LEAGUE OF
WOMEN VOTERS®

League of Women Voters of Delaware
League of Women Voters of New Jersey
League of Women Voters of New York
League of Women Voters of Pennsylvania

April 8, 2011

Commission Secretary
Delaware River Basin Commission
P.O.Box 7360
25 State Police Drive
West Trenton, New Jersey 08628-0360

Dear Commission Secretary,

The Leagues of Women Voters of Delaware, New Jersey, New York, and Pennsylvania recognize the Delaware River Basin Commission ("DRBC" or the "Commission") as the entity responsible for the quality and quantity of the water supply which serves 15 million people in the Delaware River Basin. 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. We remain deeply concerned with the potential long-term, cumulative adverse impacts of the full life-cycle of gas extraction from the Marcellus Shale, including high volume slick-water horizontal hydraulic fracturing, upon our air, water and land and we look to the DRBC for regulations that provide ample protection and certain enforcement.

There have been no completed independent scientific studies, to date, on the multi-phased shale gas extraction process, nor has there been a completed study of potential long-term cumulative impacts. To this end, the League recommends that no regulations be approved by the DRBC until after the Environmental Protection Agency ("EPA") completes its current study so that the EPA study results can inform your regulations.

With regard to our water resources, the League supports implementation and enforcement of:

water resource programs that reflect the interrelationships of water quality, water quantity, groundwater, and surface water and policies that address the potential depletion and pollution of water supplies;

measures to reduce water pollution from direct point-source discharges and from non-point sources;

policies to achieve water quality essential for maintaining species population and diversity, including measures to protect lakes, estuaries, wetlands and in-stream-flows; and

stringent controls to protect the quality of current and potential drinking water supplies, including protection of watersheds for surface supplies and recharge areas for groundwater.

With specific regard to the proposed regulations for natural gas drilling from the Marcellus Shale in the Delaware River Basin, we support:

- 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."

With these positions in mind, we submit the following four (4) major points, followed by specific comments to the Delaware River Basin Commission's Proposed Natural Gas Regulations which we ask you to review and respond affirmatively to in your revised Regulations.

1. The draft rules do not require the wastewater mix from hydraulic fracturing to be tested after filtration for potability at the point of entry into the water supply. The residents of four states deserve drinkable water free of toxic chemicals that adversely affect their health.
2. The draft rules do not require encasing and cementing for the entire vertical well bore. It must be to withstand the shocks from hydraulic fracturing.
3. The setback requirements in the draft rules are inadequate with respect to water infrastructure such as reservoirs, tunnels, aqueducts, public and domestic water supply wells and other structures such as homes, public buildings and roads. The minimum setback requirements imposed by the Delaware River Basin Commission should prohibit drilling under any drinking water source or within a safe distance from any drinking water source, whether public or private, which distance shall be determined based upon verifiable scientific data to protect each of the aforementioned from adverse impacts of intensive drilling, including, without limitation, possible resulting earthquakes.
4. The draft rules require water withdrawal permits for withdrawals of more than 100,000 gallons per day but do not put a cap on how much water ultimately can be withdrawn from the water-body. Caps on water withdrawal per well/well pad are needed to protect and preserve this finite natural resource for uses other than natural gas drilling.

Public Notice: The League has long been known for its insistence on adequate public notice of activities affecting public health and the environment.

Section (7.3(i)) p. 18. of these regulations addresses Public Notice. In subsection (1), we request that County Conservation Districts be added to the local agencies receiving notice of an application submitted to the Commission. Conservation Districts are often the first place to which citizens will turn with a question about a natural resource issue. Because these offices will be the recipients of complaints when an impact on local streams is observed, they need to know what drilling activities are planned in their county.

This section requires that project sponsors place a notice in a local newspaper, "at least once." We request that that requirement be increased to "at least four times . . ." This is the requirement under the Federal Surface Mining Act and relevant PA laws for coal mining. We see no reason why this competitive resource extraction industry should do less. Public notice requirements should be consistent for all these entities.

This section requires that the notice include, "a description of the project . . ," but provides little guidance on what should be included in the description. That guidance must be included in these regulations. Some details that we consider important include: physical location of the project, including street address and municipality; source of water to be used; what storage will be provided on-site; wastewater disposal and/or on-site reuse; public roads used to access the site; location and description of transmission lines proposed and a public location in the local area where the application and plans can be reviewed. (We suggest that County Conservation Districts be that location.) If water well testing will be provided to local residents, information on the process, nature, and reporting of the water evaluation should be included in the notice.

Public Notice - Approval by Rule – Section 7.3 A and Elsewhere:

In many instances, these regulations allow for "Approval by Rule ("ABR")" for activities relating to gas extraction. Our review finds that most often, the Public Notice section is referenced when ABR is provided. We urge that the Commission staff make sure that Public Notice is a requirement for all applications for ABR.

