



LEAGUE OF WOMEN VOTERS® OF OHIO

17 South High Street, Suite 650 • Columbus, Ohio 43215

Phone (614) 469-1505 • Fax (614) 469-7918

www.lwvohio.org

FRACKING: An Issue Brief for LWVO Members

October 2013

Background

At the LWVO convention of May 2013 in Cleveland, horizontal hydraulic fracturing, aka fracking, occupied much of the discussion. Local Leagues on the eastern side of the state have already experienced a lot of fracking, since that portion of Ohio is underlain by Marcellus shale, but the rest of Ohio has mainly Utica shale that is less fracked; it is underneath & extends westward from the Marcellus. In addition, much of the state contains deep injection wells that are repositories for wastewater from various industries, often oil and gas, and are frequently used for fracking waste, a subject of considerable concern. Whether to launch a study and develop a LWVO position on the subject required a standing vote at the convention; the move was narrowly defeated, on the feeling that existing positions at the national and state levels already provide a basis for advocating on the issue and can be used immediately.

The interest and emotion manifest at this convention has prompted the LWVO board to offer a more thorough examination of fracking in Ohio, as our web site attests. Some of this material came from the 41 members of an interest group begun two years ago, channeled through board member Kristin Vessey and lobbyist Al Rosenfield. After an all-League conference call in April 2013, a 7-member committee charged with compiling information prepared a spread sheet of various fracking-related aspects. Thus many Leaguers have contributed to this project. It will, of course, need to be updated as more information emerges. The date is now 16 Oct. 2013.

Kristin Vessey, LWVO Board Member

Where the LWVO stands on the issue of fracking:

We have called for a moratorium on fracking;

We have called for a moratorium on the use of injection wells until nearby fault mapping has occurred;

We oppose drilling in state parks and forests;

We strongly seek to protect drinking water and its sources;

We strongly support good, clean air for everyone;

We want stronger regulation of the fracking process and more monitoring;

We want more data and scientific studies of the impacts of fracking;

We want transparency in government affairs;

We want the public to participate in such decisions as siting of drilling;

We want to know what chemicals will be injected in fracking;

We want brine (fracking waste) to be safely disposed of and any radioactivity acknowledged;

We want infrastructure expenses (e.g., roads) to be paid by the users.

What we can say about the horizontal hydraulic fracturing (HHF, aka fracking) debate from the LWV point of view:

Section 1: Issues that come up with fracking

Is drinking water affected?

Certainly drinking water is potentially affected and some claim it has been, because there is movement underground and aquifers may be nearby or passed through during this drilling process. Contamination might occur when concrete well casings crack, e.g., or when water flows back (about 15% does), bringing with it some of the chemicals used during drilling, and might include carcinogens and/or radioactivity (radium, e.g.). This is one of the more emotional issues, yet the data aren't in. Water can be affected, maybe has been, but we need before and after data to speak knowledgably.

Does fracking pose a threat to our water supplies - whether it comes from aquifers, lakes, rivers, or municipal supplies? And how is that affected by drought?

Fracking a well requires a huge amount of water, about 3-5 million gallons, but that is less than the amount of water required by industry, power plants, and agriculture; fracking is estimated to use about 1% of the water consumed by all such uses (<http://fracfocus.org/water-protection/hydraulic-fracturing-usage>). Effects of drought depend on the amount of water available. Drought creates more competition for water among drillers, farmers and thirsty citizens. In PA some water permits were withdrawn last year as headwater levels fell (<http://www.examiner.com/article/near-drought-conditions-impacting-marcellus-shale-gas-drilling>) so there is some flexibility, which could afford protection from drought.

How and where is the wastewater to be dealt with?

A big problem is that fracking wastewater is exempt from the Clean Water Act.

There are several methods of disposing of the wastewater, including injection wells, putting it in lagoons, and spraying the brine on roads. Dumping it in streams or down drains is illegal. Wastewater treatment plants are rarely equipped to remove any radioactivity, which has caused problems in PA when such plants were among recipients of fracking wastewater (<http://blogs.smithsonianmag.com/science/2013/10/radioactive-wastewater-from-fracking-is-found-in-a-pennsylvania-stream/>).

At present, Ohio has 242 'active' class II injection wells that can hold brine from fracking + 2,476 other specific class II wells (*FracTracker*, <http://www.fractracker.org/>) Ohio has received significant amounts of fracking wastewater from Pennsylvania and West Virginia. Under the Commerce Clause of the U.S. Constitution, states cannot bar shipments of fracking waste across state lines. Injecting this 'brine' has been shown sometimes to cause earthquakes (<http://onlinelibrary.wiley.com/doi/10.1002/jgrb.50247/abstract>), so the location and condition of the repository is an important matter; its use can and should be stopped if faults and/or old oil wells have not been mapped in the area.

