### Report from the Hydraulic Fracking Study Committee

The Committee has completed the study and has compiled data from the participating local Leagues. Arlington and Fredericksburg were unable to participate. A special "League" was created out of those people who are MAL members without affiliation with a local League. This group of Independent MAL members was treated as a separate local League.

The file: Final-Fracking Consensus Survey Responses-2017-03-26.xls is being provided to the Board as a summary of the information received from local Leagues.

It is the recommendation of this committee that the following position be considered for acceptance. Note that the actual title of the proposed position is "Extractive Industries: Hydraulic Fracturing. The use of this title provides the latitude for inclusion of any future study pertaining to "Pipelines" which was not able to be included in this study. It also provides a place for any existing or future studies that may pertain to processes related to "extractive industries".

It is recommended that the existing Uranium statements be included here. Additional future studies could include "Pipeline", "Coal", "Fly Ash", etc.

As Chair of this committee, I wish to acknowledge the dedication, time and energy provided by the members of the committee: Rona Ackerman (serving as both editor and researcher), Sue Delos (focus on all things chemical), Carolyn Caywood (economics and general researcher), Meghan Dorsett (land use and legislative researcher, and the leadership of our Program Director, Franches Schutz.

This study has been somewhat unique in that it involved processes which continued to evolve throughout the length of the study, and will continue to do so in the near future. The committee has striven to use language that is inclusive and not restrictive so that as new information about hydraulic fracturing is developed, it can be readily integrated into any actions taken.

As Rona Ackerman stated so well in the study report for local Leagues:

"The concluding thoughts of that study were: "Hydraulic fracturing is a moving target. Every day, new legislation, lawsuits, and technologies are created. Every geology [and geologic formation] and well requires a different extraction method. Every piece of data has advocates and opponents. Industry, government, and citizens struggle to find a balance that will provide low-cost, environmentally clean energy in quantities that will support our current lifestyles and future energy requirements. The public's right to know, protection and management of natural resources, social and economic justice, and health and safety are all issues to be considered when examining hydraulic fracturing."

On behalf of the committee and myself, I thank the Board for allowing us this opportunity to study hydraulic fracturing. Those thanks also extend to all of the local League and MAL participants who took the time to help use create this position.

We await the Board's leisure for any recommendations for changes/additions/deletions.

Thank you,

Carol Lindstrom, Committee Chair

Hydraulic Fracturing Study Committee

#### NATURAL RESOURCES

### **EXTRACTIVE INDUSTRIES: HYDRAULIC FRACTURING**

#### **Position in Brief:**

The League of Women Voters of Virginia supports a moratorium on hydraulic fracturing in the Commonwealth of Virginia, until there have been sufficient studies to show that hydraulic fracturing will not have a negative impact on the health, safety, and well-being of citizens, local jurisdictions, or the natural environment.

Absent a moratorium, the Commonwealth of Virginia should prohibit fracking in state parks, state forests, the Chesapeake Bay, and areas of state-recognized historic significance. The Commonwealth of Virginia should also insure that localities are free to exempt waterways, areas near waterways, and other sensitive areas such as schools, residential areas, parks, and places of historic significance from fracking operations. For those areas where hydraulic fracturing might occur, the Commonwealth and local jurisdictions should develop a system for the monitoring, regulation, and oversight of the hydraulic fracturing industry, including all related facilities and the impact on the critical features (ground and surface water resources, public and private drinking water recharge areas, historic sites, and public facilities), public parks, recreation areas; and wildlife reserves, areas critical to the Chesapeake Bay, geologic formations, local and regional infrastructure, and local and regional economies. Systems of financial assurance should be developed so all fracking-related expenses incurred by the Commonwealth and the local jurisdictions are borne by the industry.

# The League History

Neither the LWVUS nor the LWV-VA currently have a specific position on fracking. Both use their existing positions on natural resources. The study committee determined that these were insufficient given the variety of geologic regions found within Virginia and the greatly expanded potential complications created by horizontal drilling. Also, the study found that there were statements within the existing positions that could work counter to any efforts to control the impact of hydraulic fracturing in that the use of natural gas was encouraged as a way in which to address air quality concerns.

