

Listing of Characterized Soils

in

Pennsylvania

by

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and

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Agronomy Series Number 132

March 1994

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CONTENTS

| | |
|---|----|
| INTRODUCTION | 1 |
| DATE AND DATABASE CODING | 2 |
| Table 1. Listing of published soil characterization data for Pennsylvania | 3 |
| Table 2. Site data for pedon 014-099 | 4 |
| Table 3. Horizon data for pedon 014-099 | 5 |
| Table 4. Physical laboratory data for pedon 014-099 | 6 |
| Table 5. Chemical and mineralogical data for pedon 014-099..... | 7 |
| Table 6. Listing of Pennsylvania counties and their identification numbers | 9 |
| Table 7. Listing of soil series by number within each Pennsylvania county | 9 |
| Table 8. Listing of partial data by soil series for characterized Pennsylvania pedons | 17 |
| Table 9. Bulk density and 0.3 atmosphere moisture content methods of the Soil Characterization Lab | 39 |
| Table 10. Map Unit Use File (MUUF) listing of soil series number of characterized pedons and acres/pedon in Pennsylvania | 40 |
| REFERENCES | 44 |

INTRODUCTION

The Pennsylvania State University has been characterizing Pennsylvania soils since 1957. Prior to 1957, soils from three counties (Lancaster in 1955, Chester in 1956, and Erie in 1956) were sampled and characterized by the USDA Soil Conservation Service (SCS). The characterization process entails the excavation of a soil pit, a description of the pedon's (profile) morphology (color, structure, etc.), as well as a description of site characteristics (slope, vegetation, etc.). In addition the soil is sampled horizon by horizon and various laboratory analyses are performed on the collected samples.

Since the characterization program was established, 800 pedons (profiles) representing 171 different soil series have been collected and analyzed. The characterization data collected (pedon and site descriptions, and physical, chemical and mineralogical data) have been published for all the sites sampled except for recent years (see Table 1 for a listing of all published data). In addition, the data for Lancaster, Chester, and Erie Counties have been published by the SCS (SCS, 1974). Presently there are no plans to publish data acquired since the above-listed publications. The data in these publications and all subsequent data collected is a part of the Penn State Soil Characterization Database (Ciolkosz and Thurman, 1993). This system, described by Ciolkosz and Thurman (1993), is a very user-friendly computerized database. The data from the database can be output as hard copy tables or to a computer file for import into a word processing program. Examples of the data tables are given in Tables 2 through 5. The data may also be output to a computer file on an individual data field basis. For example, the clay content of all B horizons of Hagerstown and Duffield soils can be output to disk. These data can be output in various formats that can be used in statistical analysis packages, spreadsheets, or database systems such as dBase. Future characterization data collected will also be added to the database.

Over the years in which the soils were collected and analyzed, various laboratory procedures were changed, added, or deleted. In addition, some special studies were done on the characterization samples or at the characterization sites (e.g., percolation rate measurements) (see Thurman et al., 1994). Thus, not all the data fields in the database have data. Because of this reason, it is very helpful to have a listing that can be rapidly viewed prior to going to the database for data recovery. This publication is being presented to fill this need.

DATA AND DATABASE CODING

The soils in the database have been coded according to county and site numbers as well as soil series names. Table 6 gives a listing of Pennsylvania's county names and their corresponding numbers. Figure 1 gives the location of the various counties in Pennsylvania and Figure 2 gives the location of the various characterization sites in the state. Table 7 gives a listing of the various counties that have had soils sampled and the soil series name of the sampled soil. In Table 7 under the heading county and site number there is a number such as 0108. The first two numbers indicate the county (for instance, 01 indicates Adams County, see Table 6) and the second two numbers (08) indicate the site number of the sampled soil. In this table the year sampled is also given for additional information. Table 8 gives a listing by soil series name and the type of partial data (data availability only for some of the soils) while Tables 2 and 4 give the standard data that is available in the database. Table 9 gives a listing of methods used for bulk density and 0.3 atmosphere moisture measurement since the characterization program started. Table 10 gives a listing of the soils of Pennsylvania in the SCS Map Unit Use File (MUUF). This computer file lists all the soil map units by soil series or land type and their acreage in the state. Included in Table 10 is the number of acres of each soil or land type, the number of pedons (profiles) of the soil sampled in Pennsylvania and the number of acres/pedon of the listed soils that have been sampled.

Table 1. Listing of published soil characterization data for Pennsylvania.

| Date | Reference |
|------|--|
| 1968 | Characteristics, Interpretations, and Uses of Pennsylvania Soils : Dauphin County. Petersen, et al. Penn State Agr. Expt. Sta. Prog. Rept. 306. |
| 1969 | Characteristics, Interpretations, and Uses of Pennsylvania Soils : Northampton County. Cunningham, et al. Penn State Agr. Expt. Sta. Prog. Rept. 295. |
| 1970 | Characteristics, Interpretations, and Uses of Pennsylvania Soils : Warren County. Ciolkosz, et al. Penn State Agr. Expt. Sta. Prog. Rept. 306. |
| 1970 | Characteristics, Interpretations, and Uses of Pennsylvania Soils : Huntingdon County. Ranney, et al. Penn State Agr. Expt. Sta. Prog. Rept. 300. |
| 1971 | Characteristics, Interpretations, and Uses of Pennsylvania Soils : Armstrong County. Cunningham, et al. Penn State Agr. Expt. Sta. Prog. Rept. 316. |
| 1972 | Characteristics, Interpretations, and Uses of Pennsylvania Soils : Bradford County. Ranney, et al. Penn State Agr. Expt. Sta. Prog. Rept. 320. |
| 1972 | Characteristics, Interpretations, and Uses of Pennsylvania Soils : Bedford County. Ciolkosz, et al. Penn State Agr. Expt. Sta. Prog. Rept. 323. |
| 1972 | Characteristics, Interpretations, and Uses of Pennsylvania Soils : Bucks County. Petersen, et al. Penn State Agr. Expt. Sta. Prog. Rept. 324. |
| 1972 | Characteristics, Interpretations, and Uses of Pennsylvania Soils : Butler County. Cunningham, et al. Penn State Agr. Expt. Sta. Prog. Rept. 326. |
| 1972 | Laboratory Characterization Data and Field Descriptions of Selected Pennsylvania Soils. Cunningham et al. Penn State Agronomy Series No. 25 (All data prior to publication of the Agr. Expt. Sta. Series). |
| 1974 | Characteristics, Interpretations, and Uses of Pennsylvania Soils Developed from Cherty Limestone Material. Ciolkosz, et al. Penn State Agr. Expt. Sta. Prog. Rept. 341. |
| 1974 | Characteristics, Interpretations, and Uses of Pennsylvania Soils Developed from Colluvial Materials. Cunningham, et al. Penn State Agr. Expt. Sta. Prog. Rept. 344. |
| 1976 | Characteristics, Interpretations, and Uses of Pennsylvania Soils Developed from Redbeds and Calcareous Materials. Ciolkosz, et al. Penn State Agr. Expt. Sta. Prog. Rept. 355. |
| 1977 | Characteristics, Interpretations, and Uses of Pennsylvania Soils Developed from Acid Shale. Cunningham, et al. Penn State Agr. Expt. Sta. Prog. Rept. 362. |
| 1983 | Characteristics, Interpretations, and Uses of Pennsylvania Minesoils. Ciolkosz, et al. Penn State Agr. Expt. Sta. Prog. Rept. 381. |

Table 2. Site data for pedon 014-099

Pennsylvania State University
Soil Characterization Laboratory

S1976-PA-014-099 (1-11) Linden Very Fine Sandy Loam

PAGE 1 OF 4

CLASSIFICATION: Fluventic Dystrchrept; Coarse-loamy, mixed, mesic DATE PRINTED: 03/27/2000

| | | | | | | | | | | | | | |
|---|--------|--------|--------|--|----------------------|-----|-----|-----|---------------------|-----|-----|-----|--|
| <p>SOIL SERIES NAME: Linden SOIL SURVEY NO: S1976-PA-014-099 (1-11) DESCRIPTION TYPE: Full pedon desc for lab characterization PEDON TYPE: DIAGNOSTIC FEATURES (depth cm): ASSOCIATED SOILS: COUNTY: Centre TOWNSHIP: Rush LATITUDE (D-M-S): 40-57-38-N LOCATION: 1 km E of Casanova Vill. 200 m N of Twp Rt 323 along REGIONAL LANDFORM: Ridge and valley GEOMORPHIC COMPONENT: SLOPE LENGTH (above,meters): SLOPE SHAPE (up- down,across): , SLOPE (%): 1 SLOPE ASPECT (degrees): 180 MICRORELIEF (amount,pattern kind): , , PARENT MATERIAL WEATHERING: 1. Unweathered 2. Unweathered PARENT MATERIAL MODE OF DEPOSITION: 1. Alluvium 2. Alluvium BEDROCK DIP (degrees): BEDROCK FRACTURE: PARENT MATERIAL (PA system): Red fine and medium textured floodplain FLOOD PATTERN (freq.,beg. mon.,days): , , PONDING PATTERN (freq.,beg. mon.,days): , , WATER TABLE (depth cm,days,kind): 240, , DRAINAGE: Well drained EROSION: Slight STONINESS: Class 0 WEATHER STATION:</p> <table border="0" style="width: 100%; margin-left: 20px;"> <tr> <td></td> <td style="text-align: center;">ANNUAL</td> <td style="text-align: center;">WINTER</td> <td></td> </tr> <tr> <td>SOIL TEMPERATURE(C):</td> <td style="text-align: center;">9.1</td> <td style="text-align: center;">0.0</td> <td style="text-align: center;">0.0</td> </tr> <tr> <td>AIR TEMPERATURE(C):</td> <td style="text-align: center;">0.0</td> <td style="text-align: center;">0.0</td> <td style="text-align: center;">0.0</td> </tr> </table> <p>PRECIPITATION(cm): 110 LAND USE: Abandoned cropland VEGETATION: Oaks; Pines; Grass DESCRIBERS NAMES: E. J. Ciolkosz, R. C. Cronce, E. R. Stein DATE DESCRIBED: 04/17/1976 YIELD ID#: MAP UNIT SYMBOL:</p> | | ANNUAL | WINTER | | SOIL TEMPERATURE(C): | 9.1 | 0.0 | 0.0 | AIR TEMPERATURE(C): | 0.0 | 0.0 | 0.0 | <p>PREVIOUS NAMES: Linden SOIL TYPE: Very Fine Sandy Loam LAB SAMPLE NO: 9810 - 9817 CONTROL SECTION (cm): MLRA: 147, Northern Appalachian Ridges and Valleys USGS 7.5' QUAD SHEET: Philipsburg LONGITUDE (D-M-S): 078-09-43-W LOCAL LANDFORM: Flood plain HILLSLOPE COMPONENT: SLOPE LENGTH (total,meters): POSITION ON SLOPE: ELEVATION (meters): 420 PARENT MATERIAL ORIGIN: 1. Red acid shale 2. Red acid sandstone BEDROCK STRIKE (degrees): MOISTURE REGIME: Udic PERMEABILITY: Moderate HYDRAULIC CONDUCTIVITY: PERCOLATION RATE (in/hr): RUNOFF: Very slow PLOWED: Yes SUMMER</p> |
| | ANNUAL | WINTER | | | | | | | | | | | |
| SOIL TEMPERATURE(C): | 9.1 | 0.0 | 0.0 | | | | | | | | | | |
| AIR TEMPERATURE(C): | 0.0 | 0.0 | 0.0 | | | | | | | | | | |

NOTES: MS thesis site of Dick Cronce(1978) and Ed Stein(1977). The dark colors (N 2/0) in C4, C5 and C6 horizons appear to be Fe- Mn coatings on the sand grains and coarse fragments. Oaks, pines and several types of native grasses.

PA CLASSIFICATION: FLUVENTIC, , DYSTR, OCHR, EPT, COARSE-LOAMY, MIXED, MESIC,

Table 3. Horizon data for pedon 014-099

Pennsylvania State University
Soil Characterization Laboratory

S1976-PA-014-099 (1-11) Linden Very Fine Sandy Loam

PAGE 2 OF 4

CLASSIFICATION: Fluventic Dystrochrept; Coarse-loamy, mixed, mesic

DATE PRINTED: 03/27/2000

- 1 Ap1-- 0 to 10 cm; dark brown (7.5YR 3/2) matrix; very fine sandy loam; weak fine granular structure and weak fine subangular blocky structure; very friable, non sticky, slightly plastic; many roots; pH 4.5; abrupt wavy boundary
- 2 Ap2-- 10 to 20 cm; dark reddish brown (5YR 3/3) matrix; very fine sandy loam; weak very fine subangular blocky structure; friable, non sticky, slightly plastic; many roots; pH 4.5; abrupt smooth boundary
- 3 Bw1-- 20 to 41 cm; reddish brown (5YR 4/4) matrix; loam; weak fine and medium subangular blocky structure; friable, slightly sticky, slightly plastic; many roots; few faint clay films in root channels and/or pores; pH 4.4; clear wavy boundary; Dark reddish brown (5YR 3/4) ped faces.
- 4 Bw2-- 41 to 56 cm; reddish brown (5YR 4/4) matrix; loam; weak coarse prismatic structure parting to weak fine and medium subangular blocky structure; friable, slightly sticky, slightly plastic; common roots; faint clay films on faces of peds; pH 4.5; clear wavy boundary; Films are on prism faces; dark reddish brown (5YR 3/3) ped faces.
- 5 BC-- 56 to 74 cm; dark brown (7.5YR 4/4) matrix; loam; weak coarse prismatic structure parting to weak medium subangular blocky structure; very friable, slightly sticky, slightly plastic; common roots; common faint clay films on faces of peds; pH 4.5; gradual wavy boundary; Films are on prism faces.
- 6 C1-- 74 to 114 cm; dark brown (7.5YR 3/2) matrix; very fine sandy loam; structureless massive; very friable, slightly sticky, slightly plastic; common roots; pH 4.4; clear wavy boundary
- 7 C2--114 to 140 cm; dark yellowish brown (10YR 3/4) matrix; loamy sand; structureless massive; very friable, non sticky, non plastic; few roots; pH 4.4; abrupt wavy boundary
- 8 C3--140 to 150 cm; dark yellowish brown (10YR 3/4) matrix, black (N 2/0) matrix; gravelly loamy sand; with many medium and coarse prominent yellowish brown (10YR 5/6) mottles; structureless single grain; loose, non sticky, non plastic; few roots; pH 4.4; 50% gray & brown acid sandstone rock fragments, 40% gravel 2 mm-1.9 cm, 10% gravel 1.9-7.6 cm; abrupt wavy boundary; black (N 2/0) coatings on gravel.
- 9 C4--150 to 160 cm; black (N 2/0) matrix; very gravelly sand; structureless single grain; firm, weakly cemented, non sticky, non plastic; pH 4.4; 50% gray & brown acid sandstone rock fragments, 40% gravel 2 mm-1.9 cm, 10% gravel 1.9-7.6 cm; abrupt wavy boundary
- 10 C5--160 to 190 cm; dark yellowish brown (10YR 4/4) matrix, black (N 2/0) matrix, strong brown (7.5YR 5/8) matrix; very gravelly sand; structureless single grain; loose, non sticky, non plastic; pH 4.4; 65% gray & brown acid sandstone rock fragments, 45% gravel 2 mm-1.9 cm, 15% gravel 1.9-7.6 cm, 5% flat cobbles 7.6-25 cm; abrupt wavy boundary; Also black (N 2/0) coatings on coarse gravel, strong brown (7.5YR 5/8) and dark reddish brown (5YR 3/4) coating on medium gravel
- 11 C6--190 to 282 cm; strong brown (7.5YR 5/6) matrix, black (N 2/0) matrix, red (2.5YR 5/6) matrix; very gravelly coarse sand; structureless single grain; loose, non sticky, non plastic; pH 4.4; 75% gray & brown acid sandstone rock fragments, 30% gravel 2 mm-1.9 cm, 15% gravel 1.9-7.6 cm, 25% flat cobbles 7.6-25 cm, 5% flat stones 25-60 cm

Table 4. Physical laboratory data for pedon 014-099

Pennsylvania State University
Soil Characterization Laboratory

S1976-PA-014-099 (1-11) Linden Very Fine Sandy Loam

PAGE 3 OF 4

CLASSIFICATION: Fluventic Dystrochrept; Coarse-loamy, mixed, mesic

DATE PRINTED: 03/27/2000

| DEPTH NO (cm) | HORI- ZON | ROCK FRAGMENT DISTRIBUTION (MM) (PCT) | | | | | | | | TEXTURAL CLASS | | CALCULATED HYDRAULIC CONDUCTIVITY (CM/HR) | |
|------------------|--------------|--|------------|-----------|------------|------------|-------------|--------------|-----|-------------------|------------------------------|--|--------|
| | | > 250 | 250- 76 | 76- 19 | 19- 4.7 | 4.7 2.0 | TOTAL WT | TOTAL VOL | LAB | FIELD | SATURATED <2MM TOTAL SOIL | UNSATURATED <2MM TOTAL SOIL | |
| 1 | 0-10 | Ap1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | VFSL | VFSL | | |
| 2 | 10-2 | Ap2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | VFSL | VFSL | 34.761 | 34.761 |
| 3 | 20-4 | Bw1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | SIL | L | 5.084 | 5.084 |
| 4 | 41-56 | Bw2 | 0.0 | 0.0 | 1.4 | 0.0 | 0.0 | 1.4 | 1.0 | L | L | 2.863 | 3.019 |
| 5 | 56-74 | BC | 0.0 | 0.0 | 1.1 | 0.0 | 0.0 | 1.1 | 1.1 | L | L | 9.212 | 8.359 |
| 6 | 74-114 | C1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | FSL | VFSL | 4.581 | 4.581 |
| 7 | 114-14 | C2 | 0.0 | 0.0 | 0.0 | 2.6 | 4.8 | 7.4 | 6.2 | LS | LS | 0.557 | 0.458 |
| 8 | 140-150 | C3 | 0.0 | 19.1 | 4.6 | 22.7 | 9.9 | 56.3 | 0.0 | COS | LS | | |
| 9 | 150-160 | C4 | 0.0 | 0.0 | 25.8 | 39.0 | 8.8 | 73.6 | 0.0 | COS | S | | |
| 10 | 160-190 | C5 | 0.0 | 3.7 | 29.8 | 33.3 | 12.5 | 79.3 | 0.0 | COS | S | | |
| 11 | 190-282 | C6 | 0.0 | 5.5 | 32.1 | 22.6 | 18.9 | 79.1 | 0.0 | COS | COS | | |

| V | PARTICLE SIZE DISTRIBUTION (MM) (PCT OF < 2 MM MATERIAL) | | | | | | | | | | SAND | TOTAL SILT | TOTAL CLAY | | |
|----|--|-----------------------|------------------------|-----------------------|-------------------------|---------------------|----------------------|------------------------|------------------------|------------------------|------|---------------|---------------|--------------|----------------|
| | COARSE 2.0- 1.0 | COARSE 1.0- 0.5 | MEDIUM 0.5- 0.25 | FINE 0.25- 0.10 | V FINE 0.10- 0.07 | CO 0.07- 0.05 | MED 0.05- 0.02 | FINE 0.02- 0.005 | C+M 0.005- 0.002 | M+F 0.005- 0.002 | | | | 2.0- 0.05 | 0.05- 0.002 |
| 1 | 0.3 | 0.7 | 5.6 | 29.8 | 21.2 | 12.7 | 8.5 | 22.8 | 4.9 | 2.9 | 27.7 | 7.8 | 57.6 | 30.6 | 11.8 |
| 2 | 0.6 | 0.8 | 6.4 | 24.7 | 23.1 | 11.2 | 11.9 | 24.9 | 6.0 | 4.2 | 30.9 | 10.2 | 55.6 | 35.1 | 9.3 |
| 3 | 0.2 | 0.9 | 4.8 | 9.2 | 19.4 | 11.6 | 7.8 | 32.5 | 17.6 | 1.1 | 50.1 | 18.7 | 34.5 | 51.2 | 14.3 |
| 4 | 0.8 | 1.0 | 7.1 | 18.9 | 20.9 | 9.9 | 11.0 | 12.3 | 13.0 | 10.2 | 25.3 | 23.2 | 48.7 | 35.5 | 15.8 |
| 5 | 0.9 | 0.7 | 7.5 | 22.5 | 17.2 | 9.2 | 8.0 | 16.5 | 12.1 | 3.3 | 28.6 | 15.4 | 48.8 | 31.9 | 19.3 |
| 6 | 0.9 | 2.2 | 25.8 | 28.7 | 15.4 | 10.0 | 5.4 | 9.0 | 7.0 | 1.5 | 16.0 | 8.5 | 73.0 | 17.5 | 9.5 |
| 7 | 5.3 | 10.0 | 40.1 | 21.3 | 6.6 | 4.3 | 2.3 | 7.8 | 2.4 | 0.4 | 10.2 | 2.8 | 83.3 | 10.6 | 6.1 |
| 8 | 16.4 | 19.8 | 45.0 | 7.7 | 1.6 | 0.9 | 0.7 | 4.4 | 1.8 | 0.1 | 6.2 | 1.9 | 90.5 | 6.3 | 3.2 |
| 9 | 20.7 | 24.4 | 38.3 | 4.3 | 1.9 | 1.3 | 0.6 | 3.3 | 1.7 | 2.1 | 5.0 | 3.8 | 89.6 | 7.1 | 3.3 |
| 10 | 33.3 | 24.6 | 26.3 | 2.1 | 4.4 | 3.7 | 0.7 | 4.5 | 1.3 | 1.7 | 5.8 | 3.0 | 90.7 | 7.5 | 1.8 |
| 11 | 36.7 | 24.6 | 27.9 | 1.9 | 1.6 | 1.4 | 0.2 | 2.9 | 1.3 | 1.6 | 4.2 | 2.9 | 92.7 | 5.8 | 1.5 |

| NO | BULK DENSITY (G/CC) | | | | MOISTURE (PCT) | | | | AVAILABLE WATER | | | PORE SPACE | | |
|----|----------------------|-----------------------|-----------------------------|--------------------------------|----------------|-----------------------|---------------------------|-------------------------------|------------------------------------|------------------|---|------------------|---|-------------------------|
| | ENTIRE CLOD | 1/3 ATM TOTAL SOIL | MOISTURE <2MM IN CLOD | OVEN DRY <2MM IN CLOD | ENTIRE CLOD | 1/3 ATM TOTAL SOIL | 15 ATM <2MM IN CLOD | RETAINED AT <2MM SIEVED | < 2 MM MATERIAL WEIGHT (PCT) | CM/CM OF SOIL | TOTAL SOIL < 2 MM + FRAGMENTS WEIGHT (PCT) | CM/CM OF SOIL | FINE TOTAL <2MM EARTH SOIL (PCT) | TOTAL FE+RF (PCT) |
| 1 | | | | | | | | 9.9 | | | | | | |
| 2 | 1.21 | 1.21 | 1.21 | 1.24 | 0.046 | 11.4 | 11.5 | 10.8 | 0.7 | 0.008 | 0.7 | 0.008 | 53 | 53 |
| 3 | 1.27 | 1.27 | 1.27 | 1.33 | 0.015 | 22.8 | 23.0 | 12.2 | 10.8 | 0.137 | 10.8 | 0.137 | 51 | 51 |
| 4 | 1.36 | 1.36 | 1.35 | 1.40 | 0.013 | 21.3 | 22.0 | 12.2 | 9.8 | 0.132 | 9.7 | 0.131 | 48 | 48 |
| 5 | 1.48 | 1.36 | 1.36 | 1.41 | 0.010 | 19.1 | 16.1 | 10.7 | 5.4 | 0.073 | 5.3 | 0.073 | 48 | 47 |
| 6 | 1.54 | 1.53 | 1.53 | 1.51 | 0.005 | 12.6 | 13.0 | 6.4 | 6.6 | 0.101 | 6.6 | 0.101 | 41 | 41 |
| 7 | 1.75 | 1.78 | 1.75 | 1.77 | 0.027 | 12.3 | 12.5 | 3.4 | 9.1 | 0.159 | 8.4 | 0.150 | 33 | 31 |
| 8 | | | | | | | | 6.0 | | | | | | |
| 9 | | | | | | | | 4.1 | | | | | | |
| 10 | | | | | | | | 4.1 | | | | | | |
| 11 | | | | | | | | 4.5 | | | | | | |

