus to verify compliance with our rules.”

“[The agency] has used FracFocus to determine compliance with the requirement under the Safe Drinking Water Act to require an Underground Injection Control permit for hydraulic fracturing using “diesel fuel” as defined by EPA. EPA provided a definition through guidance and interpretive memo (not rule-making) for the term “diesel fuel” in May of this year. The [agency] has enforced against one operator using information obtained through FracFocus.”

“[This state uses FracFocus to] determine reporting and notification compliance with the state’s ... statutes and regulations. It is the only electronically available source of hydraulic fracturing chemicals data that the state can access to consider types of formulations or in cases of a spill. Very few of the [agency’s] environmental programs have access to electronically available chemical data for the activities they regulate.”

“We have used FracFocus to check databases of chemicals used.”

“We usually just verify reporting compliance.”

In addition, several states indicated that they cross-reference state reporting forms with the list of wells they obtain from FracFocus to verify that operators are in compliance with state reporting obligations. Moreover, they will contact an operator if the submissions to FracFocus do not match the submissions to the state.

Finally, one state wrote that it routinely runs reports from FracFocus “through the tools for the state regulator role.” This state noted that it found valuable the feature of FracFocus that allows oil and gas inspectors to “select any specific report, anytime they need to for review” and that the FracFocus reports “can be run anytime by the regulators to check operator compliance.”

3.1.3. Trade secrets

The Harvard Report vigorously criticized FracFocus for its omission of legal procedures to challenge and defend claims of trade secret. From our perspective, we do not believe FracFocus has the authority, nor was it intended, to establish any such mechanisms. State law generally defines what a trade secret is and states will have different mechanisms in place by which claims of trade secret are asserted or can be challenged. In any case, it was important to understand regulators’ views on whether FracFocus could be doing more to assist the states with respect to this issue.

We asked states whether they were satisfied with FracFocus’ approach to identifying when claims of trade secret have been made on a submission to FracFocus. As shown in Fig. 5, all of the states responding indicated that they were either neutral, satisfied, or very satisfied. No state indicated it was dissatisfied. We did not have a response to this question that allowed respondents to draft their own statements; however, two states used other comment areas to specifically address the trade secret issue. One state commented, “we have a trade secret process – that is not FracFocus’s purview.” Another state noted that “[a]lthough FracFocus provides the capability to list legislatively protected trade secret and proprietary business information chemicals in a systems approach, each state has their own requirements for protection of this information.”

Satisfaction with FracFocus' approach to identifying when claims of trade secrets are made on submissions to FracFocus

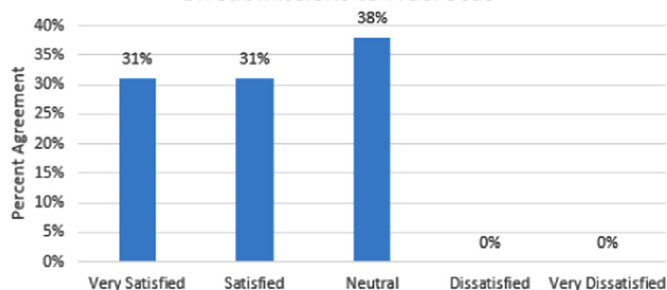


Fig. 5. Number of states responding: 13.

3.1.4. Overall satisfaction and state views regarding FracFocus

Because we expected there would be aspects of FracFocus and the states' use of it that went beyond the specific questions asked, we asked respondents how satisfied they were with the Registry overall. Forty-six percent responded that they were "very satisfied," 38% indicated they were "satisfied," and 15% indicated they were "neutral." See Fig. 6. Not one respondent replied that they were "dissatisfied" or "very dissatisfied." These results are significant because these respondents are the very ones charged with enforcing the hydraulic fracturing regulations. Surely if FracFocus was anything like the "fail[ure]" described in the Harvard Report, these respondents would have been the first to notice it. On the contrary, our survey results demonstrate that state regulators overwhelmingly find the site a useful and important regulatory tool.

