

RESOLUTION NO. 80-18

A RESOLUTION to delineate and declare a ground water protected area in southeastern Pennsylvania and establish regulations relating thereto.

WHEREAS, use of ground water resources in the Triassic lowland and adjacent areas in southeastern Pennsylvania has increased substantially in recent decades; and

WHEREAS, interference and conflicts among users of the same ground water resource in the area has become more frequent, giving rise to administrative and legal proceedings before regulatory bodies and in the courts; and

WHEREAS, in June 1979, the Commission held a series of hearings to receive public comment and suggestion as to the extent of ground water related problems in the area, and whether and to what extent the Commission should establish special regulations to provide improved regional management of the limited water resources; and

WHEREAS, as a result of additional hearings in June 1980, public representatives, water purveyors and private citizens urged the Commission to utilize its authority under Article 10 of the Compact to prevent depletion of ground water, protect the just and equitable interests and rights of lawful users of the same water source, and balance and reconcile alternative and conflicting uses of limited water resources in the area; now therefore,

BE IT RESOLVED by the Delaware River Basin Commission:

1. Findings of Fact. The Commission hereby finds and determines:
 - a. Approximately one million residents of southeastern Pennsylvania are presently reliant, entirely or substantially, on the ground water resources underlying Berks, Bucks, Chester and Montgomery Counties for supplies of domestic, municipal, commercial, industrial and agricultural water.

- b. Assessment of available water resources in relation to current and projected uses establish that ground water withdrawals in portions of Berks, Bucks, Chester and Montgomery Counties exceed or threaten soon to exceed the sustainable yields of local ground water basins.
- c. Rock formations underlying much of the area experience low recharge rates during dry years which can lead to declines in water table levels, diminished flow in adjacent streams and cessation of flow from springs.
- d. Significant portions of the area have experienced total ground water withdrawals which approached or exceeded the dry period annual recharge rates for the respective formations. Since 1975, major ground water withdrawals in the region (those withdrawals exceeding 100,000 gallons per day) have increased by over 13 million gallons per day, and additional quantities have been taken by the cumulative effect of small withdrawals. Ground water use information compiled for the Pennsylvania State Water Plan, the Comprehensive Water Quality Management Plan/208 Study for Southeastern Pennsylvania, the DRBC Level B Study, and similar reports prepared by county and regional agencies, indicate that in large portions of the affected area, pumping rates exceed 100,000 gallons per day per square mile; in substantial parts of the area, pumping rates exceed 500,000 gallons per day per square mile.
- e. Many public water supply systems in the area which rely on ground water sources have peak and/or average demands which closely approach or exceed the dry period capacity of their existing wells. Dry periods with reduced recharge rates and declining water tables have in the past resulted in reductions of public water well yields by 30 to 40 percent. As a result of past reliance on wells producing peak rates during high and normal recharge conditions, such systems become seriously overtaxed when recharge falls below normal levels.

- f. Lowered water tables, and fluctuations in ground water levels during dry periods, periodically interfere with and in some cases cut off normal access to ground water resources by users in the area, particularly residential users reliant on individual domestic wells. Communities and individual users in the region have periodically experienced sharp reductions or total loss of available supplies or loss of system pressure.
- g. Lowered water tables resulting from withdrawals in excess of recharge rate have resulted in reduction of flows in some perennial streams in the region, and have dried up some stream reaches which previously flowed all year. Such reductions in base flow interfere with instream and downstream water uses, adversely affect fisheries and aquatic life, and threaten to reduce the capacity of streams in the region to assimilate natural and man made point and non-point discharges of potential pollutants.

2. Purpose. The purpose of this regulation is to protect the ground water resources in the Triassic lowland and adjacent area of southeastern Pennsylvania and the public interest in those resources. In particular this regulation is to:

- a. Assure the effective management of water withdrawals to avoid depletion of natural stream flows and ground waters and to protect the quality of such water.
- b. Assure that ground water withdrawals are undertaken consistent with the policies stated in the Comprehensive Plan.
- c. Protect the just and equitable interests and rights of present and future lawful users of water resources, giving due regard to the need to balance and reconcile alternative and conflicting uses in view of present and threatened shortages of water of the quality required to serve such uses.