Table 5. Chemical and mineralogical data for pedon 014-099

Pennsylvania State University
Soil Characterization Laboratory

S1976-PA-014-099 (1-11) Linden Very Fine Sandy Loam

PAGE 4 OF 4

CLASSIFICATION: Fluventic Dystrochrept; Coarse-loamy, mixed, mesic

DATE PRINTED: 03/27/2000

| NO | DEPTH (cm) | HORI- ZON | CLAY MINERALS (PCT OF < 0.002 MM MATERIAL) | | | | | | | QUARTZ |
|----|---------------|--------------|--|-----|------|------|-----|-----|---|--------|
| | | | KAOL | ILL | VERM | MONT | CHL | INT | | |
| 1 | 0-10 | Ap1 | 30 | 25 | 25 | 0 | 5 | 15 | 0 | |
| 2 | 10-20 | Ap2 | 30 | 25 | 25 | 0 | 5 | 15 | 0 | |
| 3 | 20-41 | Bw1 | 30 | 25 | 30 | 0 | 0 | 15 | 0 | |
| 4 | 41-56 | Bw2 | 35 | 30 | 25 | 0 | 0 | 10 | 0 | |
| 5 | 56-74 | BC | 40 | 30 | 15 | 0 | 0 | 15 | 0 | |
| 6 | 74-114 | C1 | 40 | 40 | 15 | 0 | 0 | 5 | 0 | |
| 7 | 114-140 | C2 | 35 | 50 | 10 | 0 | 0 | 5 | 0 | |
| 8 | 140-150 | C3 | 35 | 50 | 10 | 0 | 0 | 5 | 0 | |
| 9 | 150-160 | C4 | 35 | 45 | 5 | 0 | 0 | 10 | 5 | |
| 10 | 160-190 | C5 | 35 | 50 | 5 | 0 | 0 | 5 | 5 | |
| 11 | 190-282 | C6 | 40 | 50 | 0 | 0 | 0 | 5 | 5 | |

| NO | EXTRACTABLE CATIONS (MILLIEQUIVALENTS PER 100 GRAMS OF < 2.0 MM MATERIAL) | | | | | | | | | | BASE SAT | HNO3 EXTRACT- ABLE K (LB/ACRE) |
|----|--|-----|------|------|----------------|---------|--------------|--------------|-----------|--------------|----------|---|
| | CA | MG | NA | K | TOTAL BASES | ACIDITY | CEC (SUM) | CEC (NH4) | KCL AL | SUM (PCT) | | |
| 1 | 0.0 | 0.3 | 0.07 | 0.12 | 0.5 | 28.3 | 28.8 | 4.2 | 1.7 | | | |
| 2 | 0.0 | 0.2 | 0.08 | 0.08 | 0.4 | 26.0 | 26.4 | 4.2 | 1.5 | | | |
| 3 | 0.5 | 1.3 | 0.06 | 0.08 | 1.9 | 23.1 | 25.0 | 3.8 | 7.6 | | 0.4 | |
| 4 | 0.0 | 0.3 | 0.06 | 0.06 | 0.4 | 24.7 | 25.1 | 4.2 | 1.6 | | | |
| 5 | 0.0 | 0.2 | 0.06 | 0.05 | 0.3 | 20.8 | 21.1 | 3.1 | 1.4 | | | |
| 6 | 0.0 | 0.4 | 0.08 | 0.06 | 0.5 | 11.8 | 12.3 | 1.8 | 4.1 | | | |
| 7 | 0.0 | 0.6 | 0.06 | 0.04 | 0.7 | 11.0 | 11.7 | 1.4 | 6.0 | | | |
| 8 | 0.1 | 0.8 | 0.06 | 0.03 | 1.0 | 7.2 | 8.2 | 0.5 | 12.2 | | 0.1 | |
| 9 | 0.0 | 0.4 | 0.06 | 0.06 | 0.5 | 13.3 | 13.8 | 0.5 | 3.6 | | | |
| 10 | 0.1 | 0.6 | 0.06 | 0.04 | 0.8 | 7.5 | 8.3 | 0.5 | 9.6 | | 0.2 | |
| 11 | 0.3 | 0.8 | 0.06 | 0.05 | 1.2 | 6.9 | 8.1 | 0.1 | 14.8 | | 0.4 | |

| NO | pH (1:1 SOIL:SOLUTION) | | | | CACO3 EQUIV- ALENT (PCT) | ORGANIC MATTER | | | IRON OXIDES FE2O3 (PCT) | CBD EXTRACTABLE | | TOTAL SULFUR S (PCT) |
|----|------------------------|-------|------------|--------------|-----------------------------------|----------------|-------------|------------|----------------------------------|-----------------|--------------|-------------------------------|
| | WATER LAB | FIELD | 1 N LAB | KCL FIELD | | 0.01 M LAB | CA FIELD | C (PCT) | | N (PCT) | C/N (PCT) | |
| 1 | 4.4 | | 3.7 | | 4.0 | | 3.60 | | 6.2 | | | |
| 2 | 4.5 | | 3.8 | | 4.2 | | 3.00 | | 5.2 | | | |
| 3 | 4.7 | | 3.8 | | 4.3 | | 0.90 | | 6.5 | | | |
| 4 | 4.7 | | 3.7 | | 4.2 | | 0.67 | | 7.5 | | | |
| 5 | 4.8 | | 3.7 | | 4.3 | | 0.53 | | 6.7 | | | |
| 6 | 5.0 | | 3.9 | | 4.4 | | 0.65 | | 5.6 | | | |
| 7 | 5.0 | | 4.0 | | 4.5 | | 0.70 | | 4.2 | | | |
| 8 | 5.1 | | 4.2 | | 4.6 | | 0.21 | | 3.5 | | | |
| 9 | 5.1 | | 4.2 | | 4.7 | | 0.23 | | 4.4 | | | |
| 10 | 5.3 | | 4.4 | | 4.9 | | 0.16 | | 4.6 | | | |
| 11 | 5.2 | | 4.6 | | 5.1 | | 0.18 | | 4.4 | | | |

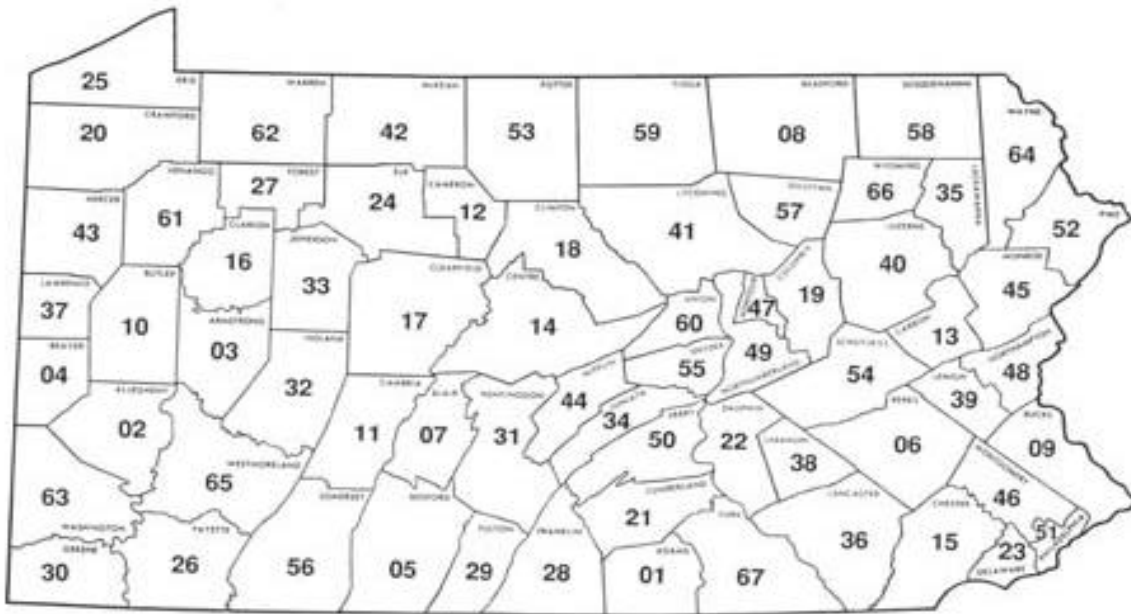


Figure 1. Location map of Pennsylvania counties and their county numbers.

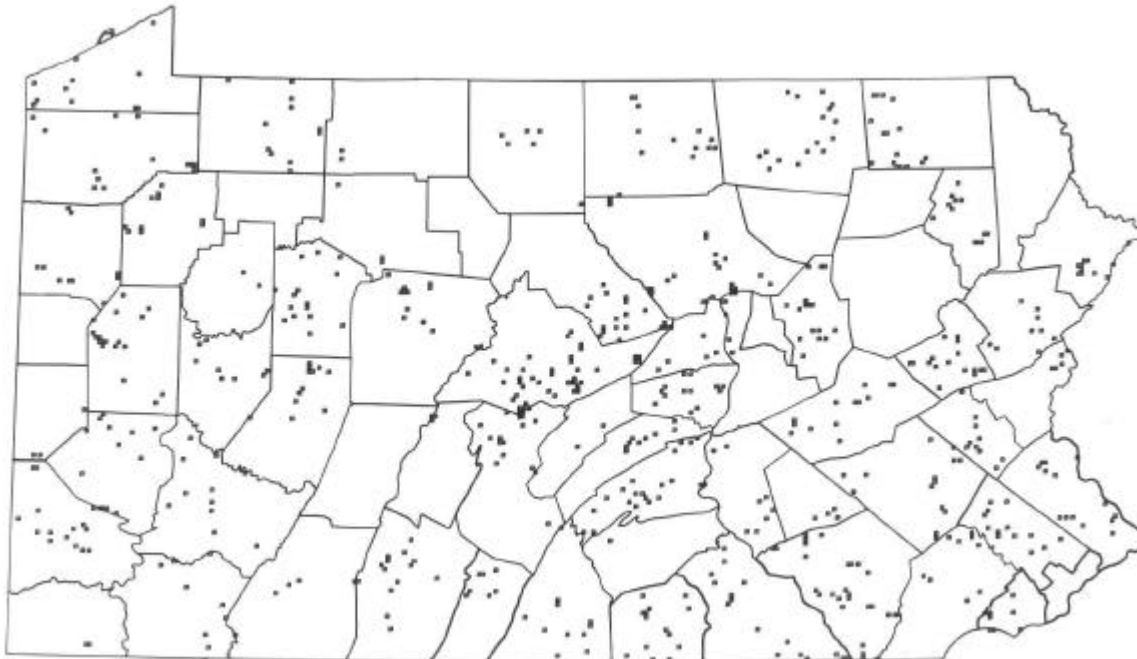


Figure 2. Location map of Pennsylvania soil characterization sites.

Table 6. Listing of Pennsylvania counties and their identification number.

| <u>Number</u> | <u>County</u> | <u>Number</u> | <u>County</u> | <u>Number</u> | <u>County</u> |
|---------------|---------------|---------------|---------------|---------------|----------------|
| 01 | Adams | 24 | Elk | 47 | Montour |
| 02 | Allegheny | 25 | Erie | 48 | Northampton |
| 03 | Armstrong | 26 | Fayette | 49 | Northumberland |
| 04 | Beaver | 27 | Forest | 50 | Perry |
| 05 | Bedford | 28 | Franklin | 51 | Philadelphia |
| 06 | Berks | 29 | Fulton | 52 | Pike |
| 07 | Blair | 30 | Greene | 53 | Potter |
| 08 | Bradford | 31 | Huntingdon | 54 | Schuylkill |
| 09 | Bucks | 32 | Indiana | 55 | Snyder |
| 10 | Butler | 33 | Jefferson | 56 | Somerset |
| 11 | Cambria | 34 | Juniata | 57 | Sullivan |
| 12 | Cameron | 35 | Lackawanna | 58 | Susquehanna |
| 13 | Carbon | 36 | Lancaster | 59 | Tioga |
| 14 | Centre | 37 | Lawrence | 60 | Union |
| 15 | Chester | 38 | Lebanon | 61 | Venango |
| 16 | Clarion | 39 | Lehigh | 62 | Warren |
| 17 | Clearfield | 40 | Luzerne | 63 | Washington |
| 18 | Clinton | 41 | Lycoming | 64 | Wayne |
| 19 | Columbia | 42 | McKean | 65 | Westmoreland |
| 20 | Crawford | 43 | Mercer | 66 | Wyoming |
| 21 | Cumberland | 44 | Mifflin | 67 | York |
| 22 | Dauphin | 45 | Monroe | | |
| 23 | Delaware | 46 | Montgomery | | |

Table 7. Listing of soil series by number within each Pennsylvania county.

| <u>County and Site Number</u> | <u>Soil Series</u> | <u>Year Sampled</u> | <u>County and Site Number</u> | <u>Soil Series</u> | <u>Year Sampled</u> | <u>County and Site Number</u> | <u>Soil Series</u> | <u>Year Sampled</u> |
|-------------------------------|--------------------|---------------------|-------------------------------|--------------------|---------------------|-------------------------------|--------------------|---------------------|
| <u>Adams</u> | | | <u>Allegheny</u> | | | <u>Armstrong</u> | | |
| 0108 | Arendtsville | 1961 | 0201 | Weikert | 1965 | 0301 | Pope | 1968 |
| 0109 | Arendtsville | 1961 | 0202 | Rayne | 1965 | 0302 | Steff | 1968 |
| 0110 | Reaville | 1961 | 0203 | Rayne | 1965 | 0303 | Melvin | 1968 |
| 0111 | Highfield | 1961 | 0204 | Weikert | 1965 | 0304 | Melvin | 1968 |
| 0112 | Highfield | 1961 | 0205 | Library | 1965 | 0305 | Steff | 1968 |
| 0113 | Reaville | 1961 | 0206 | Guernsey | 1965 | 0306 | Pope | 1968 |
| 0114 | Brecknock | 1961 | 0207 | Dormont | 1965 | 0307 | Tilsit | 1968 |
| 0115 | Brecknock | 1961 | 0208 | Gilpin | 1965 | 0308 | Vandergrift | 1968 |
| 0116 | Mount Lucas | 1961 | 0209 | Westmoreland | 1965 | 0309 | Vandergrift | 1968 |
| 0117 | Mount Lucas | 1961 | 0210 | Library | 1965 | 0310 | Rainsboro | 1968 |
| 0120 | Steinsburg | 1980 | 0220 | Upshur | 1972 | 0311 | Rainsboro | 1968 |
| 0121 | Lamington | 1980 | 0221 | Vandergrift | 1972 | 0315 | Minesoil | 1974 |
| 0122 | Readington | 1980 | 0223 | Upshur | 1972 | 0316 | Minesoil | 1974 |
| 0123 | Lamington | 1980 | | | | 0317 | Minesoil | 1974 |
| | | | | | | 0318 | Minesoil | 1974 |

Table 7 (Cont'd.). Listing of soil series by number within each Pennsylvania county.

| County and Site Number | Soil Series | Year Sampled | County and Site Number | Soil Series | Year Sampled | County and Site Number | Soil Series | Year Sampled |
|------------------------|-------------|--------------|------------------------|---------------|--------------|------------------------|-------------|--------------|
| <u>Beaver</u> | | | <u>Bradford</u> | | | <u>Butler</u> | | |
| 0401 | Vandergrift | 1972 | 0811 | Bath | 1968 | 1039 | Cavode | 1973 |
| 0402 | Vandergrift | 1972 | 0812 | Bath | 1968 | 1040 | Upshur | 1973 |
| | | | 0813 | Erie | 1968 | 1041 | Minesoil | 1974 |
| <u>Bedford</u> | | | 0814 | Volusia | 1968 | 1042 | Minesoil | 1974 |
| | | | 0815 | Chippewa | 1968 | 1044 | Minesoil | 1974 |
| 0501 | Elliber | 1969 | 0816 | Chippewa | 1968 | 1045 | Minesoil | 1974 |
| 0502 | Elliber | 1969 | 0899 | Bath | 1989 | | | |
| 0503 | Frankstown | 1969 | | | | <u>Cambria</u> | | |
| 0504 | Frankstown | 1969 | <u>Bucks</u> | | | | | |
| 0505 | Birdsboro | 1969 | | | | 1101 | Blandburg | 1971 |
| 0506 | Birdsboro | 1969 | 0901 | Pope | 1968 | 1102 | Blandburg | 1971 |
| 0507 | Edom | 1969 | 0902 | Pope | 1968 | 1103 | Blandburg | 1971 |
| 0508 | Edom | 1969 | 0903 | Lawrenceville | 1968 | | | |
| 0509 | Pope | 1969 | 0904 | Duncannon | 1968 | <u>Carbon</u> | | |
| 0510 | Pope | 1969 | 0905 | Duncannon | 1968 | | | |
| 0530 | Laidig | 1980 | 0906 | Chalfont | 1968 | 1301 | Hartleton | 1957 |
| 0531 | Brumbaugh | 1980 | 0907 | Chalfont | 1968 | 1302 | Allenwood | 1957 |
| 0532 | Laidig | 1980 | 0908 | Doylestown | 1968 | 1303 | Weikert | 1957 |
| 0533 | Brumbaugh | 1980 | 0909 | Bedington | 1968 | 1304 | Klinesville | 1957 |
| | | | 0910 | Lawrenceville | 1968 | 1305 | Weikert | 1957 |
| <u>Berks</u> | | | 0911 | Doylestown | 1968 | 1306 | Klinesville | 1957 |
| | | | 0912 | Watchung | 1968 | 1307 | Allenwood | 1957 |
| 0601 | Bedington | 1962 | 0913 | Watchung | 1968 | 1308 | Hartleton | 1957 |
| 0602 | Bedington | 1962 | 0914 | Bedington | 1968 | 1309 | Hazleton | 1957 |
| 0603 | Athol | 1962 | 0951 | Neshaminy | 1971 | 1310 | Leck Kill | 1957 |
| 0604 | Athol | 1962 | 0952 | Brecknock | 1971 | 1311 | Watson | 1957 |
| 0605 | Edgemont | 1962 | 0953 | Penn | 1971 | 1312 | Leck Kill | 1957 |
| 0606 | Edgemont | 1962 | | | | 1313 | Watson | 1957 |
| 0607 | Lewisberry | 1962 | <u>Butler</u> | | | 1314 | Buchanan | 1957 |
| 0608 | Lewisberry | 1962 | | | | 1315 | Cookport | 1957 |
| 0609 | Ryder | 1962 | 1001 | Gresham | 1969 | 1316 | Hazleton | 1957 |
| 0610 | Ryder | 1962 | 1002 | Gresham | 1969 | 1321 | Hazleton | 1957 |
| 0611 | Glenelg | 1988 | 1003 | Alton | 1969 | 1322 | Dekalb | 1957 |
| 0612 | Bedington | 1988 | 1004 | Alton | 1969 | 1361 | Allenwood | 1971 |
| | | | 1005 | Braceville | 1969 | | | |
| <u>Bradford</u> | | | 1006 | Sciotoville | 1969 | | | |
| | | | 1007 | Hazleton | 1969 | | | |
| 0801 | Arnot | 1968 | 1008 | Hazleton | 1969 | | | |
| 0802 | Arnot | 1968 | 1009 | Tilsit | 1969 | | | |
| 0803 | Chippewa | 1968 | 1010 | Tilsit | 1969 | | | |
| 0805 | Mardin | 1968 | 1011 | Canadice | 1969 | | | |
| 0806 | Mardin | 1968 | 1012 | Canadice | 1969 | | | |
| 0807 | Williamson | 1968 | 1013 | Caneadea | 1969 | | | |
| 0808 | Williamson | 1968 | 1014 | Caneadea | 1969 | | | |
| 0809 | Mardin | 1968 | 1037 | Cavode | 1973 | | | |
| 0810 | Langford | 1968 | 1038 | Cavode | 1973 | | | |

