

***WATER USE AND
WATER RIGHTS IN
PENNSYLVANIA***

**A Status Report from the
League of Women Voters of Pennsylvania
Citizen Education Fund
Common Ground Project on:**

**"Water Resources Management for
Pennsylvania's Future"**

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Introduction

In 1995 the LWVPA-CEF initiated a Common Ground Project on Water Resources Management in Pennsylvania. The project brought together a broad range of stakeholders to assess the need for improving our laws and policies related to water use in the Commonwealth. Prior to a project conference in September 1995, eight work groups were formed to discuss and prepare reports on the following topics:

Goals and Objectives of Water Resources Management in Pennsylvania
Permitting and Registration of Water Withdrawals
Consumptive Use/Nonconsumptive Use and Drought Management
Conservation and Efficient Use of Water
Instream Flow Needs
Integration of All Water Programs – Federal, State & Local
Interbasin/Interstate Transfers and Water Supply Planning for Future Needs
Water Resources and Land Use Planning

The "Pre-Conference Report" and a "Summary of the Conference Proceedings" are available from LWVPA-CEF. Following the conference several regional meetings were held to gather viewpoints about the needs of differing geographical areas:

the Upper & Lower Susquehanna Basins
the Upper & Lower Delaware Basins

This paper is an update on developments in water policy on the state and regional level since 1995. One of the most significant has been the promotion of a **watershed approach** to water quality and quantity management by both EPA and DEP. There is renewed interest in watersheds at local levels as evidenced by the formation of new watershed organizations and the growth of volunteer water quality monitoring to supplement monitoring done by agencies. The need for integration of water policies, programs and plans is becoming more evident as more accurate assessments of needs and future demands are made known.

Water Law in Pennsylvania

Public Trust Doctrine

The Constitution of the Commonwealth of Pennsylvania, Article I, Section 27 states, "*Pennsylvania's public natural resources are the common property of all the people, including generations yet to come. As trustee of these resources, the Commonwealth shall conserve and maintain them for the benefit of all the people.*" The adoption of Article I, Section 27, the Environmental Rights Amendment to the PA Constitution, in 1971 represents the culmination of a major change in attitude about the use and exploitation of natural resources. At the time the Commonwealth was founded, natural resources were abundant and seemingly inexhaustible. After two hundred years of population growth and industrial development, it became evident that unrestricted use of natural resources, while creating wealth and prosperity for some, had created many problems and environmental damage that would adversely affect future generations.

The Environmental Amendment makes it clear that the Commonwealth is the trustee of Pennsylvania's public natural resources and must conserve them for the benefit of all the people. Water is a public natural resource that is required for the life and health of every person, a "vital resource." The "waters of the Commonwealth" are held in public trust by the Commonwealth. The right to "use" those waters is

conferred by the state through a common law system of riparian rights. There are rules covering different classifications of waters and water use in Pennsylvania:

Surface Water vs. Groundwater Rights

Riparian Doctrine for the use of water in streams: *Each landowner adjacent to a stream can withdraw unlimited amounts of water for domestic use and reasonable extraordinary use on the property. Use of the water off the riparian property is considered "unreasonable per se."*

American Rule for withdrawal of groundwater: *A landowner can withdraw percolating groundwater for natural and ordinary uses on that land regardless of effect on neighbors.* There is no security of water rights under such a principle, i.e., "the deepest well and the most powerful pump wins."

Municipal Water Supplies: Riparian common law views transfer of water as "*unreasonable per se.*" However, court decisions have said that municipalities should not be prohibited from withdrawing water from outside their boundaries, but replacement of supplies affected by that withdrawal may be required.

Riparian' vs 'Prior Appropriation' Systems

Most of the states east of the Mississippi River have riparian systems of water rights based on English common law, interpreted and modified by court decisions. Historically, **under common law**, riparian doctrine said that unlimited reasonable use on the property was allowed, but that any use off the property was considered *unreasonable per se.* Over time the courts have modified their interpretation to allow for certain non-riparian uses such as public water supply. Riparian systems recognize that water resources are to be shared, but there is no guarantee of a certain share. In states west of the Mississippi (which were established later) water was more scarce and water rights associated with land holdings were appropriated to the first settlers. Under prior appropriation' statutes there is no requirement to share the resource. *"First in time means first in line."*

Consumptive Use vs. Non-consumptive Use

Most water uses in Pennsylvania are non-consumptive, because the water is returned to the basin of origin after use. If water use results in evaporation, incorporation into a product, or diversion out of a water basin, it is considered consumptive use.