The use of brine to deter dust on roads is not a good idea if brine contents are not identified because of the risk that the brine may contain radioactive materials or harmful chemicals. The industry estimates that 2% of the wastewater brine is spread on roads (<http://oilandgas.ohiodnr.gov/industry/underground-injection-control>).

Lagooning has risks, e.g., leakage and flooding.

Radioactivity scares a lot of us: is it a major problem?

In Ohio there are different classes of disposal wells: class I (there are 10 of these, which accept hazardous and nonhazardous wastes and are located at 3 sites) is regulated by the EPA; class II is regulated by ODNR and includes oilfield wastes, brines, hydrocarbons and radioactive material (low-level hazardous waste), a major concern for fracking waste (<http://oilandgas.ohiodnr.gov/industry/underground-injection-control>).

A Duke study published 10/2/13 found 200 times more radium (half-life 1600 yr) had accumulated in sediment from a wastewater treatment plant in PA getting oil and gas brine than in samples just above the release point (<http://blogs.smithsonianmag.com/science/2013/10/radioactive-wastewater-from-fracking-is-found-in-a-pennsylvania-stream/>). So yes, it's a problem.

What kind of land can be drilled, i.e., public vs. private; do any rules apply to both?

Although most of the fracking in the US is on private land, almost all the Federal 'rules' apply to public land (about 13% of US natural gas and 5% of its oil come from public lands) and more of those rules for public land are being made by the Bureau of Land Management (BLM). (8/23/13)

To quote Reuters: "The Obama administration hopes the rules on public lands will serve as a model for state oversight of drilling on private lands."

(<http://www.reuters.com/article/2013/07/22/fracking-rules-idUSL1N0FS1GO20130722>).

The technique called "sue & settle" is enabling the Obama administration to use the Endangered Species Act to limit fracking on both public and private land in order to protect endangered species

(<http://online.wsj.com/news/articles/SB10001424052702304176904579115234181105684>).

In Ohio public participation in siting decisions has been removed from local jurisdictions by the state, meaning local people have no say in where fracking may occur (http://www.legislature.state.oh.us/bills.cfm?ID=125_HB_278).

Another instance in which State law governs pertains to the use of lined impoundments that hold fresh water for drilling. Previously flowback, or fracking wastewater, had to be stored above ground in covered steel tanks before disposal or reuse. But "effective Jan. 1, the centralized impoundment pools will be authorized for

fracking wastewater by the Ohio Department of Natural Resources as part of a regulatory change state legislators made in the biennial budget bill signed in June [2013]." (<http://www.vindy.com/news/2013/oct/06/oil-and-gas-drilling-ohio-set-to-ok-pits/>)

(http://www.science20.com/briana_mordick/proposed_rules_fracking_public_lands_ack_scientific_merit-118922)

How can we get all the chemicals involved identified in advance of their use, and learn how much of each is being used?

In Ohio, this information is considered 'proprietary' and thus not available for public perusal. Federal disclosure law, however, overrules that: local authorities and first responders must be informed so they will know how to deal with chemical emergencies. The rest of us remain in the dark.

What about air pollution?

Methane, benzene, toluene and other volatile carcinogens are often found near well sites.

If we consider the entire process of unconventional oil and gas extraction, we need to think about well pads, compressor stations, pipelines and roads. It's tough to separate effects of such sources, and distance from well sites may alter their health effects. Increased trucking is inevitable but so are their diesel fumes.

Digging so-called sand (used as proppant) mines can also cause inhalation hazards. And yes, burning any fossil fuel, including flaring, contributes to global warming. The Union of Concerned Scientists (UCS) says that few states have comprehensive monitoring (<http://blog.ucsusa.org/fracking-and-my-communitys-air-quality-is-there-something-in-the-air-254>).

Who is monitoring this process and how often?

Regulations are worthless unless they are enforced.

The ODNR is supposed to monitor drilling; quoting from their web site, "ODNR's Division of Oil and Gas Resources Management is responsible for regulating all aspects of oil and gas drilling."

(<http://oilandgas.ohiodnr.gov/portals/oilgas/pdf/oilgas11.pdf>)

Are there enough inspectors, and when do they inspect??

As of April 2013, there were 50 field inspectors, 596 Utica permits had been issued, 293 drilled, 81 done & producing (<http://www.businessweek.com/>).