Table 7 (Cont'd.). Listing of soil series by number within each Pennsylvania county.

| County and Site Number | Soil Series | Year Sampled | County and Site Number | Soil Series | Year Sampled | County and Site Number | Soil Series | Year Sampled |
|------------------------|-------------|--------------|------------------------|-------------|--------------|------------------------|---------------|--------------|
| <u>Centre</u> | | | <u>Centre</u> | | | <u>Clearfield</u> | | |
| 401 | Edom | 1961 | 1470 | Hagerstown | 1983 | 1717 | Wharton | 1973 |
| 402 | Clarksburg | 1961 | 1471 | Hagerstown | 1983 | 1718 | Nolo | 1973 |
| 403 | Millheim | 1963 | 1472 | Hagerstown | 1983 | 1719 | Nolo | 1973 |
| 404 | Millheim | 1963 | 1473 | Hagerstown | 1983 | 1720 | Minesoil | 1973 |
| 405 | Hagerstown | 1963 | 1474 | Duffield | 1983 | 1721 | Minesoil | 1973 |
| 406 | Hublersburg | 1963 | 1475 | Hagerstown | 1983 | 1722 | Minesoil | 1973 |
| 407 | Hagerstown | 1963 | 1480 | Hagerstown | 1987 | 1723 | Minesoil | 1973 |
| 408 | Dunning | 1963 | 1481 | Clarksburg | 1987 | 1724 | Minesoil | 1973 |
| 409 | Dunning | 1963 | 1482 | Cookport | 1987 | 1725 | Minesoil | 1974 |
| 410 | Morrison | 1963 | 1483 | Clymer | 1987 | | | |
| 411 | Gatesburg | 1963 | 1484 | Pope | 1988 | <u>Clinton</u> | | |
| 412 | Hublersburg | 1964 | 1485 | Leetonia | 1978 | | | |
| 413 | Morrison | 1964 | 1486 | Gatesburg | 1978 | 1801 | Linden | 1958 |
| 414 | Hagerstown | 1964 | 1487 | Gatesburg | 1978 | 1802 | Linden | 1958 |
| 415 | Berks | 1964 | 1488 | Murrill | 1989 | 1803 | Clarksburg | 1958 |
| 416 | Berks | 1964 | 1497 | Nolin | 1974 | 1804 | Hazleton | 1958 |
| 417 | Clarksburg | 1964 | 1498 | Philo | 1974 | 1805 | Hazleton | 1958 |
| 418 | Morrison | 1964 | 1499 | Linden | 1976 | 1806 | Hazleton | 1958 1807 |
| 419 | Morrison | 1964 | | | | | Hazleton | 1958 |
| 420 | Opequon | 1964 | <u>Chester</u> | | | 1808 | Clarksburg | 1958 |
| 421 | Calvin | 1964 | | | | 1809 | Hagerstown | 1958 |
| 422 | Leck Kill | 1964 | 1501 | Glenville | 1956 | 1810 | Hagerstown | 1958 |
| 429 | Murrill | 1971 | 1502 | Glenelg | 1956 | 1811 | Buchanan | 1958 |
| 430 | Murrill | 1971 | 1503 | Manor | 1956 | 1812 | Andover | 1958 |
| 431 | Laidig | 1971 | 1504 | Hollinger | 1956 | 1813 | Andover | 1958 |
| 442 | Murrill | 1972 | 1505 | Glenville | 1956 | 1814 | Meckesville | 1958 |
| 443 | Duffield | 1972 | 1506 | Penn | 1956 | 1815 | Buchanan | 1958 |
| 444 | Albrights | 1970 | 1507 | Penn | 1956 | 1816 | Meckesville | 1958 |
| 445 | Murrill | 1977 | 1508 | Penn | 1956 | 1817 | Laidig | 1959 |
| 446 | Hagerstown | 1977 | 1509 | Neshaminy | 1956 | 1818 | Laidig | 1959 |
| 447 | Opequon | 1977 | 1510 | Neshaminy | 1956 | 1819 | Murrill | 1959 |
| 454 | Leetonia | 1981 | 1511 | Brecknock | 1956 | 1820 | Clarksburg | 1959 |
| 455 | Leetonia | 1981 | 1512 | Brecknock | 1956 | | | |
| 456 | Leetonia | 1981 | 1513 | Glenville | 1956 | <u>Columbia</u> | | |
| 457 | Leetonia | 1981 | | | | 1901 | Comly | 1959 |
| 458 | Leetonia | 1981 | <u>Clarion</u> | | | 1902 | Shelmadine | 1959 |
| 459 | Leetonia | 1981 | | | | 1903 | Watson | 1959 |
| 460 | Leetonia | 1981 | 1601 | Minesoil | 1974 | 1904 | Hartleton | 1959 |
| 461 | Leetonia | 1981 | 1602 | Minesoil | 1974 | 1905 | Alvira | 1959 |
| 462 | Leetonia | 1981 | <u>Clearfield</u> | | | 1906 | Shelmadine | 1959 |
| 463 | Laidig | 1981 | | | | 1907 | Watson | 1959 |
| 464 | Andover | 1981 | | | | 1908 | Lackawanna | 1959 |
| 465 | Buchanan | 1981 | 1712 | Hazleton | 1973 | 1909 | Lackawanna | 1959 |
| 466 | Hagerstown | 1983 | 1713 | Hazleton | 1973 | 1910 | Alvira | 1959 |
| 467 | Hagerstown | 1983 | 1714 | Ernest | 1973 | 1911 | Lawrenceville | 1959 |
| 468 | Hagerstown | 1983 | 1715 | Cookport | 1973 | 1912 | Lawrenceville | 1959 |
| 469 | Hagerstown | 1983 | 1716 | Wharton | 1973 | | | |

Table 7 (Cont'd.). Listing of soil series by number within each Pennsylvania county.

| County and Site Number | Soil Series | Year Sampled | County and Site Number | Soil Series | Year Sampled | County and Site Number | Soil Series | Year Sampled |
|------------------------|-------------|--------------|------------------------|-------------|--------------|------------------------|-------------|--------------|
| | | | <u>Delaware</u> | | | <u>Franklin</u> | | |
| <u>Columbia</u> | | | 2301 | Sassafras | 1959 | 2803 | Edom | 1965 |
| 1913 | Leck Kill | 1959 | 2302 | Chester | 1959 | 2804 | Edom | 1965 |
| 1914 | Hartleton | 1959 | 2303 | Chester | 1959 | 2805 | Berks | 1965 |
| 1915 | Oquaqa | 1959 | 2304 | Chrome | 1959 | 2806 | Blairton | 1965 |
| 1916 | Chenango | 1959 | 2305 | Chrome | 1959 | 2807 | Berks | 1965 |
| 1917 | Chenango | 1959 | 2312 | Sassafras | 1959 | 2808 | Blairton | 1965 |
| 1918 | Watson | 1960 | | | | 2809 | Lindside | 1965 |
| 1919 | Wellsboro | 1960 | <u>Elk</u> | | | 2810 | Lindside | 1965 |
| 1920 | Wellsboro | 1960 | 2407 | Minesoil | 1974 | 2811 | Duffield | 1965 |
| | | | 2408 | Minesoil | 1974 | 2812 | Duffield | 1965 |
| <u>Crawford</u> | | | 2409 | Ernest | 1982 | <u>Fulton</u> | | |
| 2001 | Lobdell | 1965 | <u>Erie</u> | | | 2909 | Klinesville | 1962 |
| 2002 | Lobdell | 1965 | | | | 2910 | Albrights | 1962 |
| 2003 | Wooster | 1965 | 2501 | Conotton | 1959 | 2911 | Leck Kill | 1962 |
| 2004 | Gresham | 1965 | 2502 | Marden | 1956 | 2912 | Albrights | 1962 |
| 2005 | Titusville | 1965 | 2503 | Langford | 1956 | 2913 | Halzeton | 1962 |
| 2006 | Titusville | 1965 | 2504 | Volusia | 1956 | 2914 | Calvin | 1962 |
| 2007 | Gresham | 1965 | 2505 | Langford | 1956 | 2915 | Klinesville | 1962 |
| 2008 | Howard | 1965 | 2506 | Cambridge | 1956 | 2916 | Hazleton | 1962 |
| 2009 | Wooster | 1965 | 2507 | Pierpoint | 1956 | 2917 | Berks | 1962 |
| 2010 | Sheffield | 1965 | 2508 | Pierpoint | 1956 | 2918 | Berks | 1962 |
| 2011 | Sheffield | 1965 | 2509 | Plateau | 1956 | <u>Greene</u> | | |
| 2012 | Howard | 1965 | 2510 | Minoa | 1956 | | | |
| 2013 | Huntingdon | 1982 | 2511 | Minoa | 1956 | 3002 | Dormont | 1981 |
| 2017 | Huntingdon | 1982 | 2512 | Platea | 1956 | 3004 | Culleoka | 1981 |
| 2019 | Huntingdon | 1982 | 2513 | Platea | 1956 | 3005 | Culleoka | 1981 |
| <u>Cumberland</u> | | | <u>Fayette</u> | | | 3006 | Dormont | 1981 |
| 2101 | Blairton | 1972 | 2601 | Tyler | 1964 | <u>Huntingdon</u> | | |
| 2102 | Blairton | 1972 | 2602 | Purdy | 1964 | 3101 | Vanderlip | 1967 |
| | | | 2603 | Chavies | 1964 | 3102 | Vanderlip | 1967 |
| <u>Dauphin</u> | | | 2604 | Tyler | 1964 | 3103 | Edom | 1967 |
| 2201 | Tioga | 1964 | 2605 | Purdy | 1964 | 3104 | Edom | 1967 |
| 2202 | Tioga | 1964 | 2606 | Wharton | 1964 | 3105 | Edom | 1967 |
| 2203 | Calvin | 1964 | 2607 | Wharton | 1964 | 3106 | Opequon | 1967 |
| 2204 | Leck Kill | 1964 | 2608 | Hazleton | 1964 | 3108 | Edom | 1967 |
| 2205 | Bedington | 1964 | 2609 | Chavies | 1964 | 3109 | Opequon | 1967 |
| 2206 | Hagerstown | 1964 | 2610 | Hazleton | 1964 | 3110 | Morrison | 1967 |
| 2207 | Hagerstown | 1964 | 2611 | Purdy | 1964 | 3111 | Morrison | 1967 |
| 2208 | Bedington | 1964 | <u>Franklin</u> | | | 3112 | Hublersburg | 1967 |
| 2209 | Comly | 1964 | | | | 3113 | Hublersburg | 1967 |
| 2210 | Comly | 1964 | 2801 | Warners | 1965 | 3127 | Laidig | 1971 |
| | | | 2802 | Warners | 1965 | 3128 | Murrill | 1971 |

Table 7 (Cont'd.). Listing of soil series by number within each Pennsylvania county.

| County and Site Number | Soil Series | Year Sampled | County and Site Number | Soil Series | Year Sampled | County and Site Number | Soil Series | Year Sampled |
|------------------------|-------------|--------------|------------------------|---------------|--------------|------------------------|-------------|--------------|
| <u>Lehigh</u> | | | <u>McKean</u> | | | <u>Montgomery</u> | | |
| 3914 | Chester | 1959 | 4211 | Brinkerton | 1979 | 4612 | Readington | 1960 |
| 3941 | Buchanan | 1971 | 4212 | Nolo | 1979 | 4613 | Neshaminy | 1960 |
| 3942 | Laidig | 1971 | | | | 4614 | Penn | 1961 |
| | | | <u>Mercer</u> | | | 4615 | Penn | 1961 |
| <u>Lycoming</u> | | | 4301 | Chenango | 1963 | 4616 | Reaville | 1961 |
| 4101 | Laidig | 1954 | 4302 | Canfield | 1963 | 4617 | Neshaminy | 1961 |
| 4102 | Allenwood | 1954 | 4303 | Canfield | 1963 | <u>Northampton</u> | | |
| 4113 | Linden | 1974 | 4304 | Frenchtown | 1963 | 4808 | Wurtsboro | 1967 |
| 4114 | Linden | 1974 | 4305 | Frenchtown | 1963 | 4809 | Wurtsboro | 1967 |
| 4115 | Linden | 1974 | 4306 | Ravenna | 1963 | 4817 | Chippewa | 1967 |
| 4116 | Linden | 1974 | 4307 | Conotton | 1963 | 4818 | Chippewa | 1967 |
| 4117 | Wheeling | 1974 | 4308 | Ravenna | 1963 | 4826 | Volusia | 1967 |
| 4118 | Duncannon | 1974 | 4309 | Frenchtown | 1963 | 4827 | Ravenna | 1967 |
| 4119 | Duncannon | 1974 | 4310 | Frenchtown | 1963 | 4832 | Swartswood | 1967 |
| 4120 | Duncannon | 1974 | | | | 4833 | Swartswood | 1967 |
| 4121 | Duncannon | 1974 | <u>Mifflin</u> | | | 4835 | Ellery | 1967 |
| 4122 | Duncannon | 1974 | 4401 | Elliber | 1970 | 4836 | Chippewa | 1967 |
| 4123 | Duncannon | 1974 | 4402 | Kreamer | 1970 | <u>Northumberland</u> | | |
| 4124 | Allenwood | 1974 | | | | 4907 | Linden | 1974 |
| 4139 | Leck Kill | 1975 | <u>Monroe</u> | | | 4908 | Wheeling | 1974 |
| 4140 | Leck Kill | 1975 | 4509 | Canfield | 1965 | 4909 | Wheeling | 1974 |
| 4141 | Washington | 1977 | 4510 | Canfield | 1965 | 4910 | Allenwood | 1974 |
| 4142 | Allenwood | 1977 | 4511 | Meckesville | 1965 | 4912 | Lakin | 1974 |
| 4144 | Tunkhannock | 1978 | 4512 | Meckesville | 1965 | 4913 | Lakin | 1974 |
| 4145 | Tunkhannock | 1978 | 4513 | Oquaga | 1965 | <u>Perry</u> | | |
| 4146 | Lackawanna | 1978 | 4514 | Oquaga | 1965 | 5001 | Evendale | 1970 |
| 4147 | Lackawanna | 1978 | 4515 | Lackawanna | 1965 | 5002 | Kreamer | 1970 |
| 4148 | Shelmadine | 1978 | 4516 | Lackawanna | 1965 | 5003 | Edom | 1970 |
| 4149 | Shelmadine | 1978 | 4579 | Bath | 1971 | 5005 | Edom | 1970 |
| 4150 | Alvira | 1979 | 4580 | Lackawanna | 1971 | 5006 | Elliber | 1970 |
| 4151 | Alvira | 1979 | 4581 | Morris | 1971 | 5007 | Elliber | 1970 |
| 4152 | Clymer | 1982 | <u>Montgomery</u> | | | 5008 | Elliber | 1970 |
| 4153 | Cookport | 1982 | 4601 | Lansdale | 1960 | 5009 | Elliber | 1970 |
| 4154 | Nolo | 1982 | 4602 | Lawrenceville | 1960 | 5010 | Mertz | 1970 |
| 4155 | Sweden | 1983 | 4603 | Lawrenceville | 1960 | 5011 | Mertz | 1970 |
| 4156 | Sweden | 1983 | 4604 | Lansdale | 1960 | 5012 | Mertz | 1970 |
| <u>McKean</u> | | | 4605 | Abbottstown | 1960 | 5013 | Kreamer | 1970 |
| 4204 | Cookport | 1982 | 4606 | Readington | 1960 | 5014 | Kreamer | 1970 |
| 4205 | Ernest | 1982 | 4607 | Croton | 1960 | 5015 | Kreamer | 1970 |
| 4206 | Cookport | 1979 | 4608 | Croton | 1960 | 5016 | Leetonia | 1977 |
| 4207 | Hazleton | 1979 | 4609 | Abbottstown | 1960 | 5017 | Leetonia | 1977 |
| 4208 | Clymer | 1979 | 4611 | Reaville | 1960 | | | |
| 4209 | Ernest | 1979 | | | | | | |
| 4210 | Ernest | 1979 | | | | | | |

Table 7 (Cont'd.). Listing of soil series by number within each Pennsylvania county.

| County and Site Number | Soil Series | Year Sampled | County and Site Number | Soil Series | Year Sampled | County and Site Number | Soil Series | Year Sampled |
|------------------------|-------------|--------------|------------------------|-------------|--------------|------------------------|-------------|--------------|
| <u>Perry</u> | | | <u>Snyder</u> | | | <u>Tioga</u> | | |
| 5018 | Raritan | 1979 | 5501 | Elliber | 1969 | 5904 | Allis | 1963 |
| 5019 | Raritan | 1979 | 5502 | Watson | 1969 | 5905 | Allis | 1963 |
| 5020 | Penlaw | 1979 | 5503 | Elliber | 1969 | 5906 | Alden | 1963 |
| 5021 | Penlaw | 1979 | 5504 | Evendale | 1969 | 5907 | Alden | 1963 |
| | | | 5505 | Kreamer | 1969 | 5908 | Erie | 1963 |
| | | | 5506 | Kreamer | 1969 | 5909 | Erie | 1963 |
| | | | 5507 | Allenwood | 1969 | 5910 | Oquaga | 1963 |
| | | | 5508 | Hagerstown | 1969 | 5911 | Oquaga | 1963 |
| 5201 | Swartswood | 1964 | 5509 | Evendale | 1969 | 5912 | Lordstown | 1963 |
| 5202 | Wurtsboro | 1964 | 5510 | Kreamer | 1969 | 5913 | Lordstown | 1963 |
| 5203 | Chenango | 1964 | 5511 | Mertz | 1969 | 5914 | Lordstown | 1963 |
| 5204 | Swartswood | 1964 | 5512 | Allenwood | 1969 | 5916 | Lordstown | 1963 |
| 5205 | Manlius | 1964 | 5513 | Evendale | 1969 | 5917 | Cookport | 1982 |
| 5206 | Manlius | 1964 | 5514 | Hagerstown | 1969 | 5918 | Nolo | 1982 |
| 5207 | Tioga | 1964 | | | | 5919 | Cookport | 1982 |
| 5208 | Tioga | 1964 | | | | 5920 | Nolo | 1982 |
| 5209 | Wurtsboro | 1964 | <u>Somerset</u> | | | 5921 | Dekalb | 1983 |
| 5210 | Chenango | 1964 | 5601 | Rayne | 1971 | 5922 | Cookport | 1983 |
| 5211 | Swartswood | 1964 | 5602 | Rayne | 1971 | 5923 | Cookport | 1983 |
| 5212 | Swartswood | 1964 | 5603 | Rayne | 1971 | 5927 | Sweden | 1983 |
| | | | 5604 | Leetonia | 1978 | 5928 | Sweden | 1983 |
| | | | 5605 | Hazleton | 1978 | | | |
| | | | 5606 | Hazleton | 1978 | <u>Union</u> | | |
| 5301 | Ernest | 1982 | <u>Susquehanna</u> | | | 6001 | Edom | 1975 |
| 5302 | Buchanan | 1982 | | | | 6002 | Edom | 1975 |
| 5303 | Sweden | 1982 | 5801 | Lackawanna | 1958 | 6008 | Allenwood | 1977 |
| 5304 | Sweden | 1983 | 5802 | Lackawanna | 1958 | 6009 | Allenwood | 1977 |
| 5305 | Sweden | 1983 | 5803 | Morris | 1958 | 6010 | Alvira | 1979 |
| 5307 | Hazleton | 1978 | 5804 | Wellsboro | 1958 | | | |
| 5308 | Hazleton | 1978 | 5805 | Wellsboro | 1958 | <u>Venango</u> | | |
| | | | 5806 | Basher | 1958 | 6101 | Cookport | 1966 |
| | | | 5807 | Holly | 1958 | 6102 | Cookport | 1966 |
| 5401 | Meckesville | 1966 | 5808 | Barbour | 1958 | 6103 | Gresham | 1966 |
| 5402 | Albrights | 1966 | 5809 | Papakating | 1958 | 6104 | Gresham | 1966 |
| 5403 | Leck Kill | 1966 | 5810 | Barbour | 1958 | 6105 | Philo | 1966 |
| 5404 | Leck Kill | 1966 | 5811 | Papakating | 1958 | 6106 | Pope | 1966 |
| 5405 | Clymer | 1966 | 5812 | Mardin | 1958 | 6107 | Canfield | 1966 |
| 5406 | Clymer | 1966 | 5813 | Volusia | 1958 | 6108 | Canfield | 1966 |
| 5407 | Meckesville | 1966 | 5814 | Volusia | 1958 | 6109 | Sciotoville | 1966 |
| 5408 | Meckesville | 1966 | 5815 | Mardin | 1958 | 6110 | Monongahela | 1966 |
| 5409 | Natalie | 1966 | 5816 | Holly | 1958 | | | |
| 5410 | Natalie | 1966 | 5817 | Morris | 1958 | | | |
| 5427 | Atkins | 1974 | 5818 | Basher | 1958 | | | |
| 5435 | Minesoil | 1975 | 5819 | Lackawanna | 1958 | | | |
| 5436 | Minesoil | 1975 | 5820 | Norwich | 1958 | | | |
| 5437 | Minesoil | 1975 | 5821 | Norwich | 1958 | | | |