Interestingly, the question that received perhaps the most robust response from regulators was one asking states to write anything they would like us to know about how regulators view FracFocus. The comments from the regulators are below (with any identifying information deleted). Each paragraph represents a different state's response, with minor typos or grammatical errors corrected and key comments highlighted in bold.

"The issue of trade secret status of chemicals used in hydraulic fracking is probably the most important issue regarding the hydraulic fracking debate."

"It appears to offer some queries that provide useful information."

"In the past, it has been helpful to direct citizens to the website when they have concerns regarding chemical disclosure of fluids used for hydraulic fracturing"

"I think the overall opinion of regulators is positive. My only suggestion would be to allow bigger data dumps by regulators. We are currently limited to a six month period"

Overall satisfaction with FracFocus

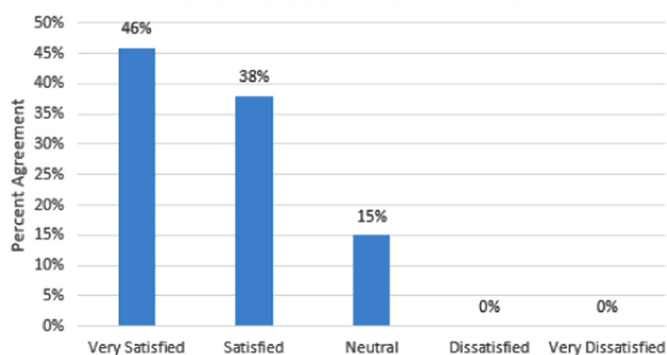


Fig. 6. Number of states responding: 13.

"FracFocus has been a very handy tool to identify what types of chemicals companies are using in their hydraulic fracturing stimulations in our state. I am able to use the information we get from the query that our database creates to determine which companies are using diesel fuel in their stimulations, and to cross reference that with the information that is on FracFocus pretty easily. ...I use FracFocus at least twice a week to determine which companies are out of compliance with our regulations, so I am pretty familiar with the site and how easy it is to use. The information that is provided is also great because it lets a person know what most of the chemicals are that are being used for a specific well, and the information is generally pretty user friendly to read. In my experience, I feel like some companies feel as if reporting to the FracFocus website is a joke, but once they have to hear from me, they quickly understand that this is not a joking matter and that it is important to report not only because it is a state regulation, but because the people want to know as well."

"It is quite effective and an efficient way to access, in a consistent format, hydraulic fracturing chemical data; and, to make that data readily available to the public. Although FracFocus provides the capability to list legislatively protected trade secret and proprietary business information chemicals in a systems approach, each state has their own requirements for protection of this information."

"We believe FracFocus has been a positive tool to assist in the disclosure of hydraulic fracturing information."

3.2. Increasing use of FracFocus

In the four calendar years FracFocus has been active or accepted submissions (January 1, 2011 through December 31, 2014), the website has received 1,090,512 hits, with 744,649 of these representing unique hits (Ground Water Protection Council, 2014). These numbers have been trending upwards each year, as Fig. 7 shows.

4. Discussion

States overall have a very positive view of FracFocus and are using it in their regulatory programs in robust and even novel ways. They overwhelmingly informed us that the timing of submissions is either quite good or not an issue, with no states expressing dissatisfaction with the time in which they are notified of submissions to the site. These findings directly contradict the