The Plain Dealer said on 12/29/12 "they inspected 18% of the 64,481 operating wells in 2011", leaving 50,000 unchecked (<http://www.cleveland.com/metro/>).

When in the fracking process the monitoring occurred is not revealed.

(<http://oilandgas.ohiodnr.gov/shale>)

Other issues include:

1. Ownership of mineral vs. land rights – often these are separable; you may think you own both but subsurface mineral rights may have been sold to someone else
2. Use of fossil fuels vs. renewables – LWVO staunchly supports solar and wind
3. Restoration of drilling land to its pre-drilling condition – as in mining
4. User-pays concept for repair to infrastructure damaged, such as roads
5. Conservation of energy – a long-time goal of LWV; decreases demand
6. Siting – lack of public involvement in, e.g., whether wells can be inside city limits
7. Quality of life changes – noise, damaged roadways, safety (increased truck traffic + accidents), fumes, lowered house value, neighborhood polarization, competition between residents and temporary workers for rental units
8. Economic frustration – fewer quality jobs than advertised, most going to imported workers – quoting, “But many of the workers on drilling rigs and construction projects are contractors from outside the state.”
(<http://www.dispatch.com/content/stories/business/2013/08/22>)
9. Environmental impact statements – adequate review of possible outcomes for the environment in fracking are missing
10. Rules governing the process – may be ‘hidden’ in other bills, e.g., Ohio’s budget
11. Health – of humans as well as other life forms should be considered
12. Severance taxes – needed; monies there from could apply to restoration of sites
Higher severance taxes proposed by governor were rejected by legislature.
13. Long-term costs, including environmental impacts, should be calculated
14. Appropriate closure, including plugging when use of a well is completed, needs to be planned
15. All companies should be held accountable for their activities and regulated by the same requirements (e.g., bonding, certification)

Section 2: Applicable LWVUS and LWVO positions

We can advocate regarding most issues relating to fracking now by drawing on League positions on, e.g., clean air, water quality, use of renewable energy sources, conservation, public right-to-know and participation in decision-making, ecosystem integrity, reduction in climate change, reclamation of land damaged by mining; disposal, safe treatment, transportation, storage and disposal of waste (including low-level radioactivity); and environmental review.

LWVUS Positions Relevant to Fracking

Natural Resources – LWVUS believes that natural resources should be managed as interrelated parts of life-supporting ecosystems. Resources should be conserved and protected to assure their future availability. Pollution of these resources should be controlled in order to preserve the physical, chemical and biological integrity of ecosystems and to protect public health.

- A. Clean air – League has pressed for full implementation of the Clean Air Act since it passed in 1970; believes global warming is a serious threat; lobbied Congress to cut greenhouse gas emissions, increase energy efficiency, shift to renewable energy
- B. Water quality & quantity – LWVUS supports policies that reflect the interrelationships of water quality, water quantity, ground-water and surface water and that address the potential depletion or pollution of water supplies; measures to protect lakes, estuaries, wetlands and in-stream flows; stringent controls to protect the quality of drinking-water supplies, including protection of watersheds and of recharge areas for groundwater; in Convention 2010 a resolution was passed to support safe drilling and mining practices.
- C. Renewable energy sources – a decades-long push for energy conservation + use of renewable resources.
- D. Conservation – the crux of its energy agenda, guaranteeing long-term benefits to everyone.
- E. Public right-to-know & participation in decision-making – participation is a necessary component of decision-making at all levels of government; SARA (Community Right-to-Know Act of 1986) gives access to information from chemical facilities on releases and spills, allows 'regulation by info', encourages strong...pollution prevention by industry; public has a right to

know about pollution levels & dangers to health and the environment...to participate in decision-making at each phase & level.

- F. Ecosystem integrity - preservation of the physical, chemical and biological integrity of the ecosystem and maximum protection of public health and the environment.
- G. Environmental protection & pollution control - interrelationships of air, water and land resources should be recognized in designing environmental safeguards, with responsibilities shared by all levels of government led by the federal government and enforced in a timely, consistent and equitable manner for all violators
- H. Reduction in climate change – believes global warming is a serious problem that needs immediate action, need to reduce emissions of heat-trapping gases.
- I. Reclamation of land damaged by mining – management of land as a finite resource, planning that reflects conservation, regulation of areas of critical concern, reclamation of damaged lands, review and regulation of areas impacted by public or private investment.
- J. Low-level wastes – supports policies for management of...high- and low-level radioactive wastes to protect public health, and air, water and land resources; L-L Radioactive Waste Policy Act of 1980 makes states responsible for disposal of LLWs, lets states refuse wastes from other states.
- K. Disposal, safe treatment, transportation, storage and disposal of waste (including low-level radioactivity) - waste management should be considered a cost of providing a product or service; inspection and monitoring; full disclosure of pollution data.
- L. Environmental review – supports review of environmental, social, and economic impacts of public and private development as well as of federally funded projects.