- d. Provide a mechanism for the acquisition of additional information necessary to more accurately plan and manage water resources.
 - e. Encourage all water users to adopt and implement reasonable water conservation measures and practices, to assure efficient use of limited water supplies.
3. Determination of Protected Areas and Restriction on Water Use. In consideration of the foregoing facts and for the purposes cited above:
- a. The Commission hereby determines and delineates the following area to be a protected area within the meaning and for the purpose of Article 10 of the Delaware River Basin Compact:

Southeastern Pennsylvania Ground Water Protected Area:

The "Southeastern Pennsylvania Ground Water Protected Area" shall consist of those portions of the following listed counties and political subdivision located within the Delaware Basin:

Berks County:

Townships

Douglass, Hereford, Union

Bucks County:

Townships

Bedminster, Buckingham, Doylestown, East Rockhill, Hilltown, Lower Southampton, Middletown, Milford, New Britain, Newtown, Northampton, Plumstead, Richland, Upper Southampton, Warminster, Warrington, Warwick, West Rockhill, Wrightstown.

Boroughs

Chalfont, Doylestown, Dublin, Hulmeville, Ivyland, Langhorne, Langhorne Manor, New Britain, Newtown, Pennel, Perkasie, Quakertown, Richlandtown, Sellersville, Silverdale, Telford, Trumbauersville.

Chester County:

Townships

Birmingham, Charlestown, East Coventry, East Goshen, East Pikeland, Easttown, East Vincent, East Whiteland, North Coventry, Schuylkill, South Coventry, Thornbury, Tredyffrin, Warwick, West Goshen, Westtown, Willistown, West Whiteland.

Boroughs

Elverson, Malvern, Phoenixville, Spring City, West Chester.

Montgomery County: All of the area within the county boundary.

- b. The Commission hereby determines that within the Southeastern Pennsylvania Ground Water Protected Area demands upon available ground water supplies have developed or threaten to develop to such a degree as to create a water shortage or to impair or conflict with the requirements or effectuation of the Comprehensive Plan. Accordingly, no person, firm, corporation or other entity within the area shall withdraw ground water for any purpose at a rate exceeding 10,000 gallons per day, except as prescribed by this regulation.
- 4. Comprehensive Plan Policies. The water resources within the Southeastern Pennsylvania Ground Water Protected Area shall be managed consistent with the Comprehensive Plan policies. For purposes of this ground water protected area, Section 2.20.4 of the Water Code of the Delaware River Basin shall be applied using the following definition of the term "withdrawal limits":
 - a. Withdrawal Limits. Except as may be otherwise determined by the Commission to be in the public interest, withdrawals from the underground waters of the basin shall be limited to the maximum

draft of all withdrawals from a ground water basin, aquifer, or aquifer system that can be sustained without rendering supplies unreliable, causing long-term progressive lowering of ground water levels, water quality degradation, permanent loss of storage capacity, or substantial impact on low flows of perennial streams.

5. Advance Notice of Exploratory Drilling. The Commission encourages consultation with any project sponsor who is considering development of a new or expanded ground water withdrawal that is being planned for any purpose when the daily average withdrawal during any calendar month exceeds 10,000 gallons to insure proper implementation of this regulation and to reduce the possibility of investment in new ground water development facilities which may not be approved hereunder. Such consultation should occur early in the planning stage of a new project and prior to initiation of exploratory drilling.
- a. Any person, firm, corporation or other entity planning a new or expanded ground water withdrawal that may be operated at a daily average withdrawal during any calendar month in excess of 10,000 gallons shall notify the Executive Director not less than 30 days prior to initiation of exploratory drilling. Such notice shall be in writing and shall specify the location of proposed new facility, the anticipated rate of withdrawal, and the general purpose of the proposed water use. The notice shall also state the location of existing wells within the radius set forth in Section 10a.
 - b. Whenever the Executive Director shall deem necessary, or upon request of a party proposing a new or expanded withdrawal of ground water, an informal conference may be scheduled to review the nature of the proposed withdrawal, the applicability of the Commission's standards relating to ground water, and the requirements of a protected area permit under this regulation.

