


**Delaware River Basin Commission**  
DELAWARE • NEW JERSEY  
PENNSYLVANIA • NEW YORK  
UNITED STATES OF AMERICA

## An Overview of Ground Water Withdrawal Regulations in the Southeastern Pennsylvania Ground Water Protected Area

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### Delaware River Basin Commission

- 13,539 square mile basin
- Five members:
  - Delaware
  - New Jersey
  - Pennsylvania
  - New York
  - United States
- Manage water resources
- Founded in 1961

**DELAWARE RIVER BASIN COMPACT**

1. The Compact provides the authority to the Delaware River Basin Commission.

2. All projects having a substantial effect on the water resources of the Basin shall not be undertaken unless submitted to and approved by the Commission.


3. Furthermore, the Commission may delineate *Protected* areas within the basin where the demands upon water supply have or might create a water shortage.\*

\* Also provided for in the recently enacted PA Water Resources Legislation

### SOUTHEASTERN PENNSYLVANIA GROUND WATER PROTECTED AREA

Established in 1980


- Due to the substantial increase in use of ground water resources in southeastern Pennsylvania in recent decade
- More frequent interference and conflicts among users of the same ground water resource
- Observed water table impacts to flows in perennial streams



### Management within the Southeastern Pennsylvania Ground Water Protected Area

Geography

- 1,200 Square Miles
- Five Counties
- 127 Municipalities
- 76 Sub-basins



### Sub-basin Delineation in Southeastern Pennsylvania



## SOUTHEASTERN PENNSYLVANIA GROUND WATER PROTECTED AREA

### Management Issues:

- Provide for the effective management of ground water resources.
- Encourage water conservation.
- Protect the rights of present and future users of water.
- Acquire additional information to more accurately plan and manage water resources.

### Results:

A computerized water-use and ground water analysis program.

## SOUTHEASTERN PENNSYLVANIA GROUND WATER PROTECTED AREA

### Special Requirements

- Permits required for withdrawals averaging 10,000 gpd or more for any 30-day period
- Advance notice of exploratory drilling
- Hydrologist report with results of extended pump test (not less than 48 hours duration) and monitoring
- Well registration and metering
- Conservation requirements
- Compliance with the Commission's "withdrawal-limits (net subbasin yield) policy."

## SOUTHEASTERN PENNSYLVANIA GROUND WATER PROTECTED AREA

### Subbasin Limits

- Geological Studies Establish Numerical Withdrawal Limits
- 1-in-25-year Average Annual Baseflow Rate
- Two-tiered Approach
  - "Maximum Withdrawal Limit" = 100%
  - "Potentially Stressed" = 75%
- Stressed Sub-basins Requirements

## SOUTHEASTERN PENNSYLVANIA GROUND WATER PROTECTED AREA

### Eligible programs in potentially stressed subbasins:

1. Conjunctive use – 15% avg annual system use from surface water
2. Expanded water conservation
3. Program to control ground water infiltration
4. Artificial recharge or spray irrigation – 60% return to same basin & aquifer
5. Alternative mitigation program

## SOUTHEASTERN PENNSYLVANIA GROUND WATER PROTECTED AREA

### Procedures for withdrawal limit revisions to afford additional protection for subbasins that are designated

- Pennsylvania "High Quality" or "Exceptional Value" Designated Streams
- "Wild", "Scenic", or "Pastoral" Streams
- or
- Consistent with More Stringent Requirements in Integrated Resource Plans

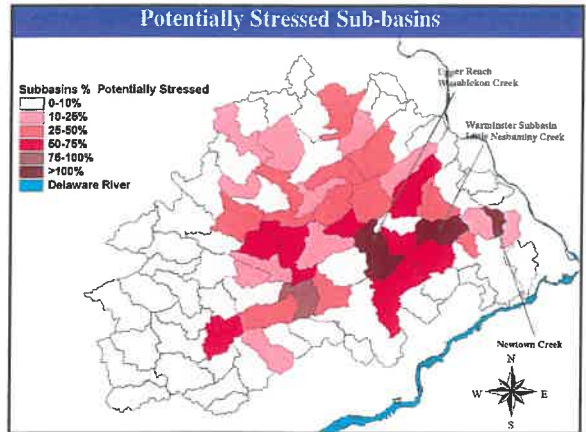
## SOUTHEASTERN PENNSYLVANIA GROUND WATER PROTECTED AREA

### Integrated Resource Planning

- IRP framework and experiences are applicable to PA Act 220 CWPA provisions
  - Similar requirements to CARPs
  - Currently being tested through Swamp-Scioto pilot project
  - Should improve understanding of how to carry on multi-municipal comprehensive water supply planning in Pennsylvania

### Neshaminy Creek Basin

Sub-basin	Potentially Stressed (mgly)	Withdrawal Limit (mgly)
West Branch Neshaminy	1,054	1,405
Pine Run	596	795
North Branch Neshaminy	853	1,134
Main Stem Doyestown	710	946
Main Stem Warwick	889	1,185
Little Neshaminy Warrington	505	673
Park Creek	582	776
Little Neshaminy Warminster	1,016	1,355
Mill Creek	1,174	1,565
Main Stem Northampton	596	794
Newtown Creek	298	397
Core Creek	494	668
Ironworks Creek	326	434
Main Stem Lower Neshaminy	3,026	4,034



### Ground Water Evaluations for Pennsylvania and Northern Delaware as a Percentage of the Potentially Stressed Limit

A study of Ground water availability for the entire Delaware Basin was conducted by the U.S. Geological Survey in 2006.

This publication can be found at <http://pubs.er.usgs.gov/usgspubs/sir/sir20065125>

- ### Latest Developments/Recent DRBC Efforts
- 2005 Scope of Work for GWPA Status Report
    - Assess ground water withdrawals
    - Assess hydrologic conditions
    - Assess relative subbasin stress
    - Assess interconnections
    - Assess streamflow conditions in gauged watersheds
    - Summarize ground water allocations
  - Develop data collection system for continuous updating
    - Tailored, in part, to Act 220 reporting information
  - Regulatory Issues
    - Future Use
    - Use vs Allocation
    - Reallocation / Trading

**DRBC WEB SITE:**  
[www.drbc.net](http://www.drbc.net)