LWVO Positions Relevant to Fracking

NATURAL RESOURCES

Water – LWVO supports stringent water quality standards and enforcement, with adequate state financing for abating water pollution.

Hazardous Materials And Waste – Siting of nuclear waste facilities should not occur where there has been oil and gas exploration/development. Adjacent property owners, residents, and users of surface and ground water should not bear the burden of improperly managed hazardous materials.

Land Use - Supports regional planning and environmental impact assessments. Land use topics of current interest to the LWVO include the increase of nutrient runoff contributing to algae growth in water, fracking, and the use of public lands for drilling for energy.

Section 3: Overview of Leagues' approaches in other states

LWV of PA – The Pennsylvania League's position specifically addresses Marcellus Shale (Ohio has both Marcellus and Utica shale that could be fracked) and the economy of Pennsylvania and expectations of their citizens. Sum: it's too specific for LWVO to consider concurrence, keeping in mind that concurrence requires us to concur with the entire position.

POSITION

Natural Gas Extraction from Marcellus Shale Support the maximum protection of public health and the environment in all aspects of Marcellus Shale natural gas production. Support the prevention of burdening the taxpayer with costs of industrialization and unanticipated consequences. Support the 2006 Pennsylvania Property Rights Protection Act without amendment, the adoption of minimum spacing requirements for wells, and the pooling of properties between corporate entities to maximize efficiencies and reduce risk in the extraction process. Support the maximum protection of public health and the environment in all aspects of Marcellus Shale natural gas transmission operations through improved siting, regulation, inspection, and enforcement that is transparent and responsive to stakeholder input.

(<http://www.palwv.org>)

LWV of CO - CONSENSUS POSITION -- Hydraulic Fracturing

Adopted by LWVCO Board on March 20, 2013

POSITION IN BRIEF

LWVCO supports policies that enhance public participation in the permitting and monitoring of oil and gas operations in the state. LWVCO supports efforts to improve coordination with local governmental units for environmental management and wise land use. We support strong environmental regulations for water quality, air quality and impacts on human health.

This is more general and more like one we might concur with. However, it does not seem to address some points that particularly concern us, e.g.,

- wastewater and injection wells,
- when the chemicals used in this process must be made public,
- radioactive waste,
- drilling in public lands (parks, forests);

and it focuses on delivery of public information (the first 3 support positions, although they do not state that this listing reflects priority). We recommend that you read the entire position at the web site below:

(<http://www.lwvaplata.org/files/lwvcofrackingposition3-26-13.pdf>)

OTHER LEAGUES: meetings & discussions are occurring in local Leagues in such places as IL, MN, CA, WA, AR, but as far as we can tell, none (as of 10/13) has done a study and reached consensus except PA and CO.

Section 4: Attempts to make rules about fracking

- In 2010, Pittsburgh was the first municipality in the nation to institute a ban on hydraulic fracturing.
- Longmont, CO: first city in CO to ban fracking (2012) within city limits. Result: sued by energy companies and the State as an unconstitutional rule. According to *The New York Times* on 8 Nov 2013: "Voters in [the three CO cities of] Boulder, Fort Collins and Lafayette approved anti fracking initiatives by wide margins A fourth city, Broomfield, narrowly defeated a proposal for a five-year moratorium on drilling that uses hydraulic fracturing."
- Mora Co., NM, was the first US county to ban fracking (4/13). (*L. A. Times* 5/28/13)
- Cincinnati was the first city in Ohio to ban fracking injection wells (8/1/12) (<http://ecowatch.com>)
- Bowling Green, OH: City Council unanimously passed an ordinance on 9/16/13 banning fracking and waste disposal within city limits. (*Toledo Blade* 9/17/13). But Bowling Green City Attorney Michael Marsh, in a Sept. 4 letter to council members, said he wrote the ordinance to be a part of the city's criminal code, not its zoning code. "It is an exercise of our police powers," Mr. Marsh wrote. "The same tack was taken by us several years ago when we were the first city in Ohio to regulate cigarette and cigar smoking in certain facilities. Smoking at that time was also a 'legal' activity and was heavily regulated by the state of Ohio. Our ordinance was challenged, and it was upheld, as a reasonable exercise of our police power, and since it did not conflict with the state criminal code, there was no pre-emption argument to overcome." This reflects the tension between state and local efforts to regulate.
- In Ohio, both Bowling Green and Youngstown defeated initiatives to ban fracking, whereas Oberlin approved such a ban (11/8/13, *TNYT*).
- The Ohio Department of Natural Resources claims it maintains legal authority to issue all drilling permits throughout the state, even in cities that pass ordinances to ban the activity.
- Municipal total in NY as of 9/6/13: 63 bans on fracking, 110 moratoria, 87 movements for prohibitions (bans or moratoria). (*FracTracker*, <http://www.fractracker.org/maps/ny-moratoria/>)