Water Use in PA

There is no comprehensive water management system in Pennsylvania. Certain aspects of water use are regulated by the following agencies.

River Basin Commissions: The Susquehanna River Basin Commission (SRBC) and the Delaware River Basin Commission (DRBC) grant water allocation permits for withdrawals of surface or groundwater greater than 100,000 gallons per day (GPD). In addition, the DRBC requires permits for withdrawals greater than 10,000 GPD in Groundwater Protection Areas. These two river basin commissions are unique in the United States for possessing this regulatory authority. They also have "consumptive use" rules that require reduction in consumptive use of water during droughts or payment of fees to provide storage in reservoirs for release during low flows. **The SRBC and DRBC also monitor water flow in relation to drought conditions or flood potential and inform the state authorities when drought warnings and emergencies are to be declared. Other functions of the commissions include water quality monitoring and mediation of disputes related to water use. .**

The **Department of Environmental Protection** Bureau of Water Supply Management grants allocation permits to public water systems that use surface water, which account for about 10% of all withdrawals.

DEP also grants permits for the wells or springs of bottled or bulk water producers.

The **PA Fish and Boat Commission** monitors the effects of proposed withdrawals on stream flows and aquatic habitats. The U.S. Fish & Wildlife Service also monitors stream flows and habitats.

Other Agencies impact water quantity and contribute data. The **U.S. Geological Service** (USGS) monitors stream flows at permanent monitoring stations. USGS provided base flow analyses for the Neshaminy Creek Watershed in the Delaware River Basin Groundwater Protection Area. The **U.S. Army Corps of Engineers** maintains reservoirs for water storage to be released in times of low flows. In the Ohio River Basin the Corps of Engineers also controls water levels in navigable rivers. Other agencies which influence water quantity include the **Environmental Protection Agency**, the **Natural Resources and Conservation Service (NRCS)**, the **Federal Energy Regulatory Commission (FERC)**), the **National Oceanic and Aerospace Administration (NOAA)**, the **U.S. Forest Service**, and the **federal and state Offices of Mining**.

Problems/Gaps in PA's Riparian System

The LWVPA CEF Common Ground Project on Water Resources Management identified a number of problems with Pennsylvania's current system of management, and potential problems for the future:

- No **guarantee of water rights** continuing undiminished
- No provision for resolution (other than litigation) of **competing uses**
- No provision for increased per capita **demand for water**
- No provision for **conservation of water**
- No provision for dealing with increase of conflicts during **droughts**

Because Pennsylvania has no comprehensive water management statute, the interstate SRBC and DRBC have the responsibility of making decisions about water withdrawals within the Commonwealth of Pennsylvania. In the case of New York, New Jersey, Maryland and Delaware, the river basin commissions have delegated that responsibility to the states because those states have water allocation programs.

Options and Consequences

Types of Water Codes Followed by Other States (see map)

There are three main types of state water law currently in effect in the United States, "riparian," "prior appropriation" and "regulated riparian." Fifteen eastern states, including Pennsylvania, follow a riparian common law system, seventeen western states follow the rule of "prior appropriation" and seventeen eastern states plus Hawaii have developed a modified riparian system called "regulated riparianism." In theory, a **riparian rights system** promotes reasonable use and sharing of the resource by riparian users, but it does not guarantee the right to a certain amount of water in the face of shortages and competing uses.

A **prior appropriation system** guarantees original users the right to take as much water as their

allocation allows and to transport it without restriction. There is little protection for the water basin or newer users and there is no incentive to conserve water.

A **regulated riparian system** combines the advantages of the first two systems and minimizes the disadvantages. Under this system, water rights are guaranteed for a certain number of years through a permit with conditions to insure reasonable use. Downstream users and the watershed are protected by the permit conditions. The restriction on transfer of water is removed, but there are provisions for the preservation of minimum in-stream flows and compensation to the basin of origin.