FracFocus User Counts

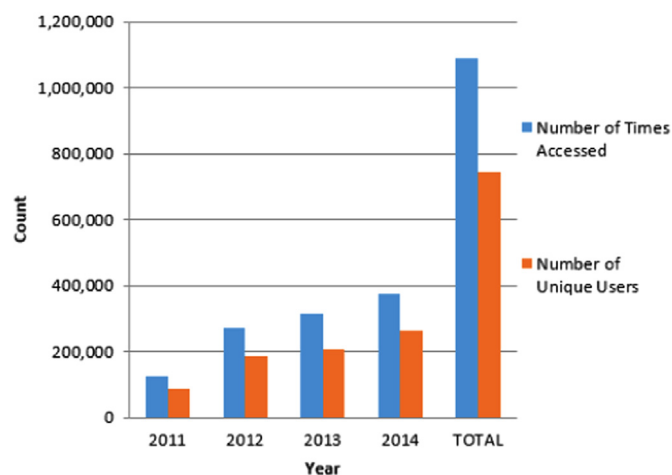


Fig. 7. User counts.

opinion set forth in the Harvard Report regarding the timeliness of submissions. The Harvard Report concluded that “FracFocus does not notify a state when the site receives a disclosure form about a well in that state. Nor can most states readily determine when a disclosure is made” (Konschnik et al., 2013). It is not clear how the Harvard Law School researchers reached this conclusion regarding FracFocus, but it is not supported by the experience of the regulators.

The states also viewed the Registry’s approach to identifying trade secrets positively, with no states objecting to the way FracFocus handles submission of trade secret information. The Harvard Report’s critical view, claiming that FracFocus failed because it did not contain a “robust trade secret regime” (Konschnik et al., 2013), does not fit with the regulators’ perspectives. In written comments, many states make clear that they never expected FracFocus to address the issue of trade secrets and the public’s right to information because this was a responsibility of state law, not a failure of the chemical disclosure registry. Indeed, many fail to see how a national registry such as FracFocus would have the capability or the jurisdiction to address trade secret claims in the way that the Harvard Law School researchers demanded. As the states surveyed were apparently well aware, each state has its own laws regarding what constitutes a trade secret and what procedural mechanisms for making or challenging a trade secret claim are available, as well as differing courts or administrative bodies for interpreting the law and ruling on trade secret disputes. This kind of “robust trade secret regime” is well beyond the purview of a national chemical disclosure registry. As one state regulator succinctly wrote, “we have a trade secret process – that is not FracFocus’ purview.”

States also made no objections regarding the need for state specific forms. Some regulators indicated they often compared submissions to FracFocus with submissions made to the state to ascertain compliance. Other states made their own pie charts with the data that is available on FracFocus, but the lack of forms that are targeted to individual states was not an issue raised by the state regulators and did not appear to impact their generally positive view of the utility of the Registry.

Finally, the results of the survey indicate that FracFocus has provided an extra measure of accountability for operators, in that several states are using the site to double check submissions that are made to the state against submissions made to FracFocus, and are promptly following up with operators when compliance issues come to light. Some have even used information obtained from FracFocus to support enforcement actions. As one of the regulators effectively stated, “I feel like some companies feel as if reporting to the FracFocus website is a joke, but once they have to hear from me, they quickly understand that this is not a joking matter.” State regulators are also downloading data from FracFocus and creating their own spreadsheets and graphics with data they deem important to their own state programs. States are using FracFocus features that allow oil and gas well inspectors to quickly access well information when they need it. Indeed, states are using FracFocus in ways perhaps not even dreamed of by its creators: to monitor earthquake issues or the illegal use of diesel fuel in fracturing treatments.

5. Conclusions and policy implications

5.1. Where the Harvard report went wrong

The national attention received by the Harvard Report has surely been harmful to a serious effort to strike a balance between the needs of the public and regulators, and the property rights of oil and gas service companies. We have demonstrated that far

from being a “fail[ure],” FracFocus actually does an excellent job with respect to the very issues on which the Harvard Report expressed concern: in general, FracFocus delivers information on a timely basis, provides data on the crucial issues of the nature of the chemicals used in fracturing, and supports states in their efforts to enforce state specific chemical disclosure laws while providing a mechanism to identify and maintain trade secret protection to an acceptable degree.