Section 5: Other countries

- France & Bulgaria have banned fracking; Britain and Germany have not shown much interest in fracking. The European Parliament [voted on 9/9/13 to tighten the rules on fracking](#), giving initial approval to a measure to require in-depth environmental impact studies on all such projects. (<http://www.nytimes.com/2013/10/12/business/international/france-upholds-fracking-ban.html?ref=world&r=0>).
- China, Poland and Australia are all fracking (<http://gu-fracking.appspot.com/>).
- Draft fracking rules have been approved by the South African Cabinet (<http://allafrica.com/stories/201310110425.html>).

Section 6: Current status

The magnitude of the fracking problem is huge. A recent attempt to sum up part of the footprint on the environment caused by fracking is in the estimates included in the report "Fracking by the Numbers" by Environment Ohio (9/3/13), which claims that we in Ohio are producing 30 million gallons of wastewater from drilling each year (and over half of what must be disposed of is coming from wells in Pennsylvania and West Virginia), 4,600 tons of air pollution in 2012, and since 2005, 1.4 billion gallons of fresh water used, 1,600 acres of land degraded, and 420,000 tons of global warming pollution. (<http://www.environmentohio.org/news/ohe/fracking-numbers-new-report-environment-ohio-research-and-policy-center-first-quantify>).

The LWVUS has been advocating strongly on fracking by using our already-existing positions (check the Appendix for details). Likewise, the LWVO has been advocating about various aspects of fracking for several years (see the web site). It is true that we in the LWVO do not have a specific position that speaks to the ability of localities or the State to ban fracking completely. However, neither of the two state Leagues which studied fracking adopted a position that supported an outright ban. Our existing positions enable us to lobby effectively and we anticipate continuing to advocate on this issue.

Appendices

Public Comment to EPA Leaders and Science Advisory Board on the Study of the Potential Impacts of Hydraulic Fracturing on Drinking Water Resources

Advisory Board Panel Meeting, **May 7, 2013**, Arlington, VA

The League of Women Voters has a long history of conducting research, examining issues from various perspectives, and reaching positions based on consensus.[i] Advocacy, based on these positions, is an important part of League activity. I am Jessica Jones speaking on behalf of the Leagues of Women Voters of the United States and our State signatories.

We are concerned that hydraulic fracturing [ii] has occurred extensively and continues to occur in over 30 states without the completion of a comprehensive, transparent, science-based, peer-reviewed study on its potential impact on drinking water resources. We are therefore highly dependent on this EPA Study to direct action to prevent damage to public health and the environment.

In reviewing the scope of your investigation, the League urges you to include a thorough examination of EPA's findings based on test sample analyses in two case studies: Pavillion, Wyoming and Dimock, Pennsylvania. These two sites are in different shale plays and both appear to have experienced water contamination. All investigations conducted at these study sites by the EPA are not included in the EPA's Progress Report of December 2012. Pavillion is not mentioned at all. Dimock, one of the locations that EPA did test sampling for this Study, is only found in footnote 78 stating no further action is planned at this site.

The League urges the EPA and the Science Advisory Board to examine fully the history and current status of these two critical sites and include them in the study going forward. We ask that the Final Report on the Study address the issues raised at these significant sites.[iii] The inclusion of Dimock and Pavillion in this EPA study is not intended to exclude the other previously selected sites from consideration.

The public should be assured that non-disclosure agreements, political pressures, and/or financial considerations have not stood in the way of relevant data needed for scientific scrutiny. Sound, reliable, and comprehensive data are essential for building rational explanations and a theoretical understanding of the cumulative impact of hydraulic fracturing on life-sustaining water resources.

In conclusion, the League of Women Voters appreciates the opportunity to provide input for the consideration of the EPA, the Science Advisory Board, and this panel of experts.