The Delaware River Basin Commission and the Susquehanna River Basin Commission follow a regulated riparian system in granting permits for withdrawals.

State and Regional Options

There have been proposals over recent years to enact a **comprehensive state water law** to provide for the conservation and management of Pennsylvania's waters. Such a law would establish a comprehensive planning and allocation program to ensure an adequate supply for all uses. DEP would be the administering agency to grant withdrawal permits and update the State Water Plan. A statewide water resources advisory committee and regional water resources advisory committees, based on the 5 major river basins, would be formed. Such a water conservation and management program would be integrated with the interstate river basin commission programs.

Watershed-based Water Supply Planning (Multi-Municipal and Integrated with Other Levels of Government)

A more recent proposal for **integrated watershed planning and management** reflects a new approach to statewide management of water resources. Under this system, municipalities within a watershed would be able to cooperate to enact an integrated water resources plan through a joint municipal planning commission. Adoption of the plan by all municipalities within the watershed would enable the municipalities to implement its provision. A municipality would not have the power to regulate withdrawals unless it is located within a special management area as designated by DEP under the Conservation and Natural Resources Act of 1995. The state, as well, would be required to develop a comprehensive water resources plan that would incorporate integrated water resources plans adopted by municipalities, and would also correlate with river basin commission plans and plans adopted under multi-state compacts for conservation and management of water resources.

A **Model State Water Code** for eastern states was published in April 1996 by the American Society of Civil Engineers. It is a regulated riparian code based on the principle of "protecting the public interest in the waters of the state." The state is given the authority to *"plan, regulate and control the withdrawal and use of those waters, in order to protect the public health, safety and welfare."* The Declaration of Policy contains the following goals:

Assuring efficient and productive use of water.

Conformity to physical laws that govern the natural occurrence, movement and storage of water.

Comprehensive planning.

Efficient and equitable distribution during shortfalls.

Legal security for water rights.

Procedural protections and dispute resolution.

Coordination of water allocations and water quality regulation.

Water conservation.

Preservation of minimum flows and levels.

Regulating interstate water transfers.

Regulating interbasin transfers.

Optional provisions in the Model Water Code include:

"Flexibility through modification of water rights to enable the sale or modification of

water rights subject to the protection of third parties and the public interest "

and

"Recognizing local interests in the waters of the state and supporting local units of

government that address local and regional water resource conditions and problems."

The model code can be modified to meet the needs of individual states.

What Other States are Doing:

Maryland, Delaware, New Jersey and New York have statewide withdrawal permits as do Georgia, Kentucky, South Carolina, Wisconsin, Minnesota and Iowa. Delaware, New Jersey, Iowa and Minnesota combine management of water quality and water quantity. In Ohio, county health departments grant permits for groundwater withdrawals. Florida has Water Management Districts which are allowed to decide when, or, if to institute water permits. The Florida Water Districts have taxing authority.

If No Change in Current PA System:

One of the problems facing Pennsylvania if no changes are made is lack of control over its natural resources. Pennsylvania has the largest number of interstate compacts in the United States. Decisions about Pennsylvania's water resources are being made by out-of-state officials. Does Pennsylvania have enough influence in those decisions?

A second problem is the inadequacy of a common law system of riparian rights to deal with conflicts in water use, in-state water decisions, or out-of-state diversions. Because Pennsylvania currently lacks an effective and efficient mechanism for making decisions about water conflicts, it must rely on the courts where principles may be applied inconsistently. The legal process is costly and time-consuming. Riparian common law works where there are few conflicts, but the number of conflicts are increasing due to changing patterns of water use and increasing competition between agriculture, industry and residential use.

A third problem relates to the inability of a common law system to anticipate problems and predict future needs.

A fourth problem is the lack of a guarantee of water rights.

Future Demands for Water in PA

May be increased by:

- Population growth and increased per capita use.
- Increased consumptive use for power generation.
- Out-of-state diversions and out-of-basin diversions.
- Increased pumping and depletion of groundwater.
- Pollution of aquifers.
- Climate changes that increase drought frequency.

May be modified by:

- Water conservation strategies (elimination of water wasting and leaks).
- Reuse and recycling of water.
- Protection of source water quality.
- Protection of minimum instream flows.
- Groundwater recharge by stormwater BMPs (Best Management Practices), land application of wastewater effluent and other land management techniques.

