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DRAFT WATER WITHDRAWAL AND USE MANAGEMENT IN PENNSYLVANIA

Introduction

Water resources law is fundamentally about the allocation of the use of the water resources among competing users. In Pennsylvania, as in most of the Eastern United States, the right to water is not a property right to which title can be acquired, but rather a “right of use” of the water resources, called the “usufructuary right.” The usufructuary right is one of those in the bundle of rights that goes with property ownership. The water right is not written down anywhere and it cannot be severed or separately sold, like mineral or timber rights that may be held as separate estates in Pennsylvania.

Common Law¹

Pennsylvania’s system of water allocation law is based on numerous court rulings dating back to the 1800s. This system of judicial rulemaking, called the common law, is decided on a case-by-case basis. The courts rely on previous court decisions or precedent to adjudicate the rights of competing users. Because common law rests on individual cases read together, rather than a cohesive code, many gaps remain in the court decisions governing water rights, and the common law is always subject to refinement or modification as new cases are litigated. The common law is not scientifically based but evolved before knowledge of the hydrogeologic cycle was developed. Different rules govern the use of surface water and groundwater.

1. Surface Water Rules – Riparian Rights

In very general terms, riparian water rights are water rights derived from ownership of real property underlying or bordering streams and rivers. The riparian right is a right to make use of the water flowing in a stream upon or next to riparian land. Pennsylvania courts have adopted what is known as the “reasonable use” doctrine. The doctrine allows some reduction in a watercourse’s natural flow, as long as other users are not unreasonably harmed. The holder of riparian rights has no property right in the water itself but only a non-exclusive right to use water. No right to divert or consume a specific quantity of water is obtained. All rights to water use depend upon the equal, correlative rights of other riparians to use the common resource. The right to divert and use surface water is generally confined to riparian land, the land along the stream bank. Diverting water away from riparian land is prohibited and considered unreasonable. Rights to use water off riparian lands may only be acquired by municipalities, utilities, and other users through prescription, eminent domain, or contract with all affected riparians. A riparian may divert, use and consume all water necessary for household and general domestic use. If there is a conflict with other uses, domestic uses have received priority. The riparian rules have favored the establishment of water-consuming industries on the lower reaches of Pennsylvania’s major rivers.

¹ See R.T. Weston and J.R. Burcat, *Legal Aspects of Pennsylvania Water Management*, WATER RESOURCES IN PENNSYLVANIA: AVAILABILITY, QUALITY AND MANAGEMENT (1990).

2. Groundwater Rules

The riparian rules generally are followed for use of groundwater flowing in a rare “subterranean stream.” But different rules govern the use of “percolating” groundwater, the vast majority of groundwater in Pennsylvania. Under the so-called “reasonable user” doctrine, also referred to as the “American Rule,” a landowner may withdraw as much groundwater beneath his land as can be put to “natural and ordinary” use on the overlying land, regardless of the consequences to ground water supplies, wells and springs in the vicinity. As long as there is no malicious, negligent or foreseeable interference, waste or off-land use that results in harm or damage to adjacent owners, the use will not be enjoined. Most economic activities are considered natural and ordinary if the use of the water is confined to the overlying land. Groundwater rules are not designed to deal equitably with conflicts among users or to protect the resource. The biggest pump or the deepest well often wins. Furthermore, Pennsylvania courts have held that the withdrawal of groundwater for use off the land of origin by public water suppliers is not a natural and ordinary use. Liability for damages may be imposed if the withdrawal interferes with other users, unless water is supplied to all interested injured parties.

State Statutory Law

Superimposed on Pennsylvania’s common law system are numerous statutory laws that regulate piecemeal particular uses or users. There is no statewide cohesive water resources management scheme that balances the needs of users while protecting the resource.