September 10, 2012

To: Department of the Interior, Bureau of Land Management

From: Elisabeth MacNamara, President

Re: Comments of the League of Women Voters of the United States on the Proposed Rule: Oil and Gas: Well Stimulation, Including Hydraulic Fracturing, on Federal and Indian Lands

Attention: 1004-AE26 Document ID BLM-2012-0001-000

The League of Women Voters of the United States (LWVUS), with its long tradition of advocacy for natural resources, is grateful for the opportunity to provide input to the Bureau of Land Management (BLM) regarding proposed rules related to oil and gas – specifically those involving well stimulation, including hydraulic fracturing, on Federal and Indian Lands.

At its 2010 National Convention held in Atlanta, Georgia, LWVUS unanimously adopted a resolution to support safe drilling and mining practices. We support the significant strengthening of appropriate regulation, oversight, inspection, and penalties associated with the development of fossil fuel resources. This strengthening includes the elimination from national legislation of the exemptions for drilling and mining, as well as additional legislation requiring the federal agencies to regulate drilling and mining in a manner consistent with the preservation of a healthy environment.

As part of our national position, derived through study and consensus by Leagues across the nation, we believe that natural resources should be managed as interrelated parts of life-supporting ecosystems. Resources should be conserved and protected to assure their future availability. Pollution of these resources should be controlled in order to preserve the physical, chemical and biological integrity of ecosystems and to protect public health" (Statement on Natural Resources, as Affirmed by the 1986 Convention). Further, the LWVUS supports:

- full disclosure of pollution data;
- management of land as a finite resource not as a commodity;
- identification and regulation of areas of critical concern... including ...rare or valuable ecosystems; significant wildlife habitats; unique scenic or historic areas; wetlands..." and "renewable resource lands, where development could result in the loss of productivity (such as watersheds, aquifers, and aquifer-recharge areas, significant agricultural and grazing

lands, forest lands); and policies to ensure safe treatment, transportation, storage and disposal of solid and hazardous wastes in order to protect public health and air, water and land resources.

On review of the proposed rules, we are encouraged by efforts to update the regulations governing hydraulic fracturing. However, we would suggest your consideration of the following issues under each of the subsections listed below.

Disclosure

Because transparency is a LWVUS core belief essential for good government, disclosure is critical – particularly on public lands and in processes that impact public health. We would encourage you to maintain the proposed language while adding the requirement to disclose chemicals after, as well as before, fracking. Such information is essential for testing water sources in the vicinity of extraction sites. Given the unpredictable upwelling and migration of liquids through evolving geological formations, the use of tracers in the injected chemicals should be considered as a way to track chemicals and determine sources of contamination.

Confidential “trade secret” information must be made available immediately to emergency responders and medical professionals. This is critical to treating patients and responding to unanticipated consequences. Such data is also essential for vital research related to epidemiological studies essential to the protection of public health.

Well Integrity

Given existing and projected data on the short- and long-term failure rate of well casings, the proposed rules are a step in the right direction. However, they are not based on the best available practices or current technology. To protect water sources, requirements should be extended to include language to address the depth below the usable water that the surface casing must be set and the design and use of intermediate and production casing. While the existing language speaks to the surface casing, additional provisions should address cement logs on intermediate and production casing to ensure proper isolation of hydrocarbon-bearing zones. It would be prudent to establish different standards of well integrity based on the seismic character of the geological formations involved in the extraction process.

Toxic Waste Management

The disposal of wastes from fracking and other fossil fuel extractive processes is problematic. Both today and in the past, disposal has created serious and permanent damage to the environment and public health. To reduce these problems, the BLM proposal should require best practices that continue to evolve with technology. This includes the use of closed loop systems to capture waste in tanks rather than open pits. To protect clean air, requirements, consistent with federal rules to be implemented in 2014, should be put in place immediately to

require the capturing of toxic air contaminants and global warming pollutants. Both of these changes, related to waste disposal, are of benefit to both the well-being of the public and the bottom line of the industry. Because of the inclusion of heavy metals, toxic chemicals, and even radioactive substances in some fracking waste, it is essential that wastes from the oil and gas industry be appropriately classified and treated as hazardous.

The proposed regulations need to be more comprehensive in addressing the governing of hydraulic fracturing. To extend the ruling, LWVUS recommends that BLM rules should:

- outlaw the use of diesel and similar petroleum distillates in fracking operations on lands under federal leases;
- prohibit the use of selected lands completely from oil and gas exploration based on their environmental sensitivity, proposed or present wilderness designation, or their critical location in support of water sources;
- establish safe setbacks from life-supporting ecological areas and from homes, schools, and other areas, as appropriate, to protect the public health and natural environment.
- safeguard our water sources, gather pre- and post- test data on water sources over time relative to natural gas operations, and disclose all water quality and quantity findings to the public, impacted landowners, and federal agencies, including the BLM.