Water Rights and Water Use a Top Priority

Water is essential for agriculture, drinking water supplies, industry, energy production and ecological health. In years with normal precipitation there is enough water for all current uses and demands in Pennsylvania. However, in drought years, which seem to be occurring more frequently, there are shortages in certain regions and competition for the resource. Growing communities in Pennsylvania are reaching the limits of local water sources and are seeking to supplement their supplies from distant sources. In addition, the northeastern urban corridor from Washington to Boston (with a population of about 38 million) is looking to the watersheds of the Appalachian chain to meet their future need for water. Recently the Susquehanna River Basin Commission adopted a "Policy Regarding Diversions from the Susquehanna Basin." The policy states that out-of-basin diversions are to be discouraged, but reasonable and necessary diversion projects will be reviewed and approved according to certain criteria. In the two and one half years since the Common Ground Conference on Water Resources for Pennsylvania's Future, there have been increasing local conflicts and issues related to water use. The debate over private property rights has caused some people to believe that a property owner has the right to unlimited use of the water flowing on or under his or her property, no matter what the effect on other uses of the same water. Such a misunderstanding of riparian water law leads to conflict and adverse impacts. Water is a resource that must be equitably shared in order to protect human health and the environment and to enhance economic opportunity.

As Common Ground Conference speaker R. Timothy Weston, Esq. (Attorney, Kirkpatrick and Lockhart, Harrisburg, PA) said, *"Water management is a system of plans, policies, programs, projects and actions which provides for inventorying, evaluation, development, use, conservation and protection of water resources. Water management includes those legal and institutional systems by which we define water rights and by which we resolve conflicts between water users in relation to both quantity and quality. Stewardship of our water resources, to be effective, requires an integrated approach to such management. The importance of our waterways, aquifers, water infrastructure and management systems to the sustaining of Pennsylvania's economic and environmental future cannot be overestimated."* An integrated program would include management of water quality and quantity, drinking water supplies, sewage facilities, stormwater, flood plains and watershed-based planning. Pennsylvania's Department of Environmental Protection has been moving in the direction of integrated water resources management by including all of the water programs under one deputate. In addition, DEP cooperates closely with the river basin commissions.

Conclusions and Summary

Conclusions from the pre-conference work groups, the conference attendees and the post-conference regional meetings included the following:

There is need for **education** on the legal basis for water management in Pennsylvania.
There is general recognition that PA's water management **policies and regulations** are fragmented and minimally protective of water rights.

The **permit issue** is the most controversial. There is reluctance on the part of some stakeholders to give

up what they perceive as unlimited access to water.

The **hierarchy of water management** needs to be decided, whether limited top-down management or integrated roles for basin, state, watershed, county and municipal levels.

The **scope** of Pennsylvania's water law needs to be addressed. Some issues to be resolved include:

- the regulation of interbasin and interstate transfers.
- efficient and equitable distribution during shortages.
- recognition of local interests.
- coordination of water quantity and water quality regulations.
- adequate data collection and planning to meet changing needs and conditions.

The **State Water Plan** should be updated at least every 5 years. A consistent water database system of high quality and a statewide GIS (**Geographic Information System**) with uniform standards are required.

Municipality water planning responsibility should be recognized. Land use decisions have water implications. Local planning should consider watershed budgets, placement of infrastructure and pollution prevention in recharge areas. State decisions that affect land use, including sewer facility extensions and water supply infrastructure, should be coordinated with local/county land use planning.

Conjunctive use and management of water resources, **an integrated approach to surface water and groundwater**, should conform to **physical laws** of natural occurrence, movement and storage of water.

Pennsylvania deserves a water management system that will protect, conserve and manage its water resources in a sustainable manner for present and future generations.

Appendix

I. "Goals and Objectives of Water Resources Management" Report of the Pre-Conference Work Group

PRE-CONFERENCE REPORT FROM THE WORK GROUP on GOALS & OBJECTIVES OF WATER RESOURCES MANAGEMENT

PREAMBLE:

"The Work Group on Goals and Objectives has examined the state of water management in Pennsylvania. We have identified major problems which we believe will worsen in the future if nothing is done about them. Based on our analysis, our work group believes that substantial changes are needed in PA's current water management system, including laws, institutions and programs. We propose a set of principles to guide the development of a new water resources management system for Pennsylvania.