The *Water Rights Act of 1939*² authorizes the grant to public water supply agencies³ of the right to acquire water rights to surface waters of the Commonwealth, thus overcoming the common law prohibition against the use of water off the land of withdrawal. The statute replaced the old eminent domain system for individual municipal water allocations and vested allocation authority in one state agency, now DEP, the successor agency to the Water and Power Resources Board. The Act prohibits water suppliers from acquiring or taking surface waters without a permit. The permitting process requires proof of the need for the water, and that the taking will not interfere with navigation, jeopardize public safety or cause substantial injury to the Commonwealth. DEP may condition the approval, including requiring minimum flow releases from dams and reservoirs and pass-by flows that establish minimum instream low flow that will not be allocated to any water supplier. Since public water supply agencies have been estimated to account for only about 10 percent of the surface water uses in Pennsylvania, the Water Rights Act allocation provisions cover only a small portion of Pennsylvania’s water resources.

The *Dam Safety and Encroachments Act of 1978*⁴, which replaced the 1913 Water Obstructions Act, grants DEP the authority to regulate the construction, operation and maintenance of dams and other water obstructions. Under this authority, DEP also establishes minimum stream flow requirements for dammed waterways. The Act also establishes the legal basis for Pennsylvania’s regulation of activities encroaching upon or affecting wetlands. Permits are

² 32 P.S. §631 *et seq.*

³ “Public water supply agency” is defined as “any corporation or any municipal or quasi-municipal corporation, district, or authority . . . vested with the power, authority, right, or franchise to supply water to the public in all or part of any municipal or political subdivision of the Commonwealth of Pennsylvania.” 32 P.S. §631.

⁴ 32 P.S. §693.1 *et seq.*

required for projects involving the modification to the course current or cross section including the fill, draining, inundation or other encroachment on all wetlands in the Commonwealth. Submerged lands licenses are required to occupy the beds of navigable rivers that are owned by the Commonwealth.

The *1923 Limited Power and Water Supply Act*⁵ established two separate programs, covering power projects and water supply facilities involving diversion of surface waters. The public water supply portion of the Act has been superseded by the 1939 Water Rights Act. The Act requires that any person who uses a dam or alters a stream or other body of water in order to develop hydroelectric power, or who diverts water for thermal-electric plant steam generation or cooling, must obtain a limited power permit from DEP. This statute is limited in its application to those non-FERC regulated facilities on non-navigable waters that do not affect interstate or foreign commerce.

The *Water Well Drillers License Act of 1956*⁶ requires an annual license for all drillers and drilling rigs and the submission of groundwater information to the Department of Conservation and Natural Resources' Bureau of Topographic and Geologic Survey.

The Commonwealth uses the general disaster and emergency management authority in the *Pennsylvania Emergency Management Services Code of 1978*⁷ to respond to water resource shortages. Once the Governor issues a Proclamation and declares a drought or water shortage emergency, the PEMA drought regulations, at 4 PA. Code Chapters 118, 119 and 120, govern the management of water uses and water supplies, including the authority to curtail nonessential uses, to require preparation of drought contingency plans and to ration water to conserve dwindling supplies. The Commonwealth Drought Coordinator, a DEP official, considers requests for variances and exemptions from the drought rules and must approve all local water rationing plans.

The *Water Resources Planning Act*⁸ (Act 220 of 2002 or WRPA) authorizes the preparation of a new State Water Plan, requires the registration with DEP of all withdrawals exceeding 10,000 gpd, and prohibits political subdivisions from allocating water resources.

Three Key Decisions that Pose Important Legal Issues in Pennsylvania Water Management

A 1996 decision⁹ by the Environmental Hearing Board (EHB) indicates that DEP is vested with indirect authority under the *Pennsylvania Safe Drinking Water Act*¹⁰ to regulate groundwater withdrawals by public water systems to avoid violation of other state environmental laws, including the *Clean Streams Law*¹¹. The EHB held that it was DEP's duty to protect waters of the Commonwealth, such as wetlands, from pollution and degradation, and that diminishment of water quantity can constitute water pollution.

⁵ 32 P.S. §591 *et seq.*

⁶ 32 P.S. §645.1 *et seq.*

⁷ 35 Pa.C.S. §7101 *et seq.*

⁸ 27 Pa.C.S. §3101 *et seq.*

⁹ *Oley Township et al. v. DEP and Wissahickon Spring Water, Inc.*, 1996 EHB 1098.