In closing, because of the evolving nature of the industry and the growing bank of information relative to its consequences, LWVUS encourages you to provide language in the rules that require periodic updates of the regulations. One way to do this is to have the BLM proposal be automatically updated to reflect the most stringent rules adopted by any state within our nation. In this way, the BLM will be able to ensure that public health, our lands, our air, our water, and our wildlife are protected today and for generations yet to come.

LWVUS appreciates the opportunity to public comment on this matter of high priority to many of Leagues throughout the nation. Thank you for your kind consideration.

August 3, 2012

To: Environmental Protection Agency

From: Elisabeth MacNamara, President

Re: Permitting Guidance for Oil and Gas Hydraulic Fracturing Activities Using Diesel Fuel, Docket ID No. EPA-HQ-OW- 2011-1013

The League of Women Voters of the United States (LWVUS) is encouraged that the Environmental Protection Agency (EPA) has issued draft guidance for the use of diesel in hydraulic fracturing and is accepting public comment regarding these changes. We believe it is imperative that existing requirements be further clarified in order to provide regulatory certainty, improve compliance with the Safe Drinking Water Act (SDWA) requirements and strengthen environmental protections. As you may know, the League advocated for the passage of this law based on our national, long-standing position on natural resources.

The League of Women Voters of the United States believes that natural resources should be managed as interrelated parts of life-supporting ecosystems. Resources should be conserved and protected to assure their future availability. Pollution of these resources should be controlled in order to preserve the physical, chemical and biological integrity of ecosystems and to protect public health.

With regard to our national position specifically on water issues, the League supports

- *water resource programs and policies that reflect the interrelationships of water quality, water quantity, ground-water and surface water and that address the potential depletion or pollution of water supplies;*
- *measures to reduce water pollution from direct point-source discharges and from indirect nonpoint sources;*
- *policies to achieve water quality essential for maintaining species populations and diversity, including measures to protect lakes, estuaries, wetlands and in-stream flows;*
- *stringent controls to protect the quality of current and potential drinking-water supplies, including protection of watersheds for surface supplies and of recharge areas for groundwater.*

Based on information accompanying the May 2012 draft guidance documents, the EPA has specifically requested input regarding: diesel fuels description; diesel fuels usage information; permit duration and well closure; area of review; information submitted with the permit application; and monitoring. However, our review, done with reference to the sequence in which the document is drafted, has prompted a series of general questions rather than specific comments.

Background:

Underground Injection Control (UIC) Program Implementation –

Is regulatory authority stemming from different states and the federal level in the best interest of the stakeholders and the environment? Will there be confusion over jurisdiction given that water resources are not subject to state, territorial or tribal boundaries? Since contamination can flow downstream or up-well from distant sources, would there be greater consistency and accountability if it were centralized at the EPA rather than dependent on sharing and coordination?

Regulation of Hydraulic Fracturing in the UIC Program/Diesel Fuel

Recognizing the evolving nature and definitional problems of “diesel fuel” and related petroleum distillates whose composition may be deemed proprietary, will on-going monitoring and permitting remain problematic? Would tracers that could be put into all fracking fluids promote greater compliance as well the ability to hold “bad actors” accountable? Is adequate consideration being given to potential changes in the material injected into a well and pre-existing substances with which this mix may interact within the given strata? What requirements will be put in place to monitor chemical changes as flow back hazards may not be evident as part of the injection process? What procedures will be used to identify, monitor, and regulate unidentified “diesel fuel” contained in flow back fluids that will be reused for fracking or refracking wells?

Guidance for Wells that Use Fluids Containing Diesel Fuels for Hydraulic Fracturing

Can Multiple UIC Class II Wells Using Diesel Fuels for HF Be Authorized by One Permit?

Is adequate consideration being given to not only multiple wells within a given area but also multiple fracking of the same well? The cumulative impact of such processes requires monitoring. Are not all wells that are re-using flow back water and/or acid mine drainage actually using wells to “inject hazardous waste?” We concur with the EPA recommendation that applicable public notice for such permits should be enacted and widely distributed throughout applicable watershed/resource areas.

How Should EPA UIC Permit Writers Establish a Permit Duration and Apply UIC Well Closure Requirements After Fracturing at a Well Ceases?