Table 7 (Cont'd.). Listing of soil series by number within each Pennsylvania county.

| County and Site Number | Soil Series | Year Sampled | County and Site Number | Soil Series | Year Sampled | County and Site Number | Soil Series | Year Sampled |
|------------------------|--------------|--------------|------------------------|--------------|--------------|------------------------|-------------|--------------|
| <u>Warren</u> | | | <u>Westmoreland</u> | | | <u>York</u> | | |
| 6201 | Hazleton | 1967 | 6501 | Westmoreland | 1958 | 6701 | Penn | 1957 |
| 6202 | Hazleton | 1967 | 6502 | Westmoreland | 1958 | 6702 | Readington | 1957 |
| 6203 | Dekalb | 1967 | 6507 | Upshur | 1962 | 6703 | Croton | 1957 |
| 6204 | Cookport | 1967 | 6508 | Upshur | 1962 | 6704 | Readington | 1957 |
| 6205 | Dekalb | 1967 | 6509 | Monongahela | 1962 | 6705 | Cardiff | 1957 |
| 6206 | Cookport | 1967 | 6510 | Clarksburg | 1962 | 6706 | Cardiff | 1957 |
| 6207 | Philo | 1967 | 6511 | Dormont | 1962 | 6707 | Chester | 1957 |
| 6208 | Pope | 1967 | 6512 | Clarksburg | 1962 | 6708 | Chester | 1957 |
| 6209 | Pope | 1967 | 6513 | Guernsey | 1962 | 6709 | Penn | 1957 |
| 6210 | Wayland | 1967 | 6514 | Brooke | 1962 | 6710 | Croton | 1957 |
| 6211 | Wayland | 1967 | 6515 | Brooke | 1962 | 6711 | Lehigh | 1957 |
| 6212 | Wayland | 1967 | 6516 | Monongahela | 1962 | 6712 | Lehigh | 1957 |
| 6213 | Philo | 1967 | 6517 | Clarksburg | 1972 | 6713 | Manor | 1957 |
| 6214 | Atkins | 1968 | 6518 | Cavode | 1972 | 6714 | Manor | 1957 |
| | | | 6519 | Blairton | 1972 | 6715 | Lewisberry | 1957 |
| | | | 6520 | Wharton | 1972 | 6716 | Lewisberry | 1957 |
| | | | 6521 | Gilpin | 1972 | 6717 | Elioak | 1957 |
| | | | 6550 | Guernsey | 1976 | 6718 | Elioak | 1957 |
| <u>Washington</u> | | | | | | | | |
| 6303 | Rainsboro | 1966 | | | | | | |
| 6304 | Rainsboro | 1966 | | | | | | |
| 6305 | Guernsey | 1966 | | | | | | |
| 6306 | Guernsey | 1966 | | | | | | |
| 6307 | Lindsay | 1966 | | | | | | |
| 6308 | Lindsay | 1966 | | | | | | |
| 6309 | Melvin | 1966 | | | | | | |
| 6310 | Melvin | 1966 | | | | | | |
| 6311 | Culleoka | 1966 | | | | | | |
| 6312 | Culleoka | 1966 | | | | | | |
| 6343 | Westmoreland | 1972 | | | | | | |
| 6344 | Library | 1972 | | | | | | |
| 6345 | Library | 1972 | | | | | | |
| 6346 | Rayne | 1972 | | | | | | |
| 6348 | Minesoil | 1974 | | | | | | |
| 6349 | Minesoil | 1974 | | | | | | |
| 6350 | Minesoil | 1974 | | | | | | |

Table 8. Listing of partial data by soil series for characterized Pennsylvania pedons (See Thurman et al., 1994, for procedures). Blanks mean no analysis was done.

| Soil Series | County and Site Number | Year Sampled | Number of Percolation Holes | Calculated Hydraulic Conductivity | Bulk Density | Cole | Organic Carbon | | Kjeldahl Nitrogen | SUM | CEC | Clay Mineralogy | CBD Fe ₂ O ₃ | KCL | HNO ₃ |
|--------------|------------------------|--------------|-----------------------------|-----------------------------------|--------------|------|----------------|--------------------|-------------------|-----|-----|-----------------|------------------------------------|-----|------------------|
| | | | | | | | W-Walkley | Black C-Combustion | | | | | | | |
| Abbottstown | 4605 | 1960 | 6 | | Core | | W | | N | Sum | NH4 | X's | | | K |
| Abbottstown | 4609 | 1960 | 7 | | Core | | W | | N | Sum | NH4 | X's | | | K |
| Albrights | 1444 | 1970 | | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | K |
| Albrights | 2910 | 1962 | 8 | | Core | | W | | N | Sum | | X's | | | K |
| Albrights | 2912 | 1962 | 6 | | Core | | W | | N | Sum | | X's | | | K |
| Albrights | 5402 | 1966 | 8 | HC | Core | | W | | N | Sum | | Numbers | FE | AL | K |
| Alden | 5906 | 1963 | | HC | Core | | W | | N | Sum | | | | | K |
| Alden | 5907 | 1963 | | HC | Core | | W | | N | Sum | | | | | K |
| Allenwood | 1302 | 1957 | | | Core | | W | | N | Sum | NH4 | Numbers | FE | | K |
| Allenwood | 1307 | 1957 | | HC | Core | | W | | N | Sum | NH4 | Numbers | FE | | K |
| Allenwood | 1361 | 1971 | | | Clod | Cole | C | | N | Sum | | | | AL | K |
| Allenwood | 4102 | 1954 | | | Clod | | C | | N | Sum | | | | | K |
| Allenwood | 4124 | 1974 | | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | K |
| Allenwood | 4142 | 1977 | | | Clod | | C | | N | Sum | | Numbers | FE | AL | K |
| Allenwood | 4910 | 1974 | 7 | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | K |
| Allenwood | 5507 | 1969 | 8 | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | K |
| Allenwood | 5512 | 1969 | 8 | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | K |
| Allenwood | 6008 | 1977 | | | Clod | | C | | N | Sum | | Numbers | FE | AL | K |
| Allenwood | 6009 | 1977 | | | Core | | C | | N | Sum | | | | AL | K |
| Allis | 5904 | 1963 | | HC | Core | | W | | N | Sum | | | | | K |
| Allis | 5905 | 1963 | | HC | Core | | W | | N | Sum | | | | | K |
| Alton | 1003 | 1969 | 8 | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | K |
| Alton | 1004 | 1969 | 8 | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | K |
| Alvira | 1905 | 1959 | | | Core | | W | | N | Sum | NH4 | Numbers | | | K |
| Alvira | 1910 | 1959 | | | Core | | W | | N | Sum | NH4 | Numbers | | | K |
| Alvira | 4150 | 1979 | | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | K |
| Alvira | 4151 | 1979 | | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | K |
| Alvira | 6010 | 1979 | | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | K |
| Alvira | 6010 | 1979 | | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | K |
| Andover | 1464 | 1981 | | | Clod | Cole | W | | N | Sum | NH4 | X's | FE | | K |
| Andover | 1812 | 1958 | | | Core | | W | | N | Sum | NH4 | X's | FE | | K |
| Andover | 1813 | 1958 | | HC | Clod | Cole | C | | N | Sum | | | | AL | K |
| Andover | 3132 | 1977 | | | Clod | | C | | N | Sum | | | | AL | K |
| Andover | 3134 | 1977 | | | Clod | | C | | N | Sum | | | | AL | K |
| Andover | 3135 | 1981 | | HC | Clod | Cole | W | | N | Sum | | Numbers | FE | | K |
| Andover | 0108 | 1961 | 4 | HC | Core | | W | | N | Sum | | Numbers | | | K |
| Arendtsville | 0109 | 1961 | 4 | | Core | | W | | N | Sum | NH4 | X's | | | K |
| Armagh | 3312 | 1958 | | | Core | | W | | N | Sum | | | | | K |

Table 8 (Cont'd). Listing of partial data by soil series for characterized Pennsylvania pedons (see Thurman et al., 1994, for procedures). Blanks mean no analysis was done.

| Soil Series | County and Site Number | Year Sampled | Number of Percolation Holes | Calculated Hydraulic Conductivity | Bulk Density | Cole | Organic Carbon | | Kjeldahl Nitrogen | SUM | CEC | NH4 | Clay Mineralogy | CBD Fe ₂ O ₃ | KCL AL | HNO ₃ K |
|-------------|------------------------|--------------|-----------------------------|-----------------------------------|--------------|------|----------------|--------------------|-------------------|-----|-----|---------|-----------------|------------------------------------|--------|--------------------|
| | | | | | | | W-Walkley | Black C-Combustion | | | | | | | | |
| Armagh | 3316 | 1958 | | | | | | | | | | | | | | |
| Arnot | 0801 | 1968 | | HC | Clod | Cole | W | N | Sum | | NH4 | X's | FE | AL | K | |
| Arnot | 0802 | 1968 | | HC | Clod | Cole | C | N | Sum | | | Numbers | FE | AL | | |
| Athol | 0603 | 1962 | 6 | | Core | | W | N | Sum | | NH4 | Numbers | | AL | K | |
| Athol | 0604 | 1962 | 7 | | Core | | W | N | Sum | | NH4 | Numbers | | | K | |
| Atkins | 3204 | 1959 | | | Core | | W | N | Sum | | | Numbers | | | K | |
| Atkins | 5427 | 1974 | | | Core | | C | N | Sum | | | Numbers | FE | AL | | |
| Atkins | 6214 | 1968 | | HC | Clod | Cole | C | N | Sum | | NH4 | Numbers | FE | AL | | |
| Barbour | 5808 | 1958 | | | Core | | W | N | Sum | | NH4 | Numbers | | | K | |
| Barbour | 5810 | 1958 | | | Core | | W | N | Sum | | NH4 | Numbers | | | K | |
| Barbour | 5806 | 1958 | | | Core | | W | N | Sum | | NH4 | X's | | | K | |
| Basher | 5818 | 1958 | | | Core | | W | N | Sum | | NH4 | Numbers | | | K | |
| Basher | 0811 | 1968 | 6 | HC | Clod | Cole | C | N | Sum | | | Numbers | FE | AL | | |
| Bath | 0812 | 1968 | 7 | HC | Clod | Cole | C | N | Sum | | | Numbers | FE | AL | | |
| Bath | 0899 | 1989 | | HC | Clod | Cole | C | N | Sum | | | Numbers | FE | AL | | |
| Bath | 4579 | 1971 | | HC | Clod | Cole | C | N | Sum | | | Numbers | FE | AL | | |
| Bedington | 0601 | 1962 | 4 | | Core | | W | N | Sum | | NH4 | Numbers | | | K | |
| Bedington | 0602 | 1962 | 7 | | Core | | W | N | Sum | | NH4 | Numbers | | | K | |
| Bedington | 0612 | 1988 | | HC | Clod | Cole | C | N | Sum | | | Numbers | FE | AL | | |
| Bedington | 0909 | 1968 | 8 | HC | Clod | Cole | C | N | Sum | | | Numbers | FE | AL | | |
| Bedington | 0914 | 1968 | 8 | HC | Clod | Cole | C | N | Sum | | | Numbers | FE | AL | | |
| Bedington | 2205 | 1964 | 8 | HC | Core | | W | N | Sum | | | Numbers | FE | | K | |
| Bedington | 2208 | 1964 | 8 | HC | Core | | W | N | Sum | | NH4 | Numbers | FE | | K | |
| Bedington | 3903 | 1959 | | | Core | | W | N | Sum | | NH4 | X's | | | K | |
| Bedington | 3904 | 1959 | | | Core | | W | N | Sum | | NH4 | X's | | | K | |
| Berks | 1415 | 1964 | 8 | HC | Core | | W | N | Sum | | | Numbers | FE | | K | |
| Berks | 1416 | 1964 | 6 | HC | Core | | W | N | Sum | | | Numbers | FE | | K | |
| Berks | 2805 | 1965 | 7 | HC | Core | | W | N | Sum | | | Numbers | FE | | K | |
| Berks | 2807 | 1965 | 8 | HC | Core | | W | N | Sum | | | Numbers | FE | | K | |
| Berks | 2917 | 1962 | 7 | | Core | | W | N | Sum | | | X's | | | K | |
| Berks | 2918 | 1962 | 6 | | Core | | W | N | Sum | | | X's | | | K | |
| Berks | 3304 | 1958 | | | Core | | W | N | Sum | | NH4 | X's | | | K | |
| Berks | 3314 | 1958 | | | Core | | W | N | Sum | | NH4 | X's | | | K | |
| Berks | 3901 | 1959 | | | Core | | W | N | Sum | | NH4 | X's | | | K | |
| Berks | 3902 | 1959 | | | Core | | W | N | Sum | | NH4 | X's | | | K | |
| Berks | 3906 | 1959 | | | Core | | W | N | Sum | | NH4 | X's | | | K | |
| Berks | 3907 | 1959 | | | Core | | W | N | Sum | | NH4 | X's | | | K | |

Table 8 (Cont'd). Listing of partial data by soil series for characterized Pennsylvania pedons (see Thurman et al., 1994, for procedures). Blanks mean no analysis was done.

| Soil Series | County and Site Number | Year Sampled | Number of Percolation Holes | Calculated Hydraulic Conductivity | Bulk Density | Cole | Organic Carbon | | Kjeldahl Nitrogen | SUM | CEC | Clay Mineralogy | CBD Fe ₂ O ₃ | KCL | HNO ₃ K |
|--------------|------------------------|--------------|-----------------------------|-----------------------------------|--------------|------|----------------|--------------------|-------------------|-----|---------|-----------------|------------------------------------|-----|--------------------|
| | | | | | | | W-Walkley | Black C-Combustion | | | | | | | |
| Birdsboro | 0505 | 1969 | 8 | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Birdsboro | 0506 | 1969 | 8 | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Blairton | 2101 | 1972 | 8 | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Blairton | 2102 | 1972 | 8 | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Blairton | 2806 | 1965 | 8 | HC | Core | | W | N | Sum | | Numbers | FE | | | |
| Blairton | 2808 | 1965 | 8 | HC | Core | | W | N | Sum | | Numbers | FE | | | |
| Blairton | 6519 | 1972 | 8 | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Blandburg | 1101 | 1971 | 1 | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Blandburg | 1102 | 1971 | 1 | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Blandburg | 1103 | 1971 | 1 | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Bowmansville | 3641 | 1982 | | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Braceville | 1005 | 1969 | 7 | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Brecknock | 0114 | 1961 | | HC | Core | | W | N | Sum | | Numbers | | | K | |
| Brecknock | 0115 | 1961 | | HC | Core | | W | N | Sum | | Numbers | | | K | |
| Brecknock | 0952 | 1971 | | HC | Clod | Cole | C | N | Sum | | X's | FE | AL | | |
| Brecknock | 1511 | 1956 | | HC | | | W | N | Sum | | X's | FE | | | |
| Brecknock | 1512 | 1956 | | | | | W | N | Sum | | X's | | | | |
| Brinkerton | 3203 | 1959 | | | Core | | W | N | Sum | | Numbers | | | K | |
| Brinkerton | 3250 | 1961 | 7 | | Core | | W | N | Sum | | Numbers | | | K | |
| Brinkerton | 3307 | 1958 | | | Core | | W | N | Sum | NH4 | X's | | | K | |
| Brinkerton | 3308 | 1958 | | | Core | | W | N | Sum | NH4 | X's | | | K | |
| Brinkerton | 3309 | 1958 | | | Core | | W | N | Sum | NH4 | X's | | | K | |
| Brinkerton | 4211 | 1979 | | HC | Clod | | C | N | Sum | NH4 | | | AL | | |
| Brooke | 6514 | 1962 | | | Core | | W | N | Sum | | Numbers | | | K | |
| Brooke | 6515 | 1962 | | | Core | | W | N | Sum | | Numbers | | | K | |
| Brumbaugh | 0531 | 1980 | | HC | Clod | Cole | C | N | Sum | | | FE | AL | | |
| Brumbaugh | 0533 | 1980 | | HC | Clod | Cole | C | N | Sum | | | FE | AL | | |
| Buchanan | 1314 | 1957 | | | Clod | Cole | W | N | Sum | NH4 | X's | | | K | |
| Buchanan | 1465 | 1981 | | HC | Clod | Cole | W | N | Sum | | | | | | |
| Buchanan | 1811 | 1958 | | | Core | | W | N | Sum | NH4 | X's | | | K | |
| Buchanan | 1815 | 1958 | | | Core | | W | N | Sum | NH4 | X's | | | K | |
| Buchanan | 3130 | 1977 | | HC | Clod | Cole | C | N | Sum | | Numbers | | AL | | |
| Buchanan | 3136 | 1981 | | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Buchanan | 3941 | 1971 | | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Buchanan | 5302 | 1982 | | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Calvin | 1421 | 1964 | 8 | HC | Core | | W | N | Sum | | Numbers | FE | AL | | |
| Calvin | 2203 | 1964 | 8 | HC | Core | | W | N | Sum | | Numbers | FE | AL | | |

Table 8 (Cont'd). Listing of partial data by soil series for characterized Pennsylvania pedons (see Thurman et al., 1994, for procedures). Blanks mean no analysis was done.

| Soil Series | County and Site Number | Year Sampled | Number of Percolation Holes | Calculated Hydraulic Conductivity | Bulk Density | Cole | Organic Carbon | | Kjeldahl Nitrogen | SUM | CEC | NH4 | Clay Mineralogy | CBD Fe ₂ O ₃ | KCL | HNO ₃ |
|-------------|------------------------|--------------|-----------------------------|-----------------------------------|--------------|------|----------------|--------------------|-------------------|-----|-----|---------|-----------------|------------------------------------|-----|------------------|
| | | | | | | | W-Walkley | Black C-Combustion | | | | | | | | |
| Calvin | 2914 | 1962 | 7 | | Core | | W | | N | Sum | | X's | FE | AL | K | |
| Cambridge | 2506 | 1956 | | | Core | | W | | N | Sum | NH4 | | FE | | | |
| Canadice | 1011 | 1969 | | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | | |
| Canadice | 1012 | 1969 | | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | | |
| Caneadea | 1013 | 1969 | | HC | Clod | Cole | W | | N | Sum | | Numbers | FE | AL | | |
| Caneadea | 1014 | 1969 | 1 | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | | |
| Canfield | 4302 | 1963 | | HC | Core | | W | | N | Sum | | Numbers | | | K | |
| Canfield | 4303 | 1963 | | | | | W | | N | Sum | | Numbers | | | K | |
| Canfield | 4509 | 1965 | 6 | HC | Core | | W | | N | Sum | | Numbers | FE | AL | | |
| Canfield | 4510 | 1965 | 5 | HC | Core | | W | | N | Sum | | Numbers | FE | AL | | |
| Canfield | 6107 | 1966 | 8 | HC | Core | | W | | N | Sum | | Numbers | FE | AL | | |
| Canfield | 6108 | 1966 | 8 | HC | Core | | W | | N | Sum | | Numbers | FE | AL | | |
| Cardiff | 6705 | 1957 | | | Core | | W | | N | Sum | NH4 | X's | | | K | |
| Cardiff | 6706 | 1957 | | | | | W | | N | Sum | NH4 | X's | | | K | |
| Cardiff | 1037 | 1973 | | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | K | |
| Cavode | 1038 | 1973 | | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | | |
| Cavode | 1039 | 1973 | | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | | |
| Cavode | 3202 | 1958 | | | Core | | W | | N | Sum | | Numbers | | | K | |
| Cavode | 3252 | 1961 | 7 | | Core | | W | | N | Sum | | Numbers | | | K | |
| Cavode | 3259 | 1961 | 8 | | Core | | W | | N | Sum | | Numbers | | | K | |
| Cavode | 3310 | 1958 | | | Core | | W | | N | Sum | NH4 | | | | K | |
| Cavode | 6518 | 1972 | 8 | HC | Clod | Cole | W | | N | Sum | | X's | FE | AL | | |
| Chalifont | 0906 | 1968 | 8 | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | | |
| Chalifont | 0907 | 1968 | 8 | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | | |
| Chavies | 2603 | 1964 | 6 | HC | Core | | W | | N | Sum | | Numbers | | | K | |
| Chenango | 1916 | 1959 | 6 | | | | W | | N | Sum | NH4 | | | | K | |
| Chenango | 1917 | 1959 | 7 | | | | W | | N | Sum | NH4 | | | | K | |
| Chenango | 4301 | 1963 | | HC | Core | | W | | N | Sum | | Numbers | | | K | |
| Chenango | 5203 | 1964 | 8 | HC | Core | | W | | N | Sum | | Numbers | | | K | |
| Chenango | 5210 | 1964 | 5 | HC | Core | | W | | N | Sum | | Numbers | | | K | |
| Chenango | 2302 | 1959 | | | Core | | W | | N | Sum | NH4 | | | | K | |
| Chester | 2303 | 1959 | | | Core | | W | | N | Sum | NH4 | | | | K | |
| Chester | 3601 | 1955 | | | Core | | W | | N | Sum | NH4 | | | | K | |
| Chester | 3602 | 1955 | | | Core | | W | | N | Sum | NH4 | | | | K | |
| Chester | 3647 | 1990 | | | Clod | | W | | N | Sum | | X's | FE | AL | | |
| Chester | 3648 | 1990 | | | Clod | | C | | N | Sum | | X's | FE | AL | | |
| Chester | 3650 | 1990 | | HC | Clod | Cole | C | | N | Sum | | X's | FE | AL | | |