We do not understand, however, what public comment opportunities will be provided when an ABR decision is made. Applications requiring a Docket decision are provided an opportunity for public comment. Through what means will public comment be provided for ABR approvals?

Public Notice – Variances:

Section 7.5(b)(9) allows the Executive Director to grant variances to siting restrictions and setbacks (7.5(b) (3) and (4)). Notice must be given to the property and mineral rights owners, but no other public notice is required. We believe notice should be given to local agencies and adjacent property owners as well.

Reliance on State Regulations:

Section 7.1 (i) states:

> Subject to the provisions of this Section 7.1, a project sponsor's compliance with state laws and permit requirements relating to natural gas and exploratory well construction and operation shall constitute satisfaction of the project sponsor's obligations under section 3.8 of the Compact that relate to regulation of gas well construction and operation, except as specified in Section 7.5. In particular, a project sponsor's compliance with New York Environmental Conservation Law, Article 23 (NY ECL §23-0101 et seq.), and its implementing regulations and permitting requirements or Pennsylvania's requirements in the Oil and Gas Act, the Act of December 19, 1984 (P.L. 1140, No. 223), as amended, 58 P.S. §§ 601.101 et seq., and 25 Pa. Code Chapter 78, satisfies the Commission's requirements with respect to natural gas well construction and operation.

We do not agree with this provision. PA is in the process of dismantling its natural gas regulatory program. DRBC MUST be there for the residents of the Basin who want their water resources protected. DRBC should adopt regulations more stringent than the states, where necessary. In fact, since you propose regulations in Section 7.6 relating to wastewater disposal that are more stringent than PA's, we do not understand why Section 7.1 gives away your authority to enforce your regulations.

Monitoring and Reporting Violations:

Section 7.3 (m) requires the project sponsor to report violations or complaints to DRBC. We urge you to develop a way for these reports to be accessed by the public, preferably on the DRBC and the project sponsors' websites. The

only way that the public will come to accept that shale gas drilling is a safe operation is for the industry to be completely open and transparent in its dealing with the regulators and the general public.

Enforcement:

Similarly, any enforcement actions taken under Section 7.3(n) should be reported on the DRBC website, easily accessed by the public.

Water Usage:

Section 7.4 regulates Water Sources for Uses Related to Natural Gas Well Development. We urge you to make available on the DRBC website any application, approval and reporting of water usage for shale gas development. The quarterly reporting required by Section (ix) on page 39 should be reported electronically and made available on your website.

Section 7.5 – Well Pads for Natural Gas Activities:

This section is where DRBC hopes to have the most impact on shale gas development projects in the Delaware River Basin. We applaud your recognition of the "critical importance" of the headwaters and groundwater of the Delaware Basin to the drinking water and other uses by 15 million people in New York, New Jersey and Pennsylvania. We assume this section of the regulations was developed to encourage planning to minimize cumulative impact of multiple well pads in the headwaters of the Basin. We agree that good planning is of extreme importance for minimizing adverse impacts.

However, we wondered if the regulations, as currently written, will capture enough of the well siting decisions to be effective.

- Natural Gas Development Plans (NGDP) are required for leaseholds that total over 3,200 acres. Will that lead to many site developments of less than 3200 acres, to avoid the requirement for a NGDP, and to defeat its purpose?

- NGDP are required when the intention is to construct more than 5 well pads . . . Again, will that lead to many development projects of 5 or fewer wells?

- A NGDP is not required for 3 months after the application for the first well. A project sponsor may submit up to 5 well pad applications prior to application for a NGDP approval (p 51, second from bottom paragraph).

How can true planning take place with so many ways to delay or avoid the requirement for a NGDP? We recommend that no permits be issued for individual wells in the Special Protection Waters without an approved NGDP. The studies needed for a NGDP may be considered onerous by project sponsors, but such studies are needed if the adverse impacts of multiple wells are to be minimized and the Special Waters of the Basin are to be adequately protected.

Variances and ABR:

Frankly, these sections of the regulations appear to be a hurried "cut and paste job." We find duplicate sections referencing other sections as "above" or "below" when the referenced sections are not to be found at the location given. With that in mind, we want only to add that the many opportunities for variances and ABRs will again defeat the purpose of planning to minimize cumulative adverse impacts.

Section 7.5 Well Pads for Natural Gas Activities:

Section 7.5 (b)(4) (p. 49) provides setback requirements. These are totally inadequate. Legislation has been introduced in PA to increase setbacks required from water supply wells, water supply reservoirs, surface water

intakes, domestic wells, and streams to 2500 feet. We urge you to adopt larger setbacks and be proactively protective of our drinking water sources and trout streams. In addition, we urge you to prohibit horizontal drilling under a water supply reservoir or within 2500 feet of water supply well.