While shorter timeframes are commendable, will permit durations be subject to on-going, periodic review given the changing scientific knowledge base about the fracking process and its implications? Given that regulatory agencies and their employees are, at times, subject to political influences and considerations provided by industries, is there cause for concerns regarding permits issued on a “case-by-

case” basis through reviewer discretion? Will there be safeguards to insulate parties from the appearance of a conflict of interest or potential ethical issues? Should wells that have used high volume, slick water, horizontal fracturing with diesel fuel be subject to closure requirements consistent with EPA deep injection wells for toxic wastes given the unknown, hazardous nature of their contents?

What Are Considerations for the Diesel Fuels HF Permit Application Submission and Review Process?

What incentives or meaningful penalties are in place to insure compliance for HF permits when diesel fuels are involved in the process? Given that some states are considering and may have outside contractors reviewing permits, what standards and criteria will be enforced to promote consistency and accountability for document submission and review?

How Do the Area of Review (AoR) Requirements at 40 CFR 146.6 Apply to Wells Using Diesel Fuels for HF?

Given the many unknowns, will the area of review be subject to further assessment with revisions made every five years to set reasonable boundaries for permitting? Realizing the limitations of current knowledge and procedures, can tracers and/or other processes be used to monitor and establish meaningful zones of endangered influence based on continual oversight and review by EPA? Will revisions of these overall guidelines be developed as needed or at pre-determined intervals?

What Information Should Be Submitted with the Permit Application?

While the nature and quantity of required data has expanded, would the use of tracers be added to verify actual consequences beyond those that might be anticipated? Can test areas be established with expanded areas for baseline testing given the potential of migration and upwelling? Would flexibility in permitting to account for local conditions and practices be allowed only to strengthen regulations in areas of high consequence and not to reduce regulatory guidelines? In addition to plugging and/or abandonment plans, should site-specific emergency plans be filed with each permit to control, mitigate, and remediate any potential individual and cumulative problems that might stem from diesel fuel contaminating water under SDWA?

How Do the Class II Well Construction Requirements Apply to HF Wells Using Diesel Fuels?

Given the importance of the casing and cement to well integrity, should long-term testing be conducted to evaluate and remediate potential contamination pathways? Because failures in the concrete tend to occur over time and are stimulated by multiple fracking processes, will EPA provide requirements for annual testing of wells? Will there be spot-checking of requirements through on-site testing by regulators to verify information provided by the drilling companies and/or their

subcontractors?

How Do the Class II Well Construction Requirements Apply to Already Constructed Wells Using Diesel Fuels HF?

While some “retro” upgrades may increase protection of water supplies, what processes and procedures – beyond consultation - are in place to ensure compliance? Will on-site visitations, monitoring, and enforcement through meaningful penalties enhance protection of our water beyond the data provided by company logs? What level of bonding or superfund contributions might be required so that the projected costs of potential remediation are not passed on to taxpayers? Will “best practices” be periodically updated over time to safeguard water resources?

Monitoring and Reporting

Although it appears that reducing the nature and timing of updates is appropriate given well activity, what requirements will be enacted to recognize and reduce long term consequences of migration paths that develop slowly over time? What essential types of data will be continually collected and reviewed relative to baseline findings?

How Do the Class II Financial Responsibility Requirements Apply to Wells Using Diesel Fuels for HF?

Is consideration of costs for plugging and abandonment adequate? What will you do to prevent such costs being passed on to taxpayers? What safeguards will be put into place to prevent subcontracting and consolidation of corporations from terminating their financial responsibility for negative impacts? What comprehensive plan will be formulated to assess liability when multiple parties are involved in a contamination event? Can clean-up, remediation, and restoration cost be held for potential use given that profitable companies of today may go bankrupt in the future? What liability, if any, will be borne by those who have leased mineral rights?

What Public Notification Requirements or Special Environmental Justice (EJ) Considerations are Recommended for Authorization of Wells Using Diesel Fuels for HF?

Should notices go out to landowners and municipal agencies beyond one-quarter mile – particularly given the length of the horizontal bore and the potential for extensive contamination of water sources – be they for residential, agricultural, recreational, or industrial use? What will EPA do to ensure that environmental justice considerations are implemented?

Does this Guidance Apply to States, Tribes, and Territories with Primacy?

Is there any mechanism by which this guidance might be applicable to all states, tribes and territories as recognition of the growing importance of adequate and safe drinking water? Can consistency be promoted to encourage compliance and public understanding? Can EPA suggest more restrictive regulations, as needed, to specific states, tribes, and territories based on relevant data, experience, and specific requirements of historical, cultural, and/or environmentally sensitive areas?

Thank you for your consideration of our input as you continue to safeguard and sustain our vital water resources.