¹⁰ 35 P.S. §721.1 *et seq.*

¹¹ 35 P.S. §691.1 *et seq.*

The Pennsylvania Commonwealth Court, in a 1994 decision¹², held that *the Municipalities Planning Code*¹³ (MPC) gave municipalities authority akin to a court of equity to approve, in the context of a zoning decision, the use of groundwater off the land of withdrawal by a public water supply agency. A 1995 decision¹⁴ by the same court in the same matter, later affirmed by the Pennsylvania Supreme Court, held that local governments were preempted from imposing conflicting conditions on groundwater withdrawals approved by a river basin commission. Act 68 of 2000 added Section 603(b) of the MPC that recognized the preemptive effect of state or federal laws on zoning ordinances that regulate uses of land, watercourses and other bodies of water.

Federal Compacts and Law

Pennsylvania is a member of two interstate compact commissions with regulatory authority over water withdrawals, the *Delaware River Basin Commission* (DRBC)¹⁶ (1961) and the *Susquehanna River Basin Commission* (SRBC)¹⁷ (1970). The effect of the compacts, consented to by Congress and each with full participation of the federal government, is that the member states and the federal government jointly exercise sovereignty over the water resources of the respective basin. Both commissions, by regulation, require prior approval of groundwater or surface water withdrawals exceeding 100,000 gallons per day. The SRBC also regulates consumptive uses that exceed 20,000 gallons per day. In 1981, because of threatened overuse of the resource, the DRBC established by regulation¹⁸ the Southeastern Pennsylvania Groundwater Protected Area where a permit is required for all withdrawals of groundwater in excess of 10,000 gallons per day. Both compacts explicitly reserve to the states their traditional powers to manage waters within their boundaries and tend to defer to the state agency's permitting decision.

The *International Joint Commission* (IJC), a six-member board created by the United States and Canada under the *Boundary Waters Treaty of 1909*, governs the use, obstruction or diversion of boundary waters of the Great Lakes, including Lake Erie. The IJC receives "references" from the U.S. and Canadian governments to study and issue reports. The *Great Lakes Basin Compact*¹⁹ (1956) created the *Great Lakes Commission*, which was limited by the U.S. Congress' consent to that compact in 1968 to be a consultative agency only and prohibited from offering full membership to the Canadian provinces.

Under the *Great Lakes Charter*, a good faith agreement entered into in 1985, diversions and consumptive uses of the waters of the Great Lakes basin in excess of 5 million gallons a day require prior notice and consultation among the Great Lakes Governors and Premiers of Ontario

¹² *State College Borough Water Authority v. Board of Supervisors of Benner Township*, 645 A.2d 394 (Pa. Cmwlth. 1994).

¹³ 53 P.S. §10101 *et seq.*

¹⁴ *Levin v. Board of Supervisors of Benner Township*, 669 A.2d 1063 (Pa. Cmwlth. 1995), *aff'd per curiam*, 689 A.2d 224 (Pa. 1997).

¹⁶ 32 P.S. §815.101 *et seq.*

¹⁷ 32 P.S. §820.1 *et seq.*

¹⁸ 18 CFR Part 430.

¹⁹ 32 P.S. §817.1 *et seq.*

and Quebec. In the *Water Resources Development Act*²⁰ (WRDA) of 1986, as amended in 2000, the U.S. Congress enacted a federal law that prohibits the diversion or export of water from the Great Lakes for use outside the basin without the approval of the Governors of all eight Great Lakes states. In 2001, the Great Lakes governors and premiers adopted an amendment to the Charter, called *Annex 2001*, in which they committed to develop a new conservation-based standard and new agreements among the 8 Governors and 2 Premiers in 3 years to manage the Great Lakes. After submitting for public review and comment two different drafts of those proposed agreements in 2004 and 2005, the Great Lakes governors and premiers announced in December of 2005 the signing of the *Great Lakes – St. Lawrence River Basin Sustainable Water Resources Agreement* and also released a *Great Lakes – St. Lawrence River Basin Water Resources Compact*²¹. The Agreement calls for adoption of legislation in each jurisdiction to prohibit diversions from the Great Lakes, with narrow exceptions, and to manage withdrawals in accordance with new common standards. The Great Lakes states expect to carry out their commitment by enacting the interstate Compact, with U.S. Congressional consent. During 2007 and 2008, legislation adopting the Compact has been signed into law in five states (MN, IL, IN, NY and WI), has passed both houses in one state (MI), and has passed one chamber in two other states (PA and OH).