6. Protected Area Permits for New Withdrawals. Any person, firm, corporation or other entity who proposes to develop a new ground water withdrawal or expand an existing ground water withdrawal for any purpose within the Southeastern Pennsylvania Ground Water Protected Area shall be required to obtain a protected area permit under this regulation if the proposed new or expanded daily average withdrawal during any calendar month exceeds 10,000 gallons.
- a. Applications for a protected area permit shall be submitted to the Commission on forms approved by the Executive Director. Each application shall be accompanied by the following information:
- A map indicating the location of existing wells and perennial streams.
 - A written report prepared by a hydrogeologist describing the expected effects of the proposed withdrawal on existing wells, flows of perennial streams and the long-term lowering of groundwater levels.
 - A log showing the nature of subsurface material encountered during the construction and installation of the exploratory or production well(s).
 - The detailed results of extended pump tests, of not less than 48 hours duration, and records of observations during such pump tests from representative monitoring wells.
- b. Applications for a protected area permit whose daily average withdrawal during any calendar month is in excess of 10,000 gallons shall be accompanied by an application fee of \$100.

- c. If the application for a protected area permit is for a daily average withdrawal during any calendar month in excess of 100,000 gallons, it shall be accompanied by such other information or exhibits required by Article 3 of the Commission's Rules of Practice and Procedure. In such cases, only the application fee required by the Rules will be assessed.
- d. To qualify for approval of a protected area permit, the owner or sponsor of the proposed withdrawal shall demonstrate that:
- The proposed withdrawal is consistent with the Commission's Comprehensive Plan and the policies and purposes of these regulations.
 - Opportunities to satisfy water requirements on a timely basis from existing available supplies and facilities have been explored and found infeasible.
 - The proposed withdrawal, in conjunction with other withdrawals in the applicable ground water basin, will not exceed withdrawal limits of a ground water basin, aquifer or aquifer system.
 - The proposed withdrawal will not significantly impair or reduce the flow of perennial streams in the area.
 - Existing ground and surface water withdrawals will not be adversely impacted, or will be otherwise assured of adequate supplies in accordance with the requirements of Section 9 of this regulation.
 - The proposed withdrawal will not cause substantial, permanent adverse impact to the overlying environment.
 - The owner or sponsor has adopted and will implement conservation and management programs as required by Section 7 of this regulation.

- e. Protected area permits shall be approved or disapproved by the Executive Director with the concurrence of the Pennsylvania member of the Commission or his alternate.
7. Conservation Requirements. The following conservation requirements shall apply to all existing, new or expanded ground water withdrawals for municipal, public, industrial or commercial water supply whose cumulative daily average withdrawal from one or more wells during any calendar month exceeds 10,000 gallons.
- a. Each person, firm, corporation or other entity withdrawing ground water within the Southeastern Pennsylvania Ground Water Protected Area for purposes of municipal or public water supply shall comply with the following conservation requirements:
- Water connections shall be metered, and water charges collected shall be based on metered usage.
 - A water conservation program shall be initiated and diligently pursued within the service area of the municipal or public water supply. Such program shall include a program for leakage control providing for the monitoring, prevention and repair of significant leakage, and the provision of customer information relating to water-saving devices.
 - Interconnections with adjacent water systems shall be considered to assure more reliable supplies of water during emergencies.
 - A drought emergency plan specifying actions which would be taken to reduce demand and assure supplies to priority uses in the event of drought conditions shall be prepared in cooperation with the municipalities in the service area. The plan shall be filed with the Commission.
- b. Each person, firm, corporation or other entity withdrawing ground water within the Southeastern Pennsylvania Ground Water Protected