This paper represents the first comprehensive survey of state regulators and the first attempt to obtain a data-driven analysis of how FracFocus is being used and whether it is effective as a regulatory tool. The survey had a very high response rate for a study of this kind at 70% (Sheehan, 2001), increasing confidence in the results.

In the national debate regarding hydraulic fracturing, discussions are often driven by emotions rather than facts; the Harvard Report, a paper from a prestigious research university, was never subjected to peer-review and yet was well covered by the press, was used to inform the Department of Energy’s Task Force Report on FracFocus 2.0 (USDOE, 2014a), and inevitably increased the heat of the debate without taking into consideration all of the relevant facts. This is unfortunate because, as our study shows, websites like FracFocus are an important tool for regulators in the responsible development of domestic oil and gas resources and for keeping the public informed. At present, we are not aware of another chemical disclosure registry such as FracFocus which allows such easy access to information regarding chemicals used across an entire industry and searchable by specific location. At least one regulator also noted the uniqueness of this registry: “Very few of [the state agency’s] environmental programs have access to electronically available chemical data for the activities they regulate.”

The use of FracFocus continues to increase every year. Additional oil and gas producing states and the federal government continue to adopt FracFocus as a legally required mechanism for the reporting of fracturing fluid information. Kentucky became the most recent state to do so, with its law taking effect in June 2015, and Michigan’s rules requiring the use of FracFocus took effect in March 2015. The United States Department of the Interior, Bureau of Land Management also adopted reporting to FracFocus with respect to hydraulic fracturing on certain public lands in March of this year (USDOI, 2015). The U.S. Environmental Protection Agency used FracFocus data to generate certain state-level summaries on chemical data and water usage (EPA, 2015c). EPA also is relying on FracFocus data to support its study on the impacts of oil and gas development on drinking water resources, the draft of which was released in June 2015 (EPA, 2015d). Finally, in May 2014 EPA issued an Advance Notice of Proposed Rulemaking (ANPR) soliciting comments as to whether EPA should develop regulations under its Toxic Substances Control Act (TSCA) authority governing the reporting of chemicals used in hydraulic fracturing, including whether the FracFocus registry should be included in any proposed rule (EPA, 2014). The ANPR received over 235,000 comments that are currently under review by EPA.

FracFocus continues to evolve and has been responsive to changes suggested by the federal government, authors of the Harvard Report, and other stakeholders. The third version of the Registry, FracFocus 3.0, is expected to be released in 2015 and will adopt many of the recommendations set forth in the Secretary of Energy Advisory Board (SEAB) report (Department of Energy, 2014b), including improved quality control and improved data and search functions (FracFocus, 2015d).

The results of our survey show how third party data collection sites such as FracFocus can provide considerable support to regulators, inform the public, as well as provide consistency to a regulated community that operates nationwide.

In direct contrast to the Harvard Report’s conclusion, the data

demonstrate that FracFocus is a strong regulatory tool that is being used by the majority of the largest oil and gas producing states to support their programs. The results of this study may be used to share information among states regarding additional ways to use FracFocus to augment existing regulatory programs. For example, the survey results indicate that states may be able to make more use of the water volume usage being reported to FracFocus. Indeed, it is likely that states will continue to develop new ways to use the significant data available on FracFocus and it would be helpful for states to have the benefit of other states' efforts. The results of this study may facilitate such an exchange.

As other oil and gas producing states consider how to manage chemical disclosure, FracFocus should receive serious consideration, not only for its chemical disclosure attributes, but for the varied beneficial uses that regulators (and potentially others) will continue to make of the available data. Operators and service companies often operate across state lines (some across many state lines) and consistency of disclosure obligations between states make accurate reporting more likely and lessens regulatory burdens. The data obtained in this study support the continued use of FracFocus.

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Appendix A. Supplementary material

Supplementary data associated with this article can be found in the online version at <http://dx.doi.org/10.1016/j.enpol.2015.09.031>.

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