PROBLEM STATEMENTS:

1. Pennsylvania's current legal structure (including laws and administrative structure) for governing water withdrawals cannot be relied upon to produce predictable, consistent, equitable, secure or timely results.
2. PA law addresses groundwater and surface water differently, even though they are closely interrelated.
3. Because PA only has authority to regulate surface water withdrawals for public water supply, the state must rely on the river basin commissions to resolve other intrastate conflicts in water use.
4. Political boundaries differ from watershed boundaries. Coordination and consistency are often problems when many jurisdictions and agencies are involved with water management.
5. In Pennsylvania today, there are areas for which there are not adequate water supplies to accommodate existing uses, both withdrawal and in-stream uses.
6. Growth and development are occurring in Pennsylvania with little regard for water resources availability planning at the state, regional or local level. There is no adequate mechanism to implement plans that do exist.
7. PA does not have a complete database showing how much water is available in the state's regions or a unified reporting system on availability and usage.
8. PA law dealing with water quantity is antiquated and the laws dealing with water quantity and quality are mutually inconsistent.
9. The Commonwealth's current authority to manage water withdrawals is extremely narrow and fragmented.

RECOMMENDATIONS:

The Work Group believes that a Water Resources Management Program for Pennsylvania should:

1. Provide for allocations of water resources for all uses in an equitable, secure, predictable, consistent, timely manner, based on reasonable use and availability of water.
2. Treat groundwater and surface water, including both water quality and water quantity, as one total system.
3. Develop and implement a framework of policies and standards at appropriate local, regional, state and basin-wide levels.
4. Integrate natural and jurisdictional systems, i.e., aquifers, watersheds and political boundaries.
5. Provide for long term adequacy and safety of water supplies for all uses, including in-stream uses.
6. Provide for conservation and efficient use of water.
7. Provide for flexibility to accommodate changing hydrologic conditions and water use needs, as well as more intense management in special resource areas.
8. Link water resources planning to land use approvals and growth decision, considering both environmental and economic needs and their relationships.
9. Provide for sound data and adequate planning at all levels.
8. Integrate with existing statutes and programs, as new programs, laws and systems are developed, so that all aspects of water use are coordinated and harmonized.
9. Expand education, research and resources to promote integrated water resources management and total watershed management.

II. Position of the League of Women Voters of the U.S. on Management of Natural Resources

Resource management decisions must be based on a thorough assessment of population growth and of current and future needs. The inherent characteristics and carrying capacities of each area's natural resources must be considered in the planning process. Policy makers must take into account the ramifications of their decisions on the nation as a whole as well as on other nations.

To assure the future availability of essential resources, government policies must promote stewardship of natural resources. Policies that promote resource conservation are a fundamental part of such stewardship. Resources such as water and soil should be protected. Consumption of nonrenewable resources should be minimized. Beneficiaries should pay the costs for water, land and energy development projects. Reclamation and reuse of natural resources should be encouraged.

The League believes that protection and management of natural resources are responsibilities shared by all levels of government. The federal government should provide leadership, guidance and financial assistance to encourage regional planning and decision making to enhance local and state capabilities for resource management.

The League supports comprehensive long-range planning and believes that wise decision making requires:

- * Adequate data and a framework within which alternatives may be weighed and intelligent decisions made.
- * Consideration of environmental, public health, social and economic impacts of proposed plans and actions.
- * Protection of private property rights commensurate with overall consideration of public health and environmental protection.
- * Coordination of the federal government's responsibilities and activities.
- * Resolution of inconsistencies and conflicts in basic policy among governmental agencies at all levels.
- * Regional, interregional and/or international cooperation when appropriate.
- * Mechanisms appropriate to each region that will provide coordinated planning and administration among units of government, governmental agencies and the private sector;
- * Procedures for resolving disputes.
- * Procedures for mitigation of adverse impacts.
- * Special responsibility by each level of government for those lands and resources entrusted to them.
- * Special consideration for the protection of areas of critical environmental concern, natural hazards, historical importance and aesthetic value.
- * Special attention to maintaining and improving the environmental quality of urban communities.

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