Area for purposes of industrial or commercial water supply shall comply with the following conservation requirements:

- Opportunities for water conservation shall be investigated and all feasible conservation measures shall be implemented at the earliest practicable time.
- Water uses shall be monitored, and a systematic process shall be adopted and implemented to provide for the detection and expeditious correction of leakage.
- A drought emergency plan specifying the actions to be taken to reduce demand in the event of drought conditions shall be prepared and filed with the Commission.

c. Permits issued pursuant to these regulations shall be conditioned upon compliance with the requirements of this section.

8. Registration of Existing Withdrawals. Existing users of ground water within the Southeastern Pennsylvania Ground Water Protected Area whose lawful use commenced prior to the effective date of this regulation, whose cumulative monthly average daily withdrawal from one or more wells exceeds 10,000 gallons and whose withdrawal has not previously been approved by DRBC, pursuant to Section 3.8 of the Compact, shall, prior to July 1, 1981, register their use with the Pennsylvania Department of Environmental Resources acting as agent for the Commission. Registration is required as a condition for such existing users being eligible for the protection afforded by this regulation. Such registration shall include withdrawals from quarries that are not fed by surface streams.
- a. Registrations shall be filed on forms approved by the Executive Director of the Commission. Each registrant shall provide, without limitation thereto, the following:

- A description of the location, size and depth of each well and the pump facilities installed therein.
- The estimated quantity of water withdrawn from each well, or related group of wells, during each month of 1980.
- The purposes for which the water is withdrawn, its place of use, and the approximate quantity of water used for each purpose.
- The location and method of waste water disposal and discharge.
- A registration fee of \$5 for each well.

9. Protection of Existing Users.

- a. Protected area permits issued under this regulation for new or expanded withdrawals of ground water shall include conditions to protect the owners of existing wells in accordance with the provisions of this section.
- b. Any person, firm, corporation or other entity who commences a new or expanded withdrawal of ground water that is subject to the requirement of a protected area permit under this regulation shall provide mitigating measures if the withdrawal significantly affects or interferes with any existing well. Mitigation measures may consist of:
 - providing an alternative water supply, of adequate quantity and quality, to the affected well owners(s);
 - providing financial compensation to the affected well owner(s) sufficient to cover the costs of acquiring an alternative water supply of adequate quantity and quality; or
 - such other measures as the Commission shall determine to be just and equitable under the circumstances present in the case of any individual application.

10. Technical Determinations and Procedures.

- a. The radius to be considered in assessing the potential impact of a proposed new or expanded ground water withdrawal, as required by Sections 5 and 6 of this regulation shall be as follows:

<u>Quantity of Cumulative Proposed Withdrawal</u>	<u>Radius From the Proposed Withdrawal to be Considered</u>
10,000 to 50,000 gpd	0.5 miles
50,000 to 100,000 gpd	0.75 miles
in excess of 100,000 gpd	1.0 miles

- b. Ground water withdrawal limits, as defined in Section 2.20.4 of the Water Code of the Delaware River Basin and Section 4 of this resolution, shall be calculated on the basis of the average recharge rate to the basin, aquifer, or aquifer system during repetition of a period which includes the worst recorded drought.
- c. The requirement of (a) or (b) of this section may be modified or waived by the Executive Director or the Commission if an applicant adopts and implements a program for coordinated use of ground and surface water, and the applicant demonstrates that operation of the coordinated program will be consistent with the policies contained in the Comprehensive Plan and the purposes of these regulations.

11. Definitions. For purposes of this regulation, except as otherwise required by the context:

"Aquifer" means waterbearing formation that contains sufficient ground water to be important as a source of supply.