Table 8 (Cont'd). Listing of partial data by soil series for characterized Pennsylvania pedons (see Thurman et al., 1994, for procedures). Blanks mean no analysis was done.

| Soil Series | County and Site Number | Year Sampled | Number of Percolation Holes | Calculated Hydraulic Conductivity | Bulk Density | Cole | Organic Carbon | | Kjeldahl Nitrogen | SUM | CEC | Clay Mineralogy | CBD Fe ₂ O ₃ | KCL AL | HNO ₃ K |
|-------------|------------------------|--------------|-----------------------------|-----------------------------------|--------------|------|----------------|--------------------|-------------------|-----|---------|-----------------|------------------------------------|--------|--------------------|
| | | | | | | | W-Walkley | Black C-Combustion | | | | | | | |
| Chester | 3652 | 1990 | | HC | Clod | Cole | C | | | | | | | | |
| Chester | 3913 | 1959 | | | Core | | W | N | Sum | NH4 | X's | FE | AL | K | |
| Chester | 3914 | 1959 | | | Core | | W | N | Sum | NH4 | X's | | | K | |
| Chester | 6707 | 1957 | | | Core | | W | N | Sum | NH4 | X's | | | K | |
| Chester | 6708 | 1957 | | | Core | | W | N | Sum | NH4 | X's | | | K | |
| Chippewa | 0803 | 1968 | 8 | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Chippewa | 0815 | 1968 | | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Chippewa | 0816 | 1968 | | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Chippewa | 4817 | 1967 | | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Chippewa | 4818 | 1967 | | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Chippewa | 4836 | 1967 | | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Chrome | 2304 | 1959 | | | Core | | W | N | Sum | NH4 | | FE | | K | |
| Chrome | 2305 | 1959 | | | Core | | W | N | Sum | NH4 | | FE | | K | |
| Clarksburg | 1402 | 1961 | | HC | Core | | W | N | Sum | | Numbers | FE | | K | |
| Clarksburg | 1417 | 1964 | 8 | | Core | | W | N | Sum | | Numbers | FE | | K | |
| Clarksburg | 1481 | 1987 | | | Core | | C | N | Sum | | X's | FE | AL | | |
| Clarksburg | 1803 | 1958 | | | Core | | W | N | Sum | NH4 | | | | K | |
| Clarksburg | 1808 | 1958 | | | Core | | W | N | Sum | NH4 | | | | K | |
| Clarksburg | 1820 | 1959 | | | Core | | W | N | Sum | NH4 | | | | K | |
| Clarksburg | 3807 | 1972 | 1 | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Clarksburg | 3813 | 1973 | 3 | HC | Clod | Cole | C | N | Sum | | Numbers | | | K | |
| Clarksburg | 6510 | 1962 | 6 | | Core | | W | N | Sum | | Numbers | | | K | |
| Clarksburg | 6512 | 1962 | 6 | | Core | | W | N | Sum | | Numbers | | | K | |
| Clarksburg | 6517 | 1972 | 6 | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Clarksburg | 1483 | 1987 | | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Clymer | 3255 | 1961 | 7 | | Core | | W | N | Sum | | Numbers | | | K | |
| Clymer | 3258 | 1961 | 6 | | Core | | W | N | Sum | | Numbers | | | K | |
| Clymer | 4152 | 1982 | | | Core | | C | N | Sum | | Numbers | | | | |
| Clymer | 4208 | 1979 | | HC | Clod | | C | N | Sum | NH4 | | FE | AL | | |
| Clymer | 5405 | 1966 | 8 | HC | Core | | W | N | Sum | | Numbers | FE | AL | | |
| Clymer | 5406 | 1966 | 6 | | Core | | W | N | Sum | | Numbers | FE | AL | | |
| Comly | 1901 | 1959 | | | Core | | W | N | Sum | | Numbers | | | K | |
| Comly | 2209 | 1964 | 8 | HC | Core | | W | N | Sum | NH4 | | FE | AL | | |
| Comly | 2210 | 1964 | 8 | HC | Core | | W | N | Sum | | Numbers | FE | AL | | |
| Comly | 3603 | 1955 | | | Core | | W | N | Sum | | Numbers | FE | | K | |
| Conestoga | 3612 | 1955 | | | Core | | W | N | Sum | | X's | | | K | |
| Conotton | 2501 | 1959 | | | Core | | W | N | Sum | NH4 | | | | K | |

Table 8 (Cont'd). Listing of partial data by soil series for characterized Pennsylvania pedons (see Thurman et al., 1994, for procedures). Blanks mean no analysis was done.

| Soil Series | County and Site Number | Year Sampled | Number of Percolation Holes | Calculated Hydraulic Conductivity | Bulk Density | Cole | Organic Carbon | | Kjeldahl Nitrogen | SUM | CEC | Clay Mineralogy | CBD Fe ₂ O ₃ | KCL AL | HNO ₃ K |
|-------------|------------------------|--------------|-----------------------------|-----------------------------------|--------------|------|----------------|-------------|-------------------|-----|---------|-----------------|------------------------------------|--------|--------------------|
| | | | | | | | W-Walkley | C-Combusion | | | | | | | |
| Conotton | 4307 | 1963 | | HC | Core | | W | N | Sum | | Numbers | | | K | |
| Cookport | 1315 | 1957 | | HC | Clod | Cole | W | N | Sum | NH4 | X's | FE | AL | K | |
| Cookport | 1482 | 1987 | | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Cookport | 1715 | 1973 | | HC | Clod | Cole | C | N | Sum | | X's | FE | AL | | |
| Cookport | 3301 | 1958 | | | Core | | W | N | Sum | NH4 | X's | | | K | |
| Cookport | 3303 | 1958 | | | Core | | W | N | Sum | NH4 | X's | | | K | |
| Cookport | 4153 | 1982 | | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Cookport | 4204 | 1982 | | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Cookport | 4206 | 1979 | | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Cookport | 5917 | 1982 | | HC | Clod | Cole | C | N | Sum | NH4 | Numbers | FE | AL | | |
| Cookport | 5919 | 1982 | | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Cookport | 5922 | 1983 | | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Cookport | 5923 | 1983 | | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Cookport | 6101 | 1966 | 8 | HC | Core | | W | N | Sum | | Numbers | FE | AL | | |
| Cookport | 6102 | 1966 | 8 | HC | Core | | W | N | Sum | | Numbers | FE | AL | | |
| Cookport | 6204 | 1967 | 8 | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Cookport | 6206 | 1967 | 6 | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Croton | 4607 | 1960 | 6 | | Core | | W | N | Sum | NH4 | X's | | | K | |
| Croton | 4608 | 1960 | 7 | | Core | | W | N | Sum | NH4 | X's | | | K | |
| Croton | 6703 | 1957 | | | Core | | W | N | Sum | NH4 | X's | | | K | |
| Croton | 6710 | 1957 | | | Core | | W | N | Sum | NH4 | X's | | | K | |
| Culleoka | 3004 | 1981 | | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Culleoka | 3005 | 1981 | | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Culleoka | 6311 | 1966 | 8 | HC | Core | | W | N | Sum | | Numbers | FE | AL | | |
| Culleoka | 6312 | 1966 | 8 | HC | Core | | W | N | Sum | | Numbers | FE | AL | | |
| Dekalb | 1322 | 1957 | | | | | W | N | Sum | NH4 | X's | | | K | |
| Dekalb | 3302 | 1958 | | HC | Clod | Cole | W | N | Sum | NH4 | X's | FE | AL | K | |
| Dekalb | 5921 | 1983 | | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Dekalb | 6203 | 1967 | 6 | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Dekalb | 6205 | 1967 | 5 | | Core | | C | N | Sum | | Numbers | FE | AL | | |
| Dormont | 0207 | 1965 | 6 | HC | Core | | W | N | Sum | | Numbers | FE | AL | | |
| Dormont | 3002 | 1981 | | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Dormont | 3006 | 1981 | | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Dormont | 6511 | 1962 | 5 | | Core | | W | N | Sum | | Numbers | FE | AL | K | |
| Doylestown | 0908 | 1968 | 8 | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Doylestown | 0911 | 1968 | 8 | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Duffield | 1443 | 1972 | 8 | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |

Table 8 (Cont'd). Listing of partial data by soil series for characterized Pennsylvania pedons (see Thurman et al., 1994, for procedures). Blanks mean no analysis was done.

| Soil Series | County and Site Number | Year Sampled | Number of Percolation Holes | Calculated Hydraulic Conductivity | Bulk Density | Cole | Organic Carbon | | Kjeldahl Nitrogen | SUM | CEC | Clay Mineralogy | CBD Fe ₂ O ₃ | KCL AL | HNO ₃ K |
|-------------|------------------------|--------------|-----------------------------|-----------------------------------|--------------|------|----------------|--------------|-------------------|-----|---------|-----------------|------------------------------------|--------|--------------------|
| | | | | | | | W-Walkley | C-Combustion | | | | | | | |
| Duffield | 1474 | 1983 | | | | | C | | Sum | | | | FE | AL | |
| Duffield | 2811 | 1965 | 8 | | Core | | W | N | Sum | | Numbers | FE | | | |
| Duffield | 2812 | 1965 | 8 | HC | Core | | W | N | Sum | | Numbers | FE | | | |
| Duffield | 3604 | 1955 | | | | | W | | Sum | | X's | | | | |
| Duffield | 3605 | 1955 | | | | | W | | Sum | | X's | | | | |
| Duffield | 3616 | 1977 | | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Duffield | 3617 | 1977 | | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Duffield | 3618 | 1977 | | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Duffield | 3908 | 1959 | | | Core | | W | N | Sum | NH4 | Numbers | | | | K |
| Duffield | 3909 | 1959 | | | Core | | W | N | Sum | NH4 | X's | | | | K |
| Duncannon | 0904 | 1968 | 6 | HC | Clod | Cole | W | N | Sum | | Numbers | FE | AL | | |
| Duncannon | 0905 | 1968 | 8 | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Duncannon | 4118 | 1974 | | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Duncannon | 4119 | 1974 | 8 | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Duncannon | 4120 | 1974 | 8 | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Duncannon | 4121 | 1974 | | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Duncannon | 4122 | 1974 | | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Duncannon | 4123 | 1974 | | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Dunning | 1408 | 1963 | | HC | Core | | W | N | Sum | | Numbers | FE | | | K |
| Dunning | 1409 | 1963 | | HC | Core | | W | N | Sum | | Numbers | FE | | | K |
| Edgemont | 0605 | 1962 | 5 | HC | Core | | W | N | Sum | NH4 | Numbers | FE | | | K |
| Edgemont | 0606 | 1962 | 5 | HC | Core | | W | N | Sum | NH4 | Numbers | FE | | | K |
| Edgemont | 3606 | 1955 | | | Core | | W | N | Sum | | Numbers | | | | K |
| Edgemont | 3613 | 1955 | | | | | W | N | Sum | | Numbers | | | | K |
| Edom | 0507 | 1969 | 8 | | Clod | Cole | W | N | Sum | | Numbers | FE | AL | | |
| Edom | 0508 | 1969 | 7 | HC | Clod | Cole | W | N | Sum | | Numbers | FE | AL | | |
| Edom | 1401 | 1961 | | HC | Core | | W | N | Sum | | Numbers | FE | | | K |
| Edom | 2803 | 1965 | 8 | HC | Core | | W | N | Sum | | Numbers | FE | | | |
| Edom | 2804 | 1965 | 5 | HC | Core | | W | N | Sum | | Numbers | FE | | | |
| Edom | 3103 | 1967 | 8 | HC | Clod | Cole | W | N | Sum | | Numbers | FE | | | |
| Edom | 3104 | 1967 | 6 | HC | Clod | Cole | W | N | Sum | | Numbers | FE | | | |
| Edom | 3105 | 1967 | 7 | HC | Clod | Cole | W | N | Sum | | Numbers | FE | | | |
| Edom | 3108 | 1967 | 6 | HC | Clod | Cole | W | N | Sum | | Numbers | FE | AL | | |
| Edom | 3401 | 1970 | 8 | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Edom | 3402 | 1970 | 8 | HC | Clod | Cole | W | N | Sum | | Numbers | FE | AL | | |
| Edom | 3404 | 1970 | 8 | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Edom | 5003 | 1970 | 8 | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |

Table 8 (Cont'd). Listing of partial data by soil series for characterized Pennsylvania pedons (see Thurman et al., 1994, for procedures). Blanks mean no analysis was done.

| Soil Series | County and Site Number | Year Sampled | Number of Percolation Holes | Calculated Hydraulic Conductivity | Bulk Density | Cole | Organic Carbon | | Kjeldahl Nitrogen | SUM | CEC | Clay Mineralogy | CBD Fe ₂ O ₃ | KCL AL | HNO ₃ K |
|-------------|------------------------|--------------|-----------------------------|-----------------------------------|--------------|------|------------------------------|------------------------------|-------------------|-----|-----|-----------------|------------------------------------|--------|--------------------|
| | | | | | | | W-Walkley Black C-Combustion | W-Walkley Black C-Combustion | | | | | | | |
| Frenchtown | 4304 | 1963 | | HC | Core | | W | | N | Sum | | Numbers | | | |
| Frenchtown | 4305 | 1963 | | HC | Core | | W | | N | Sum | | Numbers | | | K |
| Frenchtown | 4309 | 1963 | | HC | Core | | W | | N | Sum | | Numbers | | | K |
| Frenchtown | 4310 | 1963 | | HC | Core | | W | | N | Sum | | Numbers | | | K |
| Gatesburg | 1411 | 1963 | 8 | | | | W | | N | Sum | | Numbers | FE | | K |
| Gatesburg | 1486 | 1978 | | | | | C | | | Sum | | | | | |
| Gatesburg | 1487 | 1978 | | | | | C | | | Sum | | | | | |
| Gilpin | 0208 | 1965 | 8 | HC | Core | | W | | N | Sum | | Numbers | FE | AL | K |
| Gilpin | 3254 | 1961 | 5 | | Core | | W | | N | Sum | | Numbers | FE | | K |
| Gilpin | 3256 | 1961 | 7 | | Core | | W | | N | Sum | | Numbers | | | K |
| Gilpin | 3305 | 1958 | | | | | W | | N | Sum | NH4 | X's | | | K |
| Gilpin | 3306 | 1958 | | | | | W | | N | Sum | NH4 | X's | | | K |
| Gilpin | 6521 | 1972 | 8 | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | K |
| Glenelg | 0611 | 1988 | | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Glenelg | 1502 | 1956 | | | Core | | W | | N | Sum | | | FE | | |
| Glenelg | 3627 | 1978 | | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | | |
| Glenville | 1501 | 1956 | 7 | | Core | | W | | N | Sum | | | FE | | |
| Glenville | 1505 | 1956 | 6 | | Core | | W | | N | Sum | | | FE | | |
| Glenville | 1513 | 1956 | 5 | | Core | | W | | N | Sum | | | FE | | |
| Gresham | 1001 | 1969 | 2 | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | K |
| Gresham | 1002 | 1969 | 2 | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Gresham | 2004 | 1965 | 8 | HC | Core | | W | | N | Sum | | Numbers | FE | AL | |
| Gresham | 2007 | 1965 | 8 | HC | Core | | W | | N | Sum | | Numbers | FE | AL | |
| Gresham | 6103 | 1966 | 8 | HC | Core | | W | | N | Sum | | Numbers | FE | AL | |
| Gresham | 6104 | 1966 | 8 | HC | Core | | W | | N | Sum | | Numbers | FE | AL | |
| Guernsey | 0206 | 1965 | 8 | HC | Core | | W | | N | Sum | | Numbers | FE | AL | |
| Guernsey | 6305 | 1966 | 8 | HC | Core | | W | | N | Sum | | Numbers | FE | AL | |
| Guernsey | 6306 | 1966 | 8 | HC | Core | | W | | N | Sum | | Numbers | FE | AL | |
| Guernsey | 6513 | 1962 | 6 | | Core | | W | | N | Sum | | Numbers | FE | AL | K |
| Guernsey | 6550 | 1976 | | HC | Clod | Cole | C | | N | Sum | | | | AL | |
| Hagerstown | 1405 | 1963 | 8 | HC | Core | | W | | N | Sum | | Numbers | FE | | K |
| Hagerstown | 1407 | 1963 | | HC | Core | | W | | N | Sum | | Numbers | FE | | K |
| Hagerstown | 1414 | 1964 | 8 | HC | Core | | W | | N | Sum | | Numbers | FE | | K |
| Hagerstown | 1446 | 1977 | | HC | Clod | Cole | C | | N | Sum | | | FE | AL | |
| Hagerstown | 1466 | 1983 | | HC | Clod | Cole | C | | N | Sum | | | FE | AL | |
| Hagerstown | 1467 | 1983 | | HC | Clod | Cole | C | | N | Sum | | | FE | AL | |
| Hagerstown | 1468 | 1983 | | HC | Clod | Cole | C | | N | Sum | | | FE | AL | |

Table 8 (Cont'd). Listing of partial data by soil series for characterized Pennsylvania pedons (see Thurman et al., 1994, for procedures). Blanks mean no analysis was done.

| Soil Series | County and Site Number | Year Sampled | Number of Percolation Holes | Calculated Hydraulic Conductivity | Bulk Density | Cole | Organic Carbon | | Kjeldahl Nitrogen | SUM | CEC | Clay Mineralogy | CBD Fe ₂ O ₃ | KCL AL | HNO ₃ K |
|-------------|------------------------|--------------|-----------------------------|-----------------------------------|--------------|------|------------------------------|--------------------|-------------------|-----|---------|-----------------|------------------------------------|--------|--------------------|
| | | | | | | | W-Walkley Black C-Combustion | Black C-Combustion | | | | | | | |
| Hagerstown | 1469 | 1983 | | HC | Clod | Cole | C | | | | | | FE | AL | |
| Hagerstown | 1470 | 1983 | | HC | Clod | Cole | C | | | Sum | | | FE | AL | |
| Hagerstown | 1471 | 1983 | | HC | Clod | Cole | C | | | Sum | | | FE | AL | |
| Hagerstown | 1472 | 1983 | | HC | Clod | Cole | C | | | Sum | | | FE | AL | |
| Hagerstown | 1473 | 1983 | | HC | Clod | Cole | C | | | Sum | | | FE | AL | |
| Hagerstown | 1475 | 1983 | | | | | C | | | Sum | | | FE | AL | |
| Hagerstown | 1480 | 1987 | | | | | C | | | Sum | | | FE | AL | |
| Hagerstown | 1809 | 1958 | | | Core | | W | N | NH4 | Sum | X's | | FE | | K |
| Hagerstown | 1810 | 1958 | | | Core | | W | N | NH4 | Sum | X's | | FE | | K |
| Hagerstown | 2206 | 1964 | 8 | HC | Core | | W | N | | Sum | Numbers | | FE | | K |
| Hagerstown | 2207 | 1964 | 8 | HC | Core | | W | N | | Sum | Numbers | | FE | | K |
| Hagerstown | 3614 | 1972 | 8 | HC | Clod | Cole | C | N | | Sum | Numbers | | FE | AL | |
| Hagerstown | 3615 | 1972 | 8 | HC | Clod | Cole | C | N | | Sum | Numbers | | FE | AL | |
| Hagerstown | 3619 | 1977 | 8 | HC | Clod | Cole | C | N | | Sum | Numbers | | FE | AL | |
| Hagerstown | 5508 | 1969 | 8 | HC | Clod | Cole | C | N | | Sum | Numbers | | FE | AL | |
| Hagerstown | 5514 | 1969 | 7 | HC | Clod | Cole | C | N | | Sum | Numbers | | FE | AL | |
| Hartleton | 1301 | 1957 | | | | | W | N | NH4 | Sum | X's | | | | K |
| Hartleton | 1308 | 1957 | | | | | W | N | NH4 | Sum | X's | | | | K |
| Hartleton | 1904 | 1959 | | | Core | | W | N | NH4 | Sum | Numbers | | | | K |
| Hartleton | 1914 | 1959 | | | | | W | N | NH4 | Sum | Numbers | | | | K |
| Hazleton | 1007 | 1969 | 8 | HC | Clod | Cole | C | N | | Sum | Numbers | | FE | AL | |
| Hazleton | 1008 | 1969 | 7 | HC | Clod | Cole | C | N | | Sum | Numbers | | FE | AL | |
| Hazleton | 1309 | 1957 | | | | | W | N | NH4 | Sum | X's | | | | K |
| Hazleton | 1316 | 1957 | | | | | W | N | NH4 | Sum | X's | | | | K |
| Hazleton | 1321 | 1957 | | | | | W | N | NH4 | Sum | X's | | | | K |
| Hazleton | 1712 | 1973 | 7 | HC | Clod | Cole | C | N | | Sum | Numbers | | FE | AL | |
| Hazleton | 1713 | 1973 | 8 | HC | Clod | Cole | C | N | | Sum | Numbers | | FE | AL | |
| Hazleton | 1804 | 1958 | | | | | W | N | NH4 | Sum | X's | | | | K |
| Hazleton | 1805 | 1958 | | | | | W | N | NH4 | Sum | X's | | | | K |
| Hazleton | 1806 | 1958 | | | | | W | N | NH4 | Sum | X's | | | | K |
| Hazleton | 1807 | 1958 | | | | | W | N | NH4 | Sum | X's | | | | K |
| Hazleton | 2608 | 1964 | 6 | HC | Core | | W | N | | Sum | Numbers | | FE | | K |
| Hazleton | 2610 | 1964 | 8 | HC | Core | | W | N | | Sum | Numbers | | FE | | K |
| Hazleton | 2913 | 1962 | 6 | | | | W | N | | Sum | X's | | | | K |
| Hazleton | 2916 | 1962 | 6 | | | | W | N | | Sum | X's | | | | K |
| Hazleton | 3133 | 1977 | | | Clod | Cole | C | N | | Sum | Numbers | | | | K |
| Hazleton | 3137 | 1981 | | HC | Clod | Cole | | | | Sum | Numbers | | FE | AL | |