## League of Women Voters of Virginia

In May of 2013, the League of Women Voters of Virginia was asked to sign on to the LWVPA Comments on the EPA Fracking Study. It was found that the Technical Round Tables done by the EPA focused on Marcelus Shale but, did not cover the impact of fracking on downstream locations. The recommendation to the LWV-VA President was that LWV-VA sign on to the comments in an effort to help improve the understanding of and the regulation of fracking operations. The Board did submit a letter of support.

The LWV of Virginia membership voted during their 2015 Convention to study the Impacts of Fracking in Virginia

Reason for Study of Fracking: The current LWV-VA natural resource positions do not address recent developments in Virginia of hydraulic fracturing ("fracking") and energy pipelines. Fracking affects health as well as natural resources. Fracking and pipeline effects go beyond the current LWV-VA positions. The effects should be included in Virginia positions and in the background/history.

The scope of the study may include: Impacts of water withdrawal on ground water and surface water supplies; impacts of inadequate treatment of wastewater from fracking on drinking water; health, safety and ecological effects of natural gas pipeline and/or rail transport of shale oil through Virginia.

The concluding thoughts of the committee responsible for the hydraulic fracturing study were:

"Hydraulic fracturing is a moving target. Every day, new legislation, lawsuits, and technologies are created. Every geology [and geologic formation] and well requires a different extraction method. Every piece of data has advocates and opponents. Industry, government, and citizens struggle to find a balance that will provide low-cost, environmentally clean energy in quantities that will support our current lifestyles and future energy requirements. The public's right to know, protection and management of natural resources, social and economic justice, and health and safety are all issues to be considered when examining hydraulic fracturing."

### League of Women Voters of United States

In 2010 Delegates at the 2010 Convention of the LWVUS shared information about fracking. It was noted that State Leagues were using existing LWVUS positions on natural resources, particularly clean water and drinking water to reduce the environmental impact of mining processes that contaminate and pollute.

In 2012, the LWVUS responded to the EPA (Environmental Protection Agency), the BLM (Bureau of Land Management) and the FERC (Federal Energy Regulatory Commission) through testimony and letters.

In 2015, the LWVUS supported a set of five bills referenced to as the "Frack Pack"

## The League's Position:

The League of Women Voters of Virginia supports a moratorium on hydraulic fracturing in the Commonwealth of Virginia, until there have been sufficient studies to show that hydraulic fracturing will not have a negative impact on the health, safety, and well-being of citizens, local jurisdictions, or the natural environment.

Absent a moratorium, the League of Women Voters of Virginia (LWV-VA) believes: The Commonwealth of Virginia and the Department of Mines, Minerals, and Energy and other applicable state agencies must adopt strict review processes and permitting standards for hydraulic fracturing in all areas of Virginia. The minimum review and permitting requirements for the hydraulic fracturing process, should include, but are not limited to, the following:

- 1. Environmental impact statements for each well pad and specific drill site;
- 2. Geologic impact statement;
- 3. Infrastructure impact statement;
- 4. Economic impact statement, and a detailed cost/benefit analysis;
- 5. Baseline data for water and air quality;
- 6. A plan and methodology for periodic monitoring of water and air quality;
- 7. A detailed hazard mitigation plan and an emergency response plan;
- 8. Full disclosure of chemicals and the processes to be used, including any changes in these in perpetuity;
- 9. Sources of water, sand, and other resources used during the hydraulic fracturing process, including letters of approval from affected jurisdictions, including any changes in these in perpetuity:
- 10. A detailed plan for the disposition of waste water and other "after" products, renewed annually, along with letters from impacted jurisdictions where the waste water and "after" products will be disposed, including any changes in these in perpetuity;
- 11. GIS maps and full GIS data that show the precise location of the proposed well-pad, specific drill sites, and the location, depth, and extent of all horizontal wells, including any changes in these in perpetuity;
- 12. List of all property owners directly or indirectly (adjacent or abutting owners) impacted by the well pad, drilling sites, and horizontal wells, along with letters of approval from property owners directly impacted by the hydraulic fracturing facilities.
- 2. All costs of hydraulic fracturing, both direct and indirect, should be borne by the corporations, companies, and individuals who benefit from hydraulic fracturing. The State and all local jurisdictions in Virginia, regardless of population or rate of growth, should be allowed to impose, but are not limited to, taxes, impact fees, performance bonds, other applicable bonds (sufficient blanket bonds, surety bonds, per-well bonds, etc.), and other financial tools to insure that the costs of siting, testing construction, operation, environmental restoration, and "in perpetuity monitoring and impact mitigation" are covered by the individuals and company or companies involved in the hydraulic fracking operations. The financial obligations go with the operation (attached to the property), regardless of transfer of ownership of the site. In addition, financial assurance mechanisms should include growth mechanisms (i.e. annual payments adjusted to the rate of inflation or the consumer price index) in order to assure adequate financial coverage for future mitigation. All funds generated through taxes, fees, and bonds and paid directly to the State and local jurisdictions should be sufficient to cover the costs of site restoration and hazard mitigation, should be held in a dedicated fund, and should not devolve to the general fund for the Commonwealth or locale.
- 3. The most effective method for control and oversight of hydraulic fracturing is through the regulatory authority of the local jurisdictions, including through comprehensive plans, zoning, and other land use ordinances; and construction, operational, and post-operation inspections. Planning and zoning tools include, but are not limited to:
  - 1. Special use/conditional use permits;
  - 2. Land disturbance permits; performance standards;
  - 3. Strict setback and buffer requirements not subject to variances from ground and surface water resources, public and private drinking water sources, historic sites and viewsheds, public facilities, and residences;
  - 4. Nuisance provisions (light, sound, traffic, hours of operation); and
  - 5. Other applicable local codes and standards.