"Comprehensive Plan" means the plans, policies and programs adopted as part of the Comprehensive Plan of the Delaware Basin in accordance with Sections 3.2 and Article 13 of the Delaware River Basin Compact.

"Ground water" means all water beneath the surface of the ground.

"Ground water basin" means a subsurface structure having the character of a basin with respect to the collection, retention and outflow of water.

"Ground water protected area" means the areas declared and delineated by the Commission to be a ground water protected area pursuant to Article 10 of the Delaware River Basin Compact and these regulations.

"Ground water recharge" means the addition of water to an aquifer by infiltration of precipitation through the soil, infiltration from surface streams, lakes or reservoirs, flow of ground water from another aquifer, or pumpage of water into the aquifer through wells.

"Project" means the same word as defined by Section 1.2(g) of the Delaware River Basin Compact.

"Protected area permit" means a permit to divert or withdraw ground water within the ground water protected area for domestic, municipal, agricultural or industrial uses, granted pursuant to Section 10.3 of the Delaware River Basin Compact and these regulations.

12. Other Permit Requirements.


- a. Except to the extent provided in these regulations, registration of existing ground and surface water withdrawals and the issuance of withdrawal permits hereunder shall not create any private or proprietary rights in the water of the Basin and the Commission reserves the right to amend, alter, or repeal these regulations and to amend, alter or rescind any actions taken hereunder in order to insure the proper control, use and management of the water resources of the Basin.
- b. Neither the obligation to obtain a protected area permit under this regulation, nor the receipt thereof, shall relieve the sponsor of a

new or expanded ground water withdrawal project of the obligation to obtain any other applicable permits required by federal, state or local government agencies.


- c. A new or expanded ground water withdrawal subject to the requirement of a protected area permit under this regulation shall not require any further approval by the Commission if the daily average withdrawal during any calendar month is less than 100,000 gallons. If the new or expanded withdrawal exceeds a daily average of 100,000 gallons during any calendar month, the project shall be subject to review and approval by the Commission pursuant to Section 3.8 of the Delaware River Basin Compact, and the requirement of a protected area permit for such a project shall be in addition to other requirements of the Commission and its Rules of Practice and Procedure.
13. Appeals. Any person aggrieved by any action or decision of the Executive Director taken under these regulations shall be entitled upon timely filing of a request therefor, to a hearing in accordance with Article 6 of the Commission's Rules of Practice and Procedure.
 14. Sanctions; Civil and Criminal.
 - a. Any person, association, corporation, public or private entity who or which violates or attempts or conspires to violate any provision of this resolution, or any order, regulation or permit issued in furtherance thereof, shall be punishable as provided in Section 14.17 of the Compact.
 - b. General Counsel of the Commission may, in his discretion, request the appropriate law enforcement officers of the Commonwealth of Pennsylvania to prosecute any or all violations of this resolution in accordance with the Compact and the laws of the Commonwealth, and for recovery of the fines fixed by Section 14.17 of the Compact, in the name and on behalf of the Commission. The Commonwealth of Pennsylvania and its law

enforcement officers are hereby requested pursuant to Sections 10.1 and 11.5 of the Compact, to provide such technical, professional and administrative services as may be required for such enforcement.

- c. In addition to such penal sanctions as may be imposed pursuant to this section, any violation of this resolution shall be subject to such civil remedies by injunction and otherwise as provided by law.
15. Duration. The delineation and declaration of the Southeastern Pennsylvania Ground Water Protected Area made pursuant to this regulation, and the requirements established hereby, shall continue until terminated by specific action of the Commission.
16. Effective Date. This regulation shall take effect on January 1, 1981.
17. Amendments. Upon request by any interested party, or on its own motion, the Commission may consider amendment of this resolution, and modify the geographic boundaries of the protected area, in accordance with Article 10 of the Compact.



Steven J. Picco, Chairman pro tem



W. Brinton Whitall, Secretary

ADOPTED: October 8, 1980