Table 8 (Cont'd). Listing of partial data by soil series for characterized Pennsylvania pedons (see Thurman et al., 1994, for procedures). Blanks mean no analysis was done.

| Soil Series | County and Site Number | Year Sampled | Number of Percolation Holes | Calculated Hydraulic Conductivity | Bulk Density | Cole | Organic Carbon | | Kjeldahl Nitrogen | SUM | CEC | Clay Mineralogy | CBD Fe ₂ O ₃ | KCL AL | HNO ₃ K |
|-------------|------------------------|--------------|-----------------------------|-----------------------------------|--------------|------|----------------|--------------------|-------------------|-----|-----|-----------------|------------------------------------|--------|--------------------|
| | | | | | | | W-Walkley | Black C-Combustion | | | | | | | |
| Hazleton | 3311 | 1958 | | | | | W | | N | Sum | NH4 | X's | | | K |
| Hazleton | 4207 | 1979 | | | | | C | | | Sum | NH4 | | AL | | |
| Hazleton | 5307 | 1978 | | | | | C | | N | Sum | | | AL | | |
| Hazleton | 5308 | 1978 | | | | | C | | | Sum | | | | | |
| Hazleton | 5605 | 1978 | | | | | C | | | Sum | | | | | |
| Hazleton | 5606 | 1978 | | | | | C | | | Sum | | | | | |
| Hazleton | 6201 | 1967 | 4 | HC | Clod | Cole | C | | N | Sum | | Numbers | AL | | |
| Hazleton | 6202 | 1967 | 5 | HC | Clod | Cole | C | | N | Sum | | Numbers | AL | | |
| Highfield | 0111 | 1961 | | HC | Core | | W | | N | Sum | | Numbers | | K | |
| Highfield | 0112 | 1961 | | HC | Core | | W | | N | Sum | | Numbers | | K | |
| Hollinger | 1504 | 1956 | 6 | HC | Core | | W | | N | Sum | | Numbers | | | |
| Hollinger | 3620 | 1977 | | HC | Clod | Cole | C | | N | Sum | | Numbers | AL | | |
| Hollinger | 3621 | 1977 | | HC | Clod | Cole | C | | N | Sum | | Numbers | AL | | |
| Hollinger | 3622 | 1977 | | HC | Clod | Cole | C | | N | Sum | | Numbers | AL | | |
| Holly | 5807 | 1958 | | | Core | | W | | N | Sum | NH4 | | | | K |
| Holly | 5816 | 1958 | | | Core | | W | | N | Sum | NH4 | | | | K |
| Howard | 2008 | 1965 | 8 | HC | Core | | W | | N | Sum | | Numbers | AL | | |
| Howard | 2012 | 1965 | 8 | HC | Core | | W | | N | Sum | | Numbers | AL | | |
| Hubersburg | 1406 | 1963 | 8 | HC | Core | | W | | N | Sum | | Numbers | | K | |
| Hubersburg | 1412 | 1964 | 7 | HC | Core | | W | | N | Sum | | Numbers | | K | |
| Hubersburg | 3112 | 1967 | 6 | HC | Clod | Cole | C | | N | Sum | | Numbers | AL | | |
| Hubersburg | 3113 | 1967 | 5 | HC | Clod | Cole | C | | N | Sum | | Numbers | AL | | |
| Huntington | 2013 | 1982 | | | | | C | | | Sum | NH4 | | | | |
| Huntington | 2017 | 1982 | | | | | C | | | Sum | NH4 | | | | |
| Huntington | 2019 | 1982 | | | | | C | | | Sum | NH4 | | | | |
| Klinesville | 1304 | 1957 | | | | | W | | N | Sum | NH4 | X's | | | K |
| Klinesville | 1306 | 1957 | | | | | W | | N | Sum | NH4 | X's | | | K |
| Klinesville | 2909 | 1962 | 8 | | Core | | W | | N | Sum | NH4 | X's | | | K |
| Klinesville | 2915 | 1962 | 5 | | | | W | | N | Sum | NH4 | X's | | | K |
| Klinesville | 3508 | 1966 | 8 | | | | W | | N | Sum | | X's | | | K |
| Klinesville | 3510 | 1966 | 8 | | | | W | | N | Sum | | Numbers | AL | | |
| Klinesville | 3406 | 1970 | 8 | HC | Clod | Cole | C | | N | Sum | | Numbers | AL | | |
| Kremer | 3407 | 1970 | 8 | HC | Clod | Cole | C | | N | Sum | | Numbers | AL | | |
| Kremer | 4402 | 1970 | 7 | HC | Clod | Cole | C | | N | Sum | | Numbers | AL | | |
| Kremer | 5002 | 1970 | 8 | HC | Clod | Cole | C | | N | Sum | | Numbers | AL | | |
| Kremer | 5013 | 1970 | 8 | HC | Clod | Cole | C | | N | Sum | | Numbers | AL | | |
| Kremer | 5014 | 1970 | 8 | HC | Clod | Cole | C | | N | Sum | | Numbers | AL | | |

Table 8 (Cont'd). Listing of partial data by soil series for characterized Pennsylvania pedons (see Thurman et al., 1994, for procedures). Blanks mean no analysis was done.

| Soil Series | County and Site Number | Year Sampled | Number of Percolation Holes | Calculated Hydraulic Conductivity | Bulk Density | Cole | Organic Carbon | | Kjeldahl Nitrogen | SUM | CEC | Clay Mineralogy | CBD Fe ₂ O ₃ | KCL AL | HNO ₃ K |
|---------------|------------------------|--------------|-----------------------------|-----------------------------------|--------------|------|------------------------------|--------------------|-------------------|-----|-----|-----------------|------------------------------------|--------|--------------------|
| | | | | | | | W-Walkley Black C-Combustion | Black C-Combustion | | | | | | | |
| Kremer | 5015 | 1970 | 8 | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Kremer | 5505 | 1969 | 7 | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Kremer | 5506 | 1969 | 7 | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Kremer | 5510 | 1969 | 8 | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Lackawanna | 1908 | 1959 | | | Core | | W | NH4 | N | Sum | NH4 | Numbers | | | K |
| Lackawanna | 1909 | 1959 | | | Core | | W | NH4 | N | Sum | NH4 | Numbers | | | K |
| Lackawanna | 4146 | 1978 | | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Lackawanna | 4147 | 1978 | | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Lackawanna | 4515 | 1965 | 7 | HC | Core | | W | | N | Sum | | Numbers | FE | AL | |
| Lackawanna | 4516 | 1965 | 6 | HC | Core | | W | | N | Sum | | Numbers | FE | AL | |
| Lackawanna | 4580 | 1971 | | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Lackawanna | 5801 | 1958 | | | Core | | W | NH4 | N | Sum | NH4 | X's | | | K |
| Lackawanna | 5802 | 1958 | | | Core | | W | NH4 | N | Sum | NH4 | X's | | | K |
| Lackawanna | 5819 | 1958 | | | Core | | W | NH4 | N | Sum | NH4 | X's | | | K |
| Laidig | 0530 | 1980 | | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Laidig | 0532 | 1980 | | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Laidig | 1431 | 1971 | 4 | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Laidig | 1463 | 1981 | | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Laidig | 1817 | 1959 | | | Clod | | W | NH4 | N | Sum | NH4 | X's | | | K |
| Laidig | 1818 | 1959 | | | Clod | | W | NH4 | N | Sum | NH4 | X's | | | K |
| Laidig | 3127 | 1971 | | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Laidig | 3129 | 1971 | | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Laidig | 3131 | 1977 | | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Laidig | 3942 | 1971 | | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Laidig | 4101 | 1954 | | | Clod | | C | | N | Sum | | Numbers | FE | AL | |
| Lakin | 4912 | 1974 | 8 | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Lakin | 4913 | 1974 | 8 | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Lamington | 0121 | 1980 | | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Lamington | 0123 | 1980 | | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Langford | 0810 | 1968 | 8 | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Langford | 2503 | 1956 | | | Core | | W | NH4 | N | Sum | NH4 | Numbers | FE | AL | |
| Langford | 2505 | 1956 | | | Core | | W | NH4 | N | Sum | NH4 | Numbers | FE | AL | |
| Lansdale | 3607 | 1955 | | | Core | | W | | N | Sum | | X's | | | |
| Lansdale | 3608 | 1955 | | | Core | | W | | N | Sum | | X's | | | |
| Lansdale | 4601 | 1960 | 5 | | Core | | W | NH4 | N | Sum | NH4 | X's | | | K |
| Lansdale | 4604 | 1960 | 6 | | Core | | W | NH4 | N | Sum | NH4 | X's | | | K |
| Lawrenceville | 0903 | 1968 | 6 | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |

Table 8 (Cont'd). Listing of partial data by soil series for characterized Pennsylvania pedons (see Thurman et al., 1994, for procedures). Blanks mean no analysis was done.

| Soil Series | County and Site Number | Year Sampled | Number of Percolation Holes | Calculated Hydraulic Conductivity | Bulk Density | Cole | Organic Carbon | | Kjeldahl Nitrogen | SUM | CEC | Clay Mineralogy | CBD Fe ₂ O ₃ | KCL AL | HNO ₃ K |
|---------------|------------------------|--------------|-----------------------------|-----------------------------------|--------------|------|------------------------------|--------------------|-------------------|-----|---------|-----------------|------------------------------------|--------|--------------------|
| | | | | | | | W-Walkley Black C-Combustion | Black C-Combustion | | | | | | | |
| Lawrenceville | 0910 | 1968 | 8 | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Lawrenceville | 1911 | 1959 | 6 | | Core | | W | N | Sum | NH4 | Numbers | | | K | |
| Lawrenceville | 1912 | 1959 | 6 | | Core | | W | N | Sum | NH4 | Numbers | | | K | |
| Lawrenceville | 4602 | 1960 | 7 | | Core | | W | N | Sum | NH4 | X's | | | K | |
| Lawrenceville | 4603 | 1960 | 6 | | Core | | W | N | Sum | NH4 | X's | | | K | |
| Leck Kill | 1310 | 1957 | | | Core | | W | N | Sum | NH4 | X's | | | K | |
| Leck Kill | 1312 | 1957 | | | Core | | W | N | Sum | NH4 | X's | | | K | |
| Leck Kill | 1422 | 1964 | 8 | HC | Core | | W | N | Sum | NH4 | Numbers | FE | | K | |
| Leck Kill | 1913 | 1959 | | | Core | | W | N | Sum | | Numbers | | | K | |
| Leck Kill | 2204 | 1964 | 8 | HC | Core | | W | N | Sum | NH4 | Numbers | FE | | K | |
| Leck Kill | 2911 | 1962 | 6 | | Core | | W | N | Sum | | Numbers | | | K | |
| Leck Kill | 4139 | 1975 | | HC | Clod | Cole | C | N | Sum | | X's | | | K | |
| Leck Kill | 4140 | 1975 | | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Leck Kill | 5403 | 1966 | 7 | HC | Core | | W | N | Sum | | Numbers | FE | AL | | |
| Leck Kill | 5404 | 1966 | 4 | HC | Core | | W | N | Sum | | Numbers | FE | AL | | |
| Leetonia | 1454 | 1981 | | | Core | | C | N | Sum | | | | | | |
| Leetonia | 1455 | 1981 | | | Core | | C | N | Sum | | | | | | |
| Leetonia | 1456 | 1981 | | | Core | | C | N | Sum | | | | | | |
| Leetonia | 1457 | 1981 | | | Core | | C | N | Sum | | | | | | |
| Leetonia | 1458 | 1981 | | | Core | | C | N | Sum | | | | | | |
| Leetonia | 1459 | 1981 | | | Core | | C | N | Sum | | | | | | |
| Leetonia | 1460 | 1981 | | | Core | | C | N | Sum | | | | | | |
| Leetonia | 1461 | 1981 | | | Core | | C | N | Sum | | | | | | |
| Leetonia | 1462 | 1981 | | | Core | | C | N | Sum | | | | | | |
| Leetonia | 1485 | 1978 | | | Core | | C | N | Sum | | | | | | |
| Leetonia | 5016 | 1977 | | | Core | Cole | C | N | Sum | | | | | | |
| Leetonia | 5017 | 1977 | | | Core | | C | N | Sum | | | | AL | | |
| Leetonia | 5604 | 1971 | | HC | Clod | Cole | C | N | Sum | | | FE | AL | | |
| Lehigh | 6711 | 1957 | | | Core | | W | N | Sum | NH4 | X's | | AL | K | |
| Lehigh | 6712 | 1957 | | | Core | | W | N | Sum | NH4 | | | AL | K | |
| Letort | 3639 | 1982 | | HC | Clod | Cole | C | N | Sum | | | | | | |
| Letort | 3640 | 1982 | | HC | Clod | Cole | C | N | Sum | | | | | | |
| Lewisberry | 0607 | 1962 | 7 | | Core | | W | N | Sum | NH4 | Numbers | | | K | |
| Lewisberry | 0608 | 1962 | 6 | | Core | | W | N | Sum | NH4 | X's | | | K | |
| Lewisberry | 6715 | 1957 | | | Core | | W | N | Sum | NH4 | X's | | | K | |
| Lewisberry | 6716 | 1957 | | | Core | | W | N | Sum | NH4 | X's | | | K | |
| Library | 0205 | 1965 | 8 | HC | Core | | W | N | Sum | | Numbers | FE | AL | | |

Table 8 (Cont'd). Listing of partial data by soil series for characterized Pennsylvania pedons (see Thurman et al., 1994, for procedures). Blanks mean no analysis was done.

| Soil Series | County and Site Number | Year Sampled | Number of Percolation Holes | Calculated Hydraulic Conductivity | Bulk Density | Cole | Organic Carbon | | Kjeldahl Nitrogen | SUM | CEC | Clay Mineralogy | CBD Fe ₂ O ₃ | KCL AL | HNO ₃ K |
|-------------|------------------------|--------------|-----------------------------|-----------------------------------|--------------|------|------------------------------|-----------------|-------------------|-----|-----------------|-----------------|------------------------------------|--------|--------------------|
| | | | | | | | W-Walkley Black C-Combustion | NH ₄ | | | | | | | |
| Library | 0210 | 1965 | 8 | HC | Core | | W | | N | Sum | | Numbers | FE | AL | |
| Library | 6344 | 1972 | | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Library | 6345 | 1972 | 8 | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Linden | 1499 | 1976 | | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Linden | 1801 | 1958 | | | Core | | W | NH ₄ | N | Sum | NH ₄ | X's | | | K |
| Linden | 1802 | 1958 | | | Core | | W | NH ₄ | N | Sum | NH ₄ | X's | | | K |
| Linden | 4113 | 1974 | 8 | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Linden | 4114 | 1974 | 8 | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Linden | 4115 | 1974 | 8 | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Linden | 4116 | 1974 | 8 | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Linden | 4907 | 1974 | 8 | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Lindside | 2809 | 1965 | 8 | HC | Core | | W | | N | Sum | | Numbers | FE | AL | |
| Lindside | 2810 | 1965 | 8 | HC | Core | | W | | N | Sum | | Numbers | FE | AL | |
| Lindside | 6307 | 1966 | 8 | HC | Core | | W | | N | Sum | | Numbers | FE | AL | |
| Lindside | 6308 | 1966 | 8 | HC | Core | | W | | N | Sum | | Numbers | FE | AL | |
| Lobdell | 2001 | 1965 | 8 | HC | Core | | W | | N | Sum | | Numbers | FE | AL | |
| Lobdell | 2002 | 1965 | 8 | HC | Core | | W | | N | Sum | | Numbers | FE | AL | |
| Lordstown | 5912 | 1963 | | | | | W | | N | Sum | | Numbers | | | K |
| Lordstown | 5913 | 1963 | | | | | W | | N | Sum | | Numbers | | | K |
| Lordstown | 5914 | 1963 | | HC | Core | | W | | N | Sum | | Numbers | | | K |
| Lordstown | 5916 | 1963 | | HC | Core | | W | | N | Sum | | Numbers | | | K |
| Manlius | 5205 | 1964 | 7 | | | | W | | N | Sum | | Numbers | FE | | K |
| Manlius | 5206 | 1964 | 6 | | | | W | | N | Sum | | Numbers | FE | | K |
| Manor | 1503 | 1956 | | | Core | | W | | N | Sum | | Numbers | FE | | K |
| Manor | 3628 | 1978 | | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | | K |
| Manor | 3629 | 1978 | | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | | K |
| Manor | 3645 | 1990 | | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | | K |
| Manor | 3649 | 1990 | | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | | K |
| Manor | 3655 | 1990 | | | Clod | | C | | N | Sum | | Numbers | FE | | K |
| Manor | 6713 | 1957 | | | | | W | NH ₄ | N | Sum | NH ₄ | X's | | | K |
| Manor | 6714 | 1957 | | | | | W | NH ₄ | N | Sum | NH ₄ | X's | | | K |
| Mardin | 0805 | 1968 | 6 | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Mardin | 0806 | 1968 | 6 | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Mardin | 0809 | 1968 | 8 | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Mardin | 2502 | 1956 | | | Core | | W | NH ₄ | N | Sum | NH ₄ | X's | | | K |
| Mardin | 5812 | 1958 | | | Core | | W | NH ₄ | N | Sum | NH ₄ | X's | | | K |
| Mardin | 5815 | 1958 | | | Core | | W | NH ₄ | N | Sum | NH ₄ | X's | | | K |

Table 8 (Cont'd). Listing of partial data by soil series for characterized Pennsylvania pedons (see Thurman et al., 1994, for procedures). Blanks mean no analysis was done.

| Soil Series | County and Site Number | Year Sampled | Number of Percolation Holes | Calculated Hydraulic Conductivity | Bulk Density | Cole | Organic Carbon | | Kjeldahl Nitrogen | SUM | CEC | Clay Mineralogy | CBD | KCL | HNO ₃ |
|-------------|------------------------|--------------|-----------------------------|-----------------------------------|--------------|------|----------------|--------------------|-------------------|-----|-----|-----------------|-----|-----|------------------|
| | | | | | | | W-Walkley | Black C-Combustion | | | | | | | |
| Meckesville | 1814 | 1958 | | | Core | | W | | N | Sum | NH4 | X's | | | |
| Meckesville | 1816 | 1958 | | | Core | | W | | N | Sum | NH4 | | | | K |
| Meckesville | 4511 | 1965 | 7 | HC | Core | | W | | N | Sum | | Numbers | AL | | K |
| Meckesville | 4512 | 1965 | 8 | HC | Core | | W | | N | Sum | | Numbers | AL | | |
| Meckesville | 5401 | 1966 | 8 | HC | Core | | W | | N | Sum | | Numbers | AL | | |
| Meckesville | 5407 | 1966 | 8 | HC | Core | | W | | N | Sum | | Numbers | AL | | |
| Meckesville | 5408 | 1966 | 8 | HC | Core | | W | | N | Sum | | Numbers | AL | | |
| Melvin | 0303 | 1968 | | HC | Clod | Cole | C | | N | Sum | | Numbers | AL | | |
| Melvin | 0304 | 1968 | | HC | Clod | Cole | C | | N | Sum | | Numbers | AL | | |
| Melvin | 6309 | 1966 | 4 | HC | Core | | W | | N | Sum | | Numbers | AL | | |
| Melvin | 6310 | 1966 | | HC | Core | | W | | N | Sum | | Numbers | AL | | |
| Mertz | 3403 | 1970 | 8 | HC | Clod | Cole | C | | N | Sum | | Numbers | AL | | |
| Mertz | 3410 | 1970 | 8 | HC | Clod | Cole | C | | N | Sum | | Numbers | AL | | |
| Mertz | 3411 | 1970 | 8 | HC | Clod | Cole | C | | N | Sum | | Numbers | AL | | |
| Mertz | 5010 | 1970 | 8 | HC | Clod | Cole | C | | N | Sum | | Numbers | AL | | |
| Mertz | 5011 | 1970 | 8 | HC | Clod | Cole | C | | N | Sum | | Numbers | AL | | |
| Mertz | 5012 | 1970 | 8 | HC | Clod | Cole | C | | N | Sum | | Numbers | AL | | |
| Mertz | 5511 | 1969 | 7 | HC | Clod | Cole | C | | N | Sum | | Numbers | AL | | K |
| Millheim | 1403 | 1963 | | HC | Core | | W | | N | Sum | | Numbers | | | K |
| Millheim | 1404 | 1963 | | HC | Core | | W | | N | Sum | | Numbers | | | K |
| Minesoil | 0315 | 1974 | 8 | | Core | | C | | N | Sum | | | AL | | |
| Minesoil | 0316 | 1974 | | | Core | | C | | N | Sum | | | AL | | |
| Minesoil | 0317 | 1974 | | | Core | | C | | N | Sum | | | | | |
| Minesoil | 0318 | 1974 | | | Core | | C | | N | Sum | | | | | |
| Minesoil | 1041 | 1974 | | | Core | | C | | N | Sum | | | AL | | |
| Minesoil | 1042 | 1974 | | | Core | | C | | N | Sum | | | AL | | |
| Minesoil | 1044 | 1974 | | | Core | | C | | N | Sum | | | AL | | |
| Minesoil | 1045 | 1974 | | | Core | | C | | N | Sum | | | AL | | |
| Minesoil | 1601 | 1974 | | | Core | | C | | N | Sum | | | AL | | |
| Minesoil | 1602 | 1974 | | | Core | | C | | N | Sum | | | AL | | |
| Minesoil | 1720 | 1973 | | | Core | | C | | N | Sum | | | AL | | |
| Minesoil | 1721 | 1973 | | | Core | | C | | N | Sum | | | AL | | |
| Minesoil | 1722 | 1973 | | | Core | | C | | N | Sum | | | AL | | |
| Minesoil | 1723 | 1973 | | | Core | | C | | N | Sum | | | AL | | |
| Minesoil | 1724 | 1973 | | | Core | | C | | N | Sum | | | AL | | |
| Minesoil | 1725 | 1974 | | | Core | | C | | N | Sum | | | AL | | |
| Minesoil | 2407 | 1974 | | | Core | | C | | N | Sum | | | AL | | |