Local Regulation of Water Withdrawals

The role of local regulation of water withdrawals and water rights, and its relationship to State and river basin commission regulation, remains unsettled.

Municipalities have various powers which directly or indirectly affect water use. The Borough Code specifically authorizes municipal regulation of water wells.²² Other municipalities have the power to adopt ordinances deemed necessary for the peace, health, safety and welfare of the municipality. All municipalities are authorized by the Municipalities Planning Code to adopt zoning ordinances which permit and regulate “uses of land, watercourses and other bodies of water.”²³ Among the allowable purposes of zoning ordinances are to promote or facilitate access to water and provision of adequate water.²⁴

Acts 67 and 68 of 2000 amended the Municipalities Planning Code (“MPC”),²⁵ adding several provisions that address water resources. Act 68 amended Section 301(b) of the MPC to provide that a county, multimunicipal or municipal plan **shall** include a plan for the reliable supply of water. Local plans also shall be generally consistent with the state water plan and applicable river basin commission plans.

Act 68 amended MPC §603(b), which establishes the basic authority for municipalities to enact zoning ordinances. New language at the beginning of §603(b) indicates that **except to the extent that** zoning regulations of certain activities are preempted by certain enumerated

²⁰ 42 U.S.C. §1962d-20.

²¹ See, generally, the Council of Great Lakes’ Governors website, www.cglg.org.

²² 53 P.S. 46202(39).

²³ 53 P.S. §10603(1).

²⁴ *Id.* §10604(1).

²⁵ 53 P.S. §10101 *et seq.*

statutes “or that regulation of other activities are preempted by other Federal or State laws,” zoning ordinances may regulate uses of land, watercourses and other bodies of water. The MPC had previously allowed for zoning ordinances to regulate uses of land, watercourses and other bodies of water.

The amended MPC gives much greater emphasis to comprehensive planning, and to the consistency of zoning and land use decisions to such comprehensive plans. MPC §603(j) calls for municipal zoning ordinances be generally consistent with municipal or multimunicipal comprehensive plans, or where none exist, with the municipal statement of community development objectives and the county comprehensive plan.

Act 67 amended Article XI of the MPC to provide new authority for intergovernmental cooperative planning and implementing agreements. Subsection 1105(c) provides that “Nothing in this article shall be construed to authorize a municipality to regulate the allocation or withdrawal of water resources by a municipal authority or water company that is otherwise regulated by the Pennsylvania Public Utility Commission or other Federal or State agencies or statutes.”

Act 68 also adds a new Section 608.1, requiring that municipal authorities and water companies that plan to expand water, sanitary sewer or storm sewer service into a municipality which has not previously approved such extension shall provide notice to that municipality. At the same time, this section states that the authority of the PUC over public utility facilities and services shall not be limited, and that nothing in the new section authorizes a municipality to regulate the allocation or withdrawal of water by any person, municipality or water company.

Both Acts 67 and 68 contain provisions providing for state agency consideration of local plans. Section 1105 (added by Act 67) applies where municipalities have adopted a county plan or a multimunicipal plan, **and** the participating municipalities have conformed their local plans and ordinances to the county or multimunicipal plan by implementing cooperative agreements and adopting appropriate resolutions and ordinances. Under those conditions, state agencies “shall consider and may rely upon” comprehensive plans and zoning ordinances “when reviewing applications for the funding or permitting of infrastructure or facilities.” Similarly, Section 619.2 (added by Act 68), applies where a county adopts a comprehensive plan in accordance with MPC §§301 and 302, and any municipalities in the county have adopted both comprehensive plans and zoning ordinances in accordance with MPC §§301, 303(d) and 603(i)²⁶ (which require consistency with such comprehensive plans). Where these conditions are satisfied, state agencies “shall consider and may rely upon” comprehensive plans and zoning ordinances “when reviewing applications for the funding or permitting of infrastructure or facilities.”