When a hydraulic fracturing operation is proposed within a specific jurisdiction, the State and the Department of Mines, Minerals and Energy should provide all relevant studies to local jurisdictions, including all impact statements, mitigation documents, economic and health related information, including applicable GIS data.

In addition, local jurisdictions, which provide most of the "on the ground" oversight of fracking operations, should be allowed to offset local and operational costs, including post-production monitoring and reclamation costs. Financial assurance mechanisms include, but are not limited to: local taxes; application, inspection, and impact fees; performance bonds; and proffers.

Because hydraulic fracturing is occurring primarily in lower population jurisdictions that do not always have access to the full range of planning and zoning tools in the toolbox, the Code of Virginia should be updated to provide uniform access across jurisdictions, rather than limiting access based on location, population size, or rate of growth.

- 4. Given that local governments rarely have the financial resources to cover the expenses incurred from the long-term impacts of hydraulic fracturing and long-term monitoring of post-production and reclaimed well sites, LWV-VA believes that the State should partner with and provide funding to local governments to cover the expenses incurred by local jurisdictions. Possible funding mechanisms include, but are not limited to:
  - 1. Impact fees
  - 2. Performance bonds
  - 3. Permitting fees
  - 4. Land disturbance permit fees
- 5. LWV-VA believes that the State and the Department of Mines, Minerals, and Energy should monitor and enforce regulation of the effects of the hydraulic fracturing processes from permitting through post-reclamation monitoring using the following sources of information:
  - 1. Water sampling;
  - 2. Water level monitoring;
  - 3. Surface and ground water quality monitoring both on site and within a proscribed buffer surrounding the site;
  - 4. Seismic monitoring;
  - 5. Well integrity monitoring both during hydraulic fracturing operations and after well closure, including for abandoned and inactive wells;
  - 6. Air quality monitoring;
  - 7. NORM (Naturally Occurring Radioactive Materials) levels;
  - 8. Compliance with wastewater recycling/disposal plan
  - 9. Periodic inspection and maintenance reports;
  - 10. Tests determined as appropriate by future scientific analysis;
  - 11. Infrastructure and community impact reports
- 6. Hydraulic fracturing operations, and other extraction industries, run the risk of creating "boom and bust" cycles in local economies and communities, creating potential social and economic damage. LWV-VA believes that the impact on the long-term health of communities can be minimized by implementing a range of proactive programs, developed in partnership between the local jurisdictions, regional planning district commissions, and the Commonwealth of Virginia, including, but not limited to:
  - 1. The creation of dedicated accounts, funded in part by state monies, as well as local extraction fees, taxes and other applicable fees, that help local jurisdictions plan for both potential industrial growth and eventual decline (boom and bust cycle);
  - Development of local economic development programs to prepare jurisdictions for a future after the wells shut down:
  - 3. Provision of information on the life expectancy of the wells to local jurisdictions.