Table 8 (Cont'd). Listing of partial data by soil series for characterized Pennsylvania pedons (see Thurman et al., 1994, for procedures). Blanks mean no analysis was done.

| Soil Series | County and Site Number | Year Sampled | Number of Percolation Holes | Calculated Hydraulic Conductivity | Bulk Density | Cole | Organic Carbon | | Kjeldahl Nitrogen | SUM | CEC | Clay Mineralogy | CBD Fe ₂ O ₃ | KCL AL | HNO ₃ K |
|-------------|------------------------|--------------|-----------------------------|-----------------------------------|--------------|------|----------------|--------------------|-------------------|-----|-----|-----------------|------------------------------------|--------|--------------------|
| | | | | | | | W-Walkley | Black C-Combustion | | | | | | | |
| Minesoil | 2408 | 1974 | | | | | C | | N | Sum | | | AL | | |
| Minesoil | 3317 | 1974 | | | | | C | | N | Sum | | | AL | | |
| Minesoil | 5435 | 1975 | | HC | Clod | Cole | C | | N | Sum | | | AL | | |
| Minesoil | 5436 | 1975 | | HC | Clod | Cole | C | | N | Sum | | | AL | | |
| Minesoil | 5437 | 1975 | | | | | C | | N | Sum | | | AL | | |
| Minesoil | 6348 | 1974 | | | | | C | | N | Sum | | | AL | | |
| Minesoil | 6349 | 1974 | | | | | C | | N | Sum | | | AL | | |
| Minesoil | 6350 | 1974 | | | | | C | | N | Sum | | | AL | | |
| Minoa | 2510 | 1956 | | | Core | | W | | N | Sum | NH4 | | AL | | |
| Minoa | 2511 | 1956 | | | Core | | W | | N | Sum | NH4 | | AL | | |
| Monongahela | 2609 | 1964 | 7 | HC | Core | | W | | N | Sum | | | | | K |
| Monongahela | 6110 | 1966 | 6 | HC | Core | | W | | N | Sum | | | AL | | K |
| Monongahela | 6509 | 1962 | 5 | | Core | | W | | N | Sum | | | | | K |
| Monongahela | 6516 | 1962 | | | Core | | W | | N | Sum | | | | | K |
| Montalto | 3609 | 1955 | | | | | W | | N | Sum | | | | | |
| Montalto | 3610 | 1955 | | | | | W | | N | Sum | | | | | |
| Morris | 3501 | 1966 | 8 | HC | Core | | W | | N | Sum | | | AL | | |
| Morris | 3503 | 1966 | 8 | HC | Core | | W | | N | Sum | | | AL | | |
| Morris | 4581 | 1971 | | HC | Clod | Cole | C | | N | Sum | | | AL | | |
| Morris | 5803 | 1958 | | | Core | | W | | N | Sum | NH4 | | | | |
| Morris | 5817 | 1958 | | | Core | | W | | N | Sum | NH4 | | | | K |
| Morrison | 1410 | 1963 | 8 | HC | Core | | W | | N | Sum | | | | | K |
| Morrison | 1413 | 1964 | | HC | Core | | W | | N | Sum | | | | | K |
| Morrison | 1418 | 1964 | 8 | | Core | | W | | N | Sum | | | | | K |
| Morrison | 1419 | 1964 | 8 | | Core | | W | | N | Sum | | | | | K |
| Morrison | 3110 | 1967 | 5 | HC | Clod | Cole | C | | N | Sum | | | AL | | |
| Morrison | 3111 | 1967 | 4 | HC | Clod | Cole | C | | N | Sum | | | AL | | |
| Mount Lucas | 0116 | 1961 | | HC | Core | | W | | N | Sum | | | | | K |
| Mount Lucas | 0117 | 1961 | | HC | Core | | W | | N | Sum | | | | | K |
| Murrill | 1429 | 1971 | 4 | HC | Clod | Cole | C | | N | Sum | | | AL | | |
| Murrill | 1430 | 1971 | 3 | HC | Clod | Cole | C | | N | Sum | | | AL | | |
| Murrill | 1442 | 1972 | 8 | HC | Clod | Cole | C | | N | Sum | | | AL | | |
| Murrill | 1445 | 1977 | | HC | Clod | Cole | C | | N | Sum | | | AL | | |
| Murrill | 1488 | 1989 | | HC | Clod | Cole | C | | N | Sum | | | AL | | |
| Murrill | 1819 | 1959 | | | Core | | W | | N | Sum | NH4 | | | | K |
| Murrill | 3128 | 1971 | | HC | Clod | Cole | C | | N | Sum | | | AL | | |
| Natalie | 5409 | 1966 | 8 | HC | Core | | W | | N | Sum | | | AL | | |

Table 8 (Cont'd). Listing of partial data by soil series for characterized Pennsylvania pedons (see Thurman et al., 1994, for procedures). Blanks mean no analysis was done.

| Soil Series | County and Site Number | Year Sampled | Number of Percolation Holes | Calculated Hydraulic Conductivity | Bulk Density | Cole | Organic Carbon | | Kjeldahl Nitrogen | SUM | CEC | Clay Mineralogy | CBD Fe ₂ O ₃ | KCL AL | HNO ₃ K |
|-------------|------------------------|--------------|-----------------------------|-----------------------------------|--------------|------|----------------|--------------------|-------------------|-----|-----|-----------------|------------------------------------|--------|--------------------|
| | | | | | | | W-Walkley | Black C-Combustion | | | | | | | |
| Natalie | 5410 | 1966 | 8 | HC | Core | | W | | N | Sum | | Numbers | | AL | |
| Neshaminy | 0951 | 1971 | | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Neshaminy | 1509 | 1956 | 5 | | | | W | | N | Sum | | X's | FE | AL | |
| Neshaminy | 1510 | 1956 | 6 | | Core | | W | | N | Sum | | X's | FE | | K |
| Neshaminy | 4613 | 1960 | 7 | | Core | | W | | N | Sum | | X's | FE | | K |
| Neshaminy | 4617 | 1961 | 5 | | | | W | | N | Sum | | X's | FE | | K |
| Nolin | 1497 | 1974 | | | | | C | | N | Sum | | Numbers | FE | | |
| Nolo | 1718 | 1973 | | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Nolo | 1719 | 1973 | | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Nolo | 4154 | 1982 | | HC | Clod | Cole | C | | | Sum | | Numbers | FE | AL | |
| Nolo | 4212 | 1979 | | HC | Clod | Cole | C | | | Sum | NH4 | Numbers | FE | AL | |
| Nolo | 5918 | 1982 | | HC | Clod | Cole | C | | | Sum | | Numbers | FE | AL | |
| Nolo | 5920 | 1982 | | HC | Clod | Cole | C | | | Sum | | Numbers | FE | AL | |
| Norwich | 5820 | 1958 | | | Core | | W | | N | Sum | NH4 | Numbers | FE | | K |
| Norwich | 5821 | 1958 | | | Core | | W | | N | Sum | NH4 | Numbers | FE | | K |
| Opequon | 1420 | 1964 | | | Core | | W | | N | Sum | NH4 | Numbers | FE | | K |
| Opequon | 1447 | 1977 | | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Opequon | 3106 | 1967 | 6 | HC | Clod | Cole | W | | N | Sum | | Numbers | FE | | |
| Opequon | 3109 | 1967 | 6 | HC | Clod | Cole | W | | N | Sum | | Numbers | FE | AL | |
| Oquaga | 1915 | 1959 | | | Clod | | W | | N | Sum | NH4 | Numbers | FE | | K |
| Oquaga | 3505 | 1966 | 7 | | | | W | | N | Sum | | Numbers | FE | AL | |
| Oquaga | 3507 | 1966 | 8 | | | | W | | N | Sum | | Numbers | FE | AL | |
| Oquaga | 4513 | 1965 | 3 | HC | Core | | W | | N | Sum | | Numbers | FE | AL | |
| Oquaga | 4514 | 1965 | 4 | HC | Core | | W | | N | Sum | | Numbers | FE | AL | |
| Oquaga | 5910 | 1963 | | HC | Core | | W | | N | Sum | | Numbers | FE | AL | |
| Oquaga | 5911 | 1963 | | HC | Core | | W | | N | Sum | | Numbers | FE | AL | |
| Papakating | 5809 | 1958 | | | Core | | W | | N | Sum | NH4 | Numbers | | | K |
| Papakating | 5811 | 1958 | | | Core | | W | | N | Sum | NH4 | Numbers | | | K |
| Penlaw | 3808 | 1972 | | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Penlaw | 5020 | 1979 | | HC | Clod | Cole | C | | | Sum | | Numbers | | AL | |
| Penlaw | 5021 | 1979 | | HC | Clod | Cole | C | | | Sum | | Numbers | | AL | |
| Penn | 0953 | 1971 | | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | | K |
| Penn | 1506 | 1956 | | | Core | | W | | N | Sum | | Numbers | FE | | K |
| Penn | 1507 | 1956 | | | Core | | W | | N | Sum | | X's | FE | | K |
| Penn | 1508 | 1956 | | | Core | | W | | N | Sum | | X's | FE | | K |
| Penn | 4614 | 1961 | 6 | | Core | | W | | N | Sum | | X's | | | K |
| Penn | 4615 | 1961 | 7 | | Core | | W | | N | Sum | | X's | | | K |

Table 8 (Cont'd). Listing of partial data by soil series for characterized Pennsylvania pedons (see Thurman et al., 1994, for procedures). Blanks mean no analysis was done.

| Soil Series | County and Site Number | Year Sampled | Number of Percolation Holes | Calculated Hydraulic Conductivity | Bulk Density | Cole | Organic Carbon | | Kjeldahl Nitrogen | SUM | CEC | Clay Mineralogy | CBD Fe ₂ O ₃ | KCL AL | HNO ₃ K |
|-------------|------------------------|--------------|-----------------------------|-----------------------------------|--------------|------|----------------|--------------------|-------------------|-----|-----|-----------------|------------------------------------|--------|--------------------|
| | | | | | | | W-Walkley | Black C-Combustion | | | | | | | |
| Penn | 6701 | 1957 | | | Core | | W | | N | Sum | NH4 | X's | | | K |
| Penn | 6709 | 1957 | | | Core | | W | | N | Sum | NH4 | X's | | | K |
| Pequea | 3630 | 1978 | | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Pequea | 3631 | 1978 | | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Philo | 1498 | 1974 | | | | | C | | N | Sum | | Numbers | FE | AL | |
| Philo | 6105 | 1966 | 8 | HC | Core | Cole | W | | N | Sum | | Numbers | FE | AL | |
| Philo | 6207 | 1967 | | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Philo | 6213 | 1967 | | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Pierpont | 2507 | 1956 | | | Core | | W | | N | Sum | NH4 | | FE | AL | |
| Pierpont | 2508 | 1956 | | | Core | | W | | N | Sum | NH4 | | FE | AL | |
| Platea | 2509 | 1956 | | | Core | | W | | N | Sum | NH4 | | FE | AL | |
| Platea | 2512 | 1956 | | | Core | | W | | N | Sum | NH4 | | FE | AL | |
| Platea | 2513 | 1956 | | | | | W | | N | Sum | | Numbers | FE | AL | |
| Pope | 0301 | 1968 | 5 | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Pope | 0306 | 1968 | 8 | HC | Clod | Cole | C | | N | Sum | NH4 | Numbers | FE | AL | |
| Pope | 0509 | 1969 | 7 | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Pope | 0510 | 1969 | 8 | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Pope | 0901 | 1968 | 6 | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Pope | 0902 | 1968 | 8 | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Pope | 1484 | 1988 | | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Pope | 6106 | 1966 | 8 | HC | Core | | W | | N | Sum | NH4 | Numbers | FE | AL | |
| Pope | 6208 | 1967 | 6 | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Pope | 6209 | 1967 | 6 | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Purdy | 2602 | 1964 | 8 | HC | Core | | W | | N | Sum | | Numbers | FE | AL | |
| Purdy | 2605 | 1964 | 8 | HC | Core | | W | | N | Sum | | Numbers | FE | AL | |
| Purdy | 2611 | 1964 | | HC | Core | | W | | N | Sum | | Numbers | FE | AL | |
| Rainsboro | 0310 | 1968 | 6 | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Rainsboro | 0311 | 1968 | 6 | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Rainsboro | 6303 | 1966 | 8 | HC | Core | | W | | N | Sum | | Numbers | FE | AL | |
| Rainsboro | 6304 | 1966 | 8 | HC | Core | | W | | N | Sum | | Numbers | FE | AL | |
| Raritan | 5018 | 1979 | | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Raritan | 5019 | 1979 | | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Ravenna | 4306 | 1963 | | HC | Core | | W | | N | Sum | | Numbers | FE | AL | |
| Ravenna | 4308 | 1963 | | HC | Core | | W | | N | Sum | | Numbers | FE | AL | |
| Ravenna | 4827 | 1967 | 7 | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Rayne | 0202 | 1965 | 7 | HC | Core | | W | | N | Sum | | Numbers | FE | AL | |
| Rayne | 0203 | 1965 | 7 | HC | Core | | W | | N | Sum | | Numbers | FE | AL | |

Table 8 (Cont'd). Listing of partial data by soil series for characterized Pennsylvania pedons (see Thurman et al., 1994, for procedures). Blanks mean no analysis was done.

| Soil Series | County and Site Number | Year Sampled | Number of Percolation Holes | Calculated Hydraulic Conductivity | Bulk Density | Cole | Organic Carbon | | Kjeldahl Nitrogen | SUM | CFC | NH ₄ | Clay Mineralogy | CBD Fe ₂ O ₃ | KCL AL | HNO ₃ K |
|-------------|------------------------|--------------|-----------------------------|-----------------------------------|--------------|------|------------------------------|--------------------|-------------------|-----------------|-----|-----------------|-----------------|------------------------------------|--------|--------------------|
| | | | | | | | W-Walkley Black C-Combustion | Black C-Combustion | | | | | | | | |
| Rayne | 5601 | 1971 | 8 | HC | Clod | Cole | C | N | Sum | | | Numbers | FE | AL | | |
| Rayne | 5602 | 1971 | 8 | HC | Clod | Cole | C | N | Sum | | | Numbers | FE | AL | | |
| Rayne | 5603 | 1971 | 8 | HC | Clod | Cole | C | N | Sum | | | Numbers | FE | AL | | |
| Rayne | 6346 | 1972 | | HC | Clod | Cole | C | N | Sum | | | Numbers | FE | AL | | |
| Readington | 0122 | 1980 | | HC | Clod | Cole | C | N | Sum | | | Numbers | FE | AL | | |
| Readington | 4606 | 1960 | 7 | | Core | | W | N | Sum | NH ₄ | | X's | | | K | |
| Readington | 4612 | 1960 | 8 | | Core | | W | N | Sum | NH ₄ | | X's | | | K | |
| Readington | 6702 | 1957 | | | Core | | W | N | Sum | NH ₄ | | X's | | | K | |
| Readington | 6704 | 1957 | | | Core | | W | N | Sum | NH ₄ | | X's | | | K | |
| Reaville | 0110 | 1961 | | | Core | | W | N | Sum | | | Numbers | | | K | |
| Reaville | 0113 | 1961 | | HC | Core | | W | N | Sum | | | Numbers | | | K | |
| Reaville | 4611 | 1960 | 8 | | Core | | W | N | Sum | NH ₄ | | X's | | | K | |
| Reaville | 4616 | 1961 | 4 | | Core | | W | N | Sum | | | X's | | | K | |
| Rowland | 3499 | 1974 | | | Core | | C | N | Sum | | | Numbers | FE | AL | | |
| Rowland | 3632 | 1978 | | HC | Clod | Cole | C | N | Sum | | | Numbers | | | | |
| Rowland | 3633 | 1978 | | HC | Clod | Cole | C | N | Sum | | | Numbers | | | | |
| Ryder | 0609 | 1962 | 6 | | Core | | W | N | Sum | NH ₄ | | Numbers | | | K | |
| Ryder | 0610 | 1962 | 5 | | Core | | W | N | Sum | NH ₄ | | Numbers | | | K | |
| Sassafras | 2301 | 1959 | | | Core | | W | N | Sum | NH ₄ | | X's | | | K | |
| Sassafras | 2312 | 1959 | | | Core | | W | N | Sum | NH ₄ | | X's | | | K | |
| Sciotoville | 1006 | 1969 | 8 | | Clod | Cole | C | N | Sum | | | Numbers | FE | AL | | |
| Sciotoville | 6109 | 1966 | 8 | | Core | | W | N | Sum | | | Numbers | FE | AL | | |
| Sheffield | 2010 | 1965 | 8 | | Core | | W | N | Sum | | | Numbers | FE | AL | | |
| Sheffield | 2011 | 1965 | 8 | | Core | | W | N | Sum | | | Numbers | FE | AL | | |
| Shelmadine | 1902 | 1959 | | | Core | | W | N | Sum | NH ₄ | | Numbers | | | K | |
| Shelmadine | 1906 | 1959 | | | Core | | W | N | Sum | NH ₄ | | Numbers | | | K | |
| Shelmadine | 4148 | 1978 | | | Clod | Cole | C | N | Sum | | | Numbers | | | | |
| Shelmadine | 4149 | 1978 | | | Clod | Cole | C | N | Sum | | | Numbers | | | | |
| Steff | 0302 | 1968 | 8 | | Clod | Cole | C | N | Sum | | | Numbers | FE | AL | | |
| Steff | 0305 | 1968 | 4 | | Clod | Cole | C | N | Sum | | | Numbers | FE | AL | | |
| Steff | 0120 | 1980 | | | Clod | Cole | C | N | Sum | | | Numbers | FE | AL | | |
| Stearnsburg | 4832 | 1967 | 6 | | Clod | Cole | C | N | Sum | | | Numbers | FE | AL | | |
| Swartswood | 4833 | 1967 | 6 | | Clod | Cole | C | N | Sum | | | Numbers | FE | AL | | |
| Swartswood | 5201 | 1964 | 8 | | Core | | W | N | Sum | | | Numbers | FE | AL | K | |
| Swartswood | 5204 | 1964 | 6 | | Core | | W | N | Sum | | | Numbers | FE | AL | K | |
| Swartswood | 5211 | 1964 | 8 | | Core | | W | N | Sum | | | Numbers | FE | AL | K | |
| Swartswood | 5212 | 1964 | 6 | | Core | | W | N | Sum | | | Numbers | FE | AL | K | |

Table 8 (Cont'd). Listing of partial data by soil series for characterized Pennsylvania pedons (see Thurman et al., 1994, for procedures). Blanks mean no analysis was done.