The Water Resources Planning Act of 2002, however, provides evidence that municipalities are precluded from directly regulating water withdrawals and water allocation. Section 3136(b) of the WRPA declares, in pertinent part:

²⁶ The reference in §619.2(a) to §603(i) of the Act may be an erroneous cross-reference, and may instead be intended to refer to §603(j).

(b) Limitations on Water Allocation Authority. -- The General Assembly **reiterates the declarations of other statutes** reflecting the need to manage water resources on a watershed basis without respect to political boundaries and the understanding that water management programs should be based upon an accurate and current state water plan. **Accordingly, no political subdivision shall have any power to allocate water resources or to regulate the location, amount, timing, terms or conditions of any water withdrawal by any person.**

This preclusion is tempered by language in §3136(c) which preserves the power of municipalities to adopt and enforce ordinances pursuant to the Emergency Management Services Code²⁷ and ordinances regulating the **use of land** pursuant to the Pennsylvania Municipalities Planning Code or other laws. Thus, the WRPA creates a distinction between municipal regulation of land use and municipal regulation of water withdrawal and water allocation. Further, each municipality is allowed to retain authority conferred by other statutes to adopt ordinances and regulations concerning: (1) mandatory connection to and use of available public water supplies; and (2) the prohibition or regulation of withdrawals from particular sources of water that may be contaminated in order to protect public health and safety from exposure to the contamination or to avoid the induced migration of contamination.

Water Withdrawal and Use Management and Recommendations

Obtaining an accurate picture of current water use and projecting water use trends

In order to evaluate and formulate water policies, and to project, guide, and manage water withdrawals to assure adequate and sustainable supplies, DEP needed to base the foundation of technical work on accurate information concerning current water uses and an ability to forecast trends in water withdrawal and use. For its first five years of the state water plan process, DEP focused its data collection efforts towards its priority of identifying critical water planning areas under existing demand conditions through a state-wide assessment of water availability. This existing condition analyses has been built upon data obtained largely from the initial registration process required under the WRPA with additional data coming from registrations received since the base registration year of 2003, from information obtained through verification work by technical partners and estimations to fill in for unregistered withdrawals.

Regulations establishing the ongoing reporting of water withdrawals are still pending final adoption. These regulations requiring periodic reports collected from all significant water users regarding the amount of their withdrawals and consumptive uses are needed to improve the extent and quality of information currently collected under voluntary interim processes.

One of the tasks of the State Water Plan beyond the focus of existing demand conditions involves projection of current and future water use trends. While State-wide screening for the identification of critical water planning areas using the Water analysis Screening Tool (WAST)_ have included preliminary demand projections, the projection of future demands and analyses of water use trends is planned to be fully developed for watersheds during future state-wide water plan technical work and during development of critical area resource plans (CARPs).

²⁷ 35 Pa.C.S. Pt. V.

Recommendation 1: The water use registration and reporting regulations should be adopted and implemented as expeditiously as practicable, to facilitate the gathering of more accurate and timely water withdrawal and use information. The department, in concert with stakeholder organizations, should engage in concerted outreach efforts to improve the understanding of, and compliance with, the registration and reporting program.

Recommendation 2: The next phase of the State Water Plan should include, among other items, increased attention upon the development of water use projections in each watershed for the next 20 years, and the evaluation of major water use trends.

Evolving Pennsylvania's common law water rights doctrines and regulated riparian programs

Pennsylvania stands at an interesting point along the road of evolution of its water rights regime and programs for securing and managing water withdrawals. On the one hand, Pennsylvania's common law water rights doctrines lack clarity, predictability and administrative efficiency, and reflect a number of historical anachronisms and inconsistencies, starting with divergent and conflicting approaches to managing surface and ground waters. Pennsylvania's state-level regulatory programs relating to water withdrawals are relatively weak, narrow and fragmented, with the only program specifically designed to address withdrawals (the 1939 Water Rights Act) focused solely on surface water withdrawals by public water supply systems – a use which reflects less than 10% of the total withdrawals across the Commonwealth. On the other hand, in the Delaware and Susquehanna River basins, interstate basin commission water withdrawal permitting programs have been in place for nearly 50 and 40 years, respectively, and those programs appear to be functioning with generally broad acceptance and administrative efficiency.