Wastewater Storage/Reuse/Impoundments:

Section 7.5 (h)(1)(iv) (p. 59) Wastewater (for all well pads) –

(A)(4) – states that wastewater, flowback water, production water, etc "may not be applied to any road or other surface in the Delaware River Basin." This is an admirable requirement. However, how will it be enforced? Are the recording and reporting requirements of this section adequate to uncover any such planned "water" uses from wells in the Basin? How will the importing of such waters from out of the Basin for use on roads, or other surfaces, be monitored and prohibited?

Section 7.5 (h)(2)(iv) Wastewater Storage (for high volume hydraulically fractured wells):

These regulations seem to require that all "production water" stored on site be in "water-tight tanks." However, we do not see a similar requirement for "production water" imported to the site for re-use. It appears this water can be stored in impoundments. We urge you to review the requirements for storage of "production water" to assure that ALL storage must be in water-tight tanks. We do not believe "production water" or "flowback water" or any wastewater contaminated with industrial chemicals should be stored in impoundments in the Delaware Basin. Impoundments are not a safe way to store the hazardous materials associated with gas production. They can overflow in heavy rains and chemicals can volatilize from the exposed surface. No liner, whether synthetic or otherwise, is impervious to breakdown from the chemicals it holds.

All required reports of wastewater production and disposition should be available to the public on the DRBC website.

Section 7.5 (h) (v) Non-point Source Pollution Control Plan (p 59):

This requirement is a good one, as sediment pollution from well pad sites is a serious threat to Delaware River Basin drinking water sources. However, DRBC should bring the County Conservation Districts into the review and implementation of the Non Point Source Pollution Control Plan through administrative agreements where CCD's have that capability. They are the first line of defense for our streams.

Section 7.6 Wastewater Generated by Natural Gas Development:

Section 7.6 (h) allows for underground injection for disposal of industrial wastewater. We are strongly opposed to any use of underground injection for industrial wastewater disposal in the Basin. Deep injection waste wells have been linked to multiple earthquakes in Texas, West Virginia, Oklahoma, and Arkansas. In fact, the Arkansas Geological Society recorded more than 800 earthquakes between September 2010 and March 2011 in the Greenbrier area near such wells. Aquifer contamination from underground injection wells is a further source of danger.

Cumulative and Long Term Impact of Natural Gas Drilling in the Delaware River Basin:

Many, including Commission staff, have called for a cumulative impact study of natural gas development in the Basin. We agree on the importance of such a study. Much is at risk in this heavily populated area of the country. The waters of the Delaware River Basin provide for vast economic development in the region – including New York City. Although the Commission is under pressure to get regulations in place to allow drilling to start in the Basin, we urge you to recognize the risk involved in hasty decisions.

We are particularly concerned about the effects of the forest fragmentation that will occur with multiple well pads in the Delaware headwaters on the purity of the drinking water so many millions of people consume.

We have heard a great deal about irreversible adverse impacts to people's health from pollution of their drinking water and/or from air pollution around well sites, from trucking accidents and from pipeline problems. The industry denies that impacts from horizontal hydraulic fracturing exist and claims accidents are minor and infrequent. Indeed, it is not just the actual drilling that should be examined for adverse impacts, but the full-lifecycle of the shale gas extraction process.

We sincerely hope that the EPA study currently underway regarding the potential adverse impacts of shale gas extraction, including horizontal hydraulic fracturing, on human health and the environment will provide answers to these conflicting claims. That study will undergo rigorous peer review, and will, we hope, provide guidance on regulations needed to allow the industry to develop while protecting water, air and land resources. We do not believe DRBC should develop final regulations for drilling within the Delaware River Basin until the EPA study is complete and available to the public. Further, to the extent the Delaware River Basin Commission develops regulations, the League of Women Voters requests that the Commission commit to adopt such rules as are no less stringent than the strictest rules adopted by any one of the four member states under the Commission's jurisdiction; and further, that such regulations are reviewed no less frequently than once annually and updated accordingly to adopt and enforce standards responsive to current data on adverse impacts to public health and the environment. The League of Women Voters shares with the Delaware River Basin Commission, your commitment to clean and safe water, air and land resources and we thank you for your efforts, as stewards, in supervising the protection of our finite, precious, natural resources.

Sincerely yours,

Betsey B. Swan

Betsey R. Swan, President
League of Women Voters of New York State
62 Grand Street, Albany
New York 12207

Sandra Spence

Sandra Spence, President
League of Women Voters of Delaware
2400 W. 17th Street, Clash Wing, Room 1, Lower Level
Wilmington DE 19806-1311

Anne Maiese

Anne Maiese, President
League of Women Voters of New Jersey
1735 Country Club Drive
Cherry Hill, NJ 08003

Olivia Thorne

Olivia Thorne, President
League of Women Voters of Pennsylvania
226 Forster Street
Harrisburg, PA 17102-3220