To the extent that the Commonwealth continues to rely exclusively or predominantly on common law doctrines to define water rights (which is certainly the case outside of the Delaware and Susquehanna basins), we need to consider how well the common law works and whether it effectively addresses current conditions and challenges. The current common law system in Pennsylvania has been criticized by knowledgeable commentators as having several significant problems:

- The common law doctrines largely ignore, and fail to accommodate, the hydrologic connection between ground and surface water. As a result, the rules governing ground and surface water rights are inconsistent and incompatible.
- Common law water rights are not well defined; users obtain no defined amount of water upon which they can rely over a period of time. The lack of such definition and security can inhibit investments in enterprises that need long-term reliable supplies of water.
- The common law, which is built around deciding disputes between parties only as they arise, cannot address conditions on a watershed basis or “look ahead” to forecast and avoid conflicts among users or uses, including instream uses.

- The resolution of water rights disputes is almost always after the fact, and involves lengthy and expensive litigation proceedings before civil courts. Courts (judges and juries) are not trained in the technically complex hydrologic and geologic issues involved in water management issues, and such disputes frequently become a battle of experts.
- The common law has difficulty managing water as a replenishable resource, as there is no practical avenue for recognizing and implementing a “water budget” concept or for protecting the water resource itself.
- The traditional concept of limiting water use to the lands immediately along a stream or on which a particular well is located is not practical in the modern world.

The question is, how do we evolve these arrangements to a more consistent, secure, and holistic approach that (1) offers water users well-defined, stable and predictable water rights; (2) promotes siting and development of uses requiring withdrawals in ways that assure adequate and sustainable supplies both in normal and drought periods, without causing unacceptable impacts on instream uses and environmental resources; (3) is administratively efficient and avoids unnecessary duplication between agencies and programs?

There are a number of options that may merit review and evaluation, including:

- (1) Codifying and clarifying common law rules, including harmonizing surface water and groundwater doctrines, through an approach similar to that followed in Ohio (which opted to adopt into state law the principles of the Restatement (Second) of Torts).
- (2) Developing an alternative dispute resolution process for addressing water rights disputes, such as an expert mediation or arbitration service, with the capability of drawing upon the information and expertise of the State Water Plan process.
- (3) Updating the 1939 Water Rights Act and program for regulating public water supply agency withdrawals to encompass both groundwater and surface water, and to clarify the criteria to be considered in granting permits.
- (4) Adopting a regulated-riparian approach on a watershed-by-watershed basis to manage withdrawals and establish water rights, utilizing existing programs (such as the SRBC and DRBC arrangements in the Delaware and Susquehanna River basins and the proposed new Great Lakes-St. Lawrence River Basin Water Resources Compact), and framing similar programs as appropriate in other basins (e.g., the Ohio and Potomac River watersheds).
- (5) Adopting a regulated-riparian approach in “critical water planning areas” if and when such critical areas are designated under the State Water Plan.
- (6) Developing a statewide regulated-riparian program, similar to those in New Jersey, Maryland and Virginia, and recommended in the ASCE model water rights code.

Each of these options has some advantages and potential disadvantages or questions, and much will depend upon the acceptability of each option to the key stakeholders.

In the context of the review of these options, consideration should be given to policies and appropriate approaches for managing withdrawals to conserve flows needed for instream and downstream uses, including fisheries and aquatic systems. Those discussions should include a

thorough review of the models, field experience and scientific data available concerning the relationship between flows, habitats and actual fish populations (considering the myriad of factors affecting such populations), and an examination of the impacts on sustainability and reliability of water supplies of various policy options relating to pass-by, conservation flows and the application of such policies to surface and groundwater withdrawals in various watersheds.

Recommendation 3: As further information concerning Pennsylvania's water use trends and challenges are developed over the next five years leading up to the next update of the State Water Plan, concerted focus should be placed on considering and evaluating the above options and issues, evaluating programs that are used in other states, utilizing a process which includes the Department, the Statewide committee, and other major stakeholders. Based on that process, a report on the relative merits of the identified options should be developed, and appropriate recommendations should be made to the general assembly as to whether and how Pennsylvania's water rights system might be improved and made more efficient, effective, predictable and secure.

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