| Soil Series | County and Site Number | Year Sampled | Number of Percolation Holes | Calculated Hydraulic Conductivity | Bulk Density | Cole | Organic Carbon | | Kjeldahl Nitrogen | SUM | CEC | Clay Mineralogy | CBD Fe ₂ O ₃ | KCL AL | HNO ₃ K |
|-------------|------------------------|--------------|-----------------------------|-----------------------------------|--------------|------|----------------|--------------------|-------------------|-----|---------|-----------------|------------------------------------|--------|--------------------|
| | | | | | | | W-Walkley | Black C-Combustion | | | | | | | |
| Sweden | 4155 | 1983 | | HC | Clod | Cole | C | | Sum | | Numbers | FE | AL | | |
| Sweden | 4156 | 1983 | | HC | Clod | Cole | C | | Sum | | Numbers | FE | AL | | |
| Sweden | 5303 | 1983 | | HC | Clod | Cole | C | | Sum | | Numbers | | AL | | |
| Sweden | 5304 | 1983 | | HC | Clod | Cole | C | | Sum | | Numbers | | AL | | |
| Sweden | 5305 | 1983 | | | | | C | | Sum | | Numbers | FE | AL | | |
| Sweden | 5927 | 1983 | | | | | C | | Sum | | Numbers | FE | AL | | |
| Sweden | 5928 | 1983 | | | | | C | | Sum | | Numbers | FE | AL | | |
| Thorndale | 3814 | 1973 | | HC | Clod | Cole | C | N | Sum | | Numbers | | AL | | |
| Thorndale | 3816 | 1982 | | HC | Clod | Cole | C | | Sum | | Numbers | | AL | | |
| Thorndale | 3817 | 1982 | | HC | Clod | Cole | C | | Sum | | Numbers | | AL | | |
| Tilsit | 0307 | 1968 | 8 | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Tilsit | 1009 | 1969 | 7 | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Tilsit | 1010 | 1969 | 6 | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Tilsit | 2201 | 1964 | 7 | HC | Core | | W | N | Sum | | Numbers | FE | AL | | |
| Tioga | 2202 | 1964 | 8 | HC | Core | | W | N | Sum | | Numbers | FE | AL | | |
| Tioga | 5207 | 1964 | 6 | HC | Core | | W | N | Sum | | Numbers | FE | AL | | |
| Tioga | 5208 | 1964 | 6 | HC | Core | | W | N | Sum | | Numbers | FE | AL | | |
| Titusville | 2005 | 1965 | 6 | HC | Core | | W | N | Sum | | Numbers | FE | AL | | |
| Titusville | 2006 | 1965 | 8 | HC | Core | | W | N | Sum | | Numbers | FE | AL | | |
| Towhee | 0912 | 1968 | | HC | Clod | Cole | C | | Sum | | Numbers | | AL | | |
| Towhee | 0913 | 1968 | | HC | Clod | Cole | C | | Sum | | Numbers | | AL | | |
| Tunkhannock | 4144 | 1978 | | HC | Clod | Cole | C | | Sum | | Numbers | | AL | | |
| Tunkhannock | 4145 | 1978 | | HC | Clod | Cole | C | | Sum | | Numbers | | AL | | |
| Tyler | 2601 | 1964 | 8 | HC | Core | | W | N | Sum | | Numbers | FE | AL | | |
| Tyler | 2604 | 1964 | 8 | HC | Core | | W | N | Sum | | Numbers | FE | AL | | |
| Ungers | 3815 | 1982 | | HC | Clod | Cole | C | | Sum | | Numbers | | AL | | |
| Upshur | 0220 | 1972 | | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Upshur | 0223 | 1972 | | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Upshur | 1040 | 1973 | 8 | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Upshur | 6507 | 1962 | 5 | | Core | | W | N | Sum | | Numbers | | AL | | |
| Upshur | 6508 | 1962 | 6 | | Core | | W | N | Sum | | Numbers | | AL | | |
| Vandergrift | 0221 | 1972 | | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Vandergrift | 0308 | 1968 | 6 | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Vandergrift | 0309 | 1968 | 3 | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Vandergrift | 0401 | 1972 | 2 | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Vandergrift | 0402 | 1972 | 2 | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Vanderlip | 3101 | 1967 | 4 | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |

Table 8 (Cont'd). Listing of partial data by soil series for characterized Pennsylvania pedons (see Thurman et al., 1994, for procedures). Blanks mean no analysis was done.

| Soil Series | County and Site Number | Year Sampled | Number of Percolation Holes | Calculated Hydraulic Conductivity | Bulk Density | Cole | Organic Carbon | | Kjeldahl Nitrogen | SUM | CEC | Clay Mineralogy | CBD Fe ₂ O ₃ | KCL AL | HNO ₃ K |
|-------------|------------------------|--------------|-----------------------------|-----------------------------------|--------------|------|----------------|--------------------|-------------------|-----|---------|-----------------|------------------------------------|--------|--------------------|
| | | | | | | | W-Walkley | Black C-Combustion | | | | | | | |
| Vanderlip | 3102 | 1967 | 4 | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Volusia | 0814 | 1968 | 8 | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Volusia | 2504 | 1956 | | | Core | | W | N | Sum | NH4 | | FE | AL | | |
| Volusia | 3511 | 1980 | | HC | Clod | Cole | C | | Sum | | Numbers | FE | AL | | |
| Volusia | 3512 | 1980 | | HC | Clod | Cole | C | | Sum | | Numbers | FE | AL | | |
| Volusia | 3513 | 1980 | | HC | Clod | Cole | C | | Sum | | Numbers | FE | AL | | |
| Volusia | 3514 | 1980 | | HC | Clod | Cole | C | | Sum | | Numbers | FE | AL | | |
| Volusia | 4826 | 1967 | | HC | Clod | Cole | C | N | Sum | NH4 | Numbers | FE | AL | | |
| Volusia | 5813 | 1958 | | | Core | | W | N | Sum | NH4 | X's | FE | AL | | K |
| Volusia | 5814 | 1958 | | | Core | | W | N | Sum | NH4 | X's | FE | AL | | K |
| Warners | 2801 | 1965 | 8 | HC | Core | | W | N | Sum | | | | | | |
| Warners | 2802 | 1965 | 8 | HC | Core | | W | N | Sum | | | | | | |
| Washington | 3905 | 1959 | | | Core | | W | N | Sum | NH4 | X's | | | | K |
| Washington | 3910 | 1959 | | | Core | | W | N | Sum | NH4 | X's | | | | K |
| Washington | 3911 | 1959 | | | Core | | W | N | Sum | NH4 | X's | | | | K |
| Washington | 3912 | 1959 | | | Core | | W | N | Sum | NH4 | X's | | | | K |
| Washington | 4141 | 1977 | | | | | C | N | Sum | | | | AL | | |
| Watson | 1311 | 1957 | | | Core | | W | N | Sum | NH4 | X's | | | | K |
| Watson | 1313 | 1957 | | | Core | | W | N | Sum | NH4 | X's | | | | K |
| Watson | 1903 | 1959 | | | Core | | W | N | Sum | NH4 | Numbers | | | | K |
| Watson | 1907 | 1959 | | | Core | | W | N | Sum | NH4 | Numbers | | | | K |
| Watson | 1918 | 1960 | | | Core | | W | N | Sum | NH4 | Numbers | | | | K |
| Watson | 5502 | 1969 | 7 | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Wayland | 6210 | 1967 | | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Wayland | 6211 | 1967 | | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Wayland | 6212 | 1967 | | HC | Clod | Cole | C | N | Sum | | Numbers | FE | AL | | |
| Weikert | 0201 | 1965 | 6 | HC | Core | | W | N | Sum | | Numbers | FE | AL | | |
| Weikert | 0204 | 1965 | 7 | HC | Core | | W | N | Sum | | Numbers | FE | AL | | |
| Weikert | 1303 | 1957 | | | | | W | N | Sum | NH4 | X's | | | | K |
| Weikert | 1305 | 1957 | | | | | W | N | Sum | NH4 | X's | | | | K |
| Wellsboro | 1919 | 1960 | | | Core | | W | N | Sum | NH4 | Numbers | | | | K |
| Wellsboro | 1920 | 1960 | | | Core | | W | N | Sum | NH4 | Numbers | | | | K |
| Wellsboro | 3502 | 1966 | 7 | HC | Core | | W | N | Sum | NH4 | Numbers | FE | AL | | K |
| Wellsboro | 3504 | 1966 | 7 | HC | Core | | W | N | Sum | | Numbers | FE | AL | | |
| Wellsboro | 3506 | 1966 | 8 | HC | Core | | W | N | Sum | | Numbers | FE | AL | | |
| Wellsboro | 3509 | 1966 | 7 | HC | Core | | W | N | Sum | | Numbers | FE | AL | | |
| Wellsboro | 5804 | 1958 | | | Core | | W | N | Sum | NH4 | X's | | | | K |

Table 8 (Cont'd). Listing of partial data by soil series for characterized Pennsylvania pedons (see Thurman et al., 1994, for procedures). Blanks mean no analysis was done.

| Soil Series | County and Site Number | Year Sampled | Number of Percolation Holes | Calculated Hydraulic Conductivity | Bulk Density | Cole | Organic Carbon | | Kjeldahl Nitrogen | SUM | CEC | Clay Mineralogy | CBD Fe ₂ O ₃ | KCL AL | HNO ₃ K |
|--------------|------------------------|--------------|-----------------------------|-----------------------------------|--------------|------|----------------|--------------------|-------------------|-----|-----|-----------------|------------------------------------|--------|--------------------|
| | | | | | | | W-Walkley | Black C-Combustion | | | | | | | |
| Wellsboro | 5805 | 1958 | | | Core | | W | | N | Sum | NH4 | X's | | | K |
| Westmoreland | 0209 | 1965 | 7 | HC | Core | | W | | N | Sum | | Numbers | FE | AL | |
| Westmoreland | 6343 | 1972 | 8 | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Westmoreland | 6501 | 1958 | | | Core | | W | | N | Sum | | Numbers | | | K |
| Westmoreland | 6502 | 1958 | | | Core | | W | | N | Sum | NH4 | Numbers | | | K |
| Wharton | 1716 | 1973 | | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Wharton | 1717 | 1973 | | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | |
| Wharton | 2606 | 1964 | 6 | HC | Core | | W | | N | Sum | | Numbers | FE | | K |
| Wharton | 2607 | 1964 | 6 | HC | Core | | W | | N | Sum | | Numbers | FE | | K |
| Wharton | 3253 | 1961 | 4 | HC | Core | | W | | N | Sum | | Numbers | FE | | K |
| Wharton | 3257 | 1961 | 5 | HC | Core | | W | | N | Sum | | Numbers | FE | | K |
| Wharton | 6520 | 1972 | 8 | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | K |
| Wheeling | 4117 | 1974 | 8 | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | K |
| Wheeling | 4908 | 1974 | 8 | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | K |
| Wheeling | 4909 | 1974 | 8 | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | K |
| Williamson | 0807 | 1968 | 8 | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | K |
| Williamson | 0808 | 1968 | 8 | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | K |
| Wooster | 2003 | 1965 | 7 | HC | Core | | W | | N | Sum | | Numbers | FE | AL | K |
| Wooster | 2009 | 1965 | 5 | HC | Core | | W | | N | Sum | | Numbers | FE | AL | K |
| Wurtsboro | 4808 | 1967 | 5 | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | K |
| Wurtsboro | 4809 | 1967 | 6 | HC | Clod | Cole | C | | N | Sum | | Numbers | FE | AL | K |
| Wurtsboro | 5202 | 1964 | 7 | HC | Core | | W | | N | Sum | | Numbers | FE | | K |
| Wurtsboro | 5209 | 1964 | 8 | HC | Core | | W | | N | Sum | | Numbers | FE | | K |

Table 9. Bulk density and 0.3 atmosphere (atm) moisture content methods of the Soil Characterization Lab. In all years, 15 atmosphere moisture was done on < 2 mm material.

| Year Sampled | County | | Moist (0.3 atm) Bulk Density | | | | 0.3 atm Moisture | | | | Core 15 atm |
|-----------------|--------------|----|------------------------------|-----------|-------------|-----------|------------------|----------------|-------------|----------------|-------------------|
| | | | Core | | Clod | | Core | | Clod | | |
| | | | With RF§ | < 2 mm | With RF§ | < 2 mm | With RF§ | < 2 mm | With RF§ | < 2 mm | |
| 1955 | Lancaster* | 36 | | | | | | | | | |
| 1956 | Chester* | 15 | X | | | | | | | | |
| 1956 | Erie* | 25 | X | | | | | | | X | |
| 1957 | Carbon | 13 | | | | X | | | | X | |
| 1957 | York** | 67 | X | | | X | | | | X | |
| 1958 | Jefferson | 33 | X | | | X | | | | X | |
| 1958 | Susquehanna | 58 | X | | | | | | | X | |
| 1958 | Clinton | 18 | X | | | X | | | | X | |
| 1959 | Columbia | 19 | X | | | X | | | | X | |
| 1959 | Lehigh | 39 | X | | | X | | | | X | |
| 1959 | Delaware | 23 | X | | | X | | | | X | |
| 1960 | Montgomery | 46 | X | | | X | | | | X | |
| 1961 | Adams | 01 | X | X | | X | | | | X | X |
| 1961 | Indiana | 32 | X | | | X | | | | X | X |
| 1962 | Berks | 06 | X | | | X | | | | X | |
| 1962 | Fulton | 29 | X | | | X | | | | X | |
| 1962 | Westmoreland | 65 | X | | | X | | | | X | |
| 1963 | Mercer | 43 | X | X | | | | Core or < 2 mm | | Core or < 2 mm | |
| 1963 | Tioga | 59 | X | X | | | | Core or < 2 mm | | Core or < 2 mm | |
| 1964 | Centre | 14 | X | X | | X | | | | X | |
| 1964 | Pike | 52 | X | X | | X | | | | X | |
| 1964 | Dauphin | 22 | X | X | | X | | | | X | |
| 1964 | Fayette | 26 | X | X | | X | | | | X | |
| 1965 | Franklin | 28 | X | X | | X | | | | | |
| 1965 | Monroe | 45 | X | X | | X | | | | | |
| 1965 | Crawford | 20 | X | X | | X | | | | | |
| 1965 | Allegheny | 02 | X | X | | X | | | | | |
| 1966 | Schuylkill | 54 | X | X | ++ | ++ | X | X | | | |
| 1966 | Lackawanna | 35 | X | X | ++ | ++ | X | X | | | |
| 1966 | Venango | 61 | X | X | ++ | ++ | X | X | | | |
| 1966 | Washington | 63 | X | X | ++ | ++ | X | X | | | |
| 1967 | Huntingdon | 31 | | | X | X | | | X | X | |
| 1967 | Warren | 62 | | | X | X | | | X | X | |
| 1967 | Northampton | 48 | | | X | X | | | X | X | |
| 1968 | Armstrong | 03 | | | X | X | | | X | X | |
| 1968 | Bradford | 08 | | | X | X | | | X | X | |
| 1968 | Bucks | 09 | | | X | X | | | X | X | |
| 1969 | Bedford | 05 | | | X | X | | | X | X | |
| 1969 | Butler | 10 | | | X | X | | | X | X | |
| 1970 | Juniata | 34 | | | X | X | | | X | X | |
| 1970 | Mifflin | 44 | | | X | X | | | X | X | |
| 1970 | Perry | 50 | | | X | X | | | X | X | |
| 1971+ | | | | | X | X | | | X | X | |

+Since 1971 soils were no longer sampled on a county basis. They were sampled on a topic basis such as landslide soils, minesoils, etc. and these soils may have come from a number of counties some of which had been sampled previously.

++Only one clod was taken, in following years three were taken.

*Sampled and analyzed by the SCS. **Bulk density done by SCS. §RF = rock fragments.

Table 10. Map Unit Use File (MUUF) listing of soil series, number of characterized pedons, and acres per pedon in Pennsylvania. The MUUF was obtained in 1991 from Ed White of the USDA-SCS in Harrisburg and is complete for all counties in the state.

| Soil Series or Land Type | Number of Characterized Pedons | Acres in PA | Acres per Pedon | Soil Series or Land Type | Number of Characterized Pedons | Acres in PA | Acres per Pedon |
|--------------------------------|--------------------------------------|-------------------|-----------------------|--------------------------------|--------------------------------------|-------------------|-----------------------|
| Abbottstown | 2 | 77,765 | 38,882 | Buchanan | 8 | 617,682 | 77,210 |
| Airstrip | 0 | 150 | 0 | Bucks | 0 | 26,822 | 0 |
| Albrights | 4 | 111,472 | 27,868 | Burgin | 0 | 2,609 | 0 |
| Alden | 2 | 40,117 | 20,058 | Butlertown | 0 | 1,017 | 0 |
| Aldino | 0 | 354 | 0 | Calvert | 0 | 521 | 0 |
| Allegheny | 0 | 29,778 | 0 | Calvin | 3 | 231,803 | 77,268 |
| Allenwood | 11 | 47,128 | 4,284 | Cambridge | 1 | 79,922 | 79,922 |
| Allis | 2 | 4,257 | 2,128 | Canadice | 2 | 20,477 | 10,238 |
| Alluvial Land | 0 | 16,156 | 0 | Caneadea | 2 | 7,684 | 3,842 |
| Altavista | 0 | 643 | 0 | Canfield | 6 | 228,671 | 38,112 |
| Alton | 2 | 17,365 | 8,682 | Captina | 0 | 360 | 0 |
| Alvira | 5 | 136,567 | 27,313 | Cardiff | 2 | 7,235 | 3,618 |
| Andover | 6 | 112,925 | 18,821 | Carlisle | 0 | 13,565 | 0 |
| Aquepts | 0 | 2,600 | 0 | Catoctin | 0 | 15,465 | 0 |
| Arendtsville | 2 | 11,631 | 5,816 | Cavode | 8 | 397,337 | 49,667 |
| Arents | 0 | 9,713 | 0 | Cedarcreek | 0 | 3,151 | 0 |
| Armagh | 2 | 38,092 | 19,046 | Chagrin | 0 | 8,260 | 0 |
| Arnot | 2 | 102,018 | 51,009 | Chalfont | 2 | 12,730 | 6,365 |
| Ashton | 0 | 6,286 | 0 | Chavies | 1 | 8,777 | 8,777 |
| Atherton | 0 | 2,699 | 0 | Chenango | 5 | 137,617 | 27,523 |
| Athol | 2 | 11,448 | 5,724 | Chester | 12 | 282,399 | 23,533 |
| Atkins | 3 | 228,599 | 76,200 | Chewacla | 0 | 25,996 | 0 |
| Baile | 0 | 12,090 | 0 | Chili | 0 | 17,242 | 0 |
| Barbour | 2 | 37,396 | 18,698 | Chippewa | 6 | 85,611 | 14,268 |
| Basher | 2 | 79,007 | 39,504 | Chrome | 2 | 4,253 | 2,126 |
| Bath | 4 | 89,874 | 22,468 | Clarksburg | 11 | 86,195 | 7,836 |
| Beach | 0 | 376 | 0 | Clay Mines | 0 | 133 | 0 |
| Beach Sand | 0 | 1,072 | 0 | Clymer | 7 | 296,262 | 42,323 |
| Bedford | 0 | 8,380 | 0 | Codorus | 0 | 1,580 | 0 |
| Bedington | 9 | 166,912 | 18,546 | Collamer | 0 | 1,232 | 0 |
| Belmont | 0 | 2,093 | 0 | Comly | 3 | 33,624 | 11,208 |
| Beltsville | 0 | 1,872 | 0 | Comus | 0 | 1,985 | 0 |
| Benson | 0 | 9,616 | 0 | Conestoga | 2 | 53,807 | 26,904 |
| Berks | 12 | 817,992 | 68,166 | Congaree | 0 | 1,753 | 0 |
| Bermudian | 0 | 1,439 | 0 | Conotton | 2 | 68,064 | 34,032 |
| Berrien | 0 | 5,113 | 0 | Conowingo | 0 | 1,873 | 0 |
| Birdsall | 0 | 10,895 | 0 | Cookport | 16 | 815,751 | 50,984 |
| Birdsboro | 2 | 15,580 | 7,790 | Croton | 4 | 46,226 | 11,556 |
| Blairton | 5 | 47,714 | 9,543 | Culleoka | 4 | 352,234 | 88,058 |
| Bouldery | | | | Cut and Fill Land | 0 | 124,551 | 0 |
| Alluvial Land | 0 | 261 | 0 | Dalton | 0 | 11,336 | 0 |
| Bowmansville | 1 | 66,905 | 66,905 | Dilldown | 0 | 202 | 0 |
| Braceville | 1 | 56,250 | 56,250 | Dormont | 4 | 431,593 | 107,898 |
| Brandywine | 0 | 11,741 | 0 | Doylestown | 2 | 37,444 | 18,722 |
| Brecknock | 5 | 31,923 | 6,385 | Drifton | 0 | 6,859 | 0 |
| Brinkerton | 6 | 258,704 | 43,117 | Duffield | 11 | 203,295 | 18,481 |
| Brooke | 2 | 22,236 | 11,118 | Dumps | 0 | 30,723 | 0 |

Table 10 (Cont'd). Map Unit Use File (MUUF) listing of soil series, number of characterized pedons, and acres per pedon in Pennsylvania. The MUUF was obtained in 1991 from Ed White of the USDA-SCS in Harrisburg and is complete for all counties in the state.

| Soil Series or Land Type | Number of Characterized Pedons | Acres in PA | Acres per Pedon | Soil Series or Land Type | Number of Characterized Pedons | Acres in PA | Acres per Pedon |
|--------------------------------|--------------------------------------|-------------------|-----------------------|--------------------------------|--------------------------------------|-------------------|-----------------------|
| Duncannon | 8 | 14,210 | 1,776 | Highfield | 2 | 56,936 | 28,468 |
| Dune Sand | 0 | 574 | 0 | Histosols | 0 | 1,330 | 0 |
| Dunning | 2 | 6,031 | 3,016 | Hollinger | 4 | 16,909 | 4,227 |
| Dystrochrepts | 0 | 162,614 | 0 | Holly | 2 | 180,852 | 90,426 |
| Edgemont | 4 | 102,471 | 25,618 | Holston | 0 | 1,690 | 0 |
| Edom | 16 | 109,231 | 6,827 | Howard | 2 | 24,358 | 12,179 |
| Elioak | 2 | 16,603 | 8,302 | Howell | 0 | 11,349 | 0 |
| Elk | 0 | 5,977 | 0 | Hublersburg | 4 | 51,685 | 12,921 |
| Elkins | 0 | 600 | 0 | Huntington | 3 | 25,435 | 8,478 |
| Ellery | 1 | 14,033 | 14,033 | Iron Ore Pit | 0 | 790 | 0 |
| Elliber | 10 | 65,770 | 6,577 | Kanona | 0 | 5,590 | 0 |
| Empeyville | 0 | 5,668 | 0 | Kedron | 0 | 24,810 | 0 |
| Erie | 3 | 172,688 | 57,563 | Klinesville | 6 | 324,006 | 54,001 |
| Ernest | 10 | 689,066 | 68,907 | Kreamer | 10 | 16,690 | 1,669 |
| Escarpmnts | 0 | 3,392 | 0 | Lackawanna | 10 | 452,752 | 45,275 |
| Evendale | 6 | 7,262 | 1,210 | Laidig | 11 | 577,694 | 52,518 |
| Extremely Stony Land | 0 | 2,051 | 0 | Lakin | 2 | 1,656 | 828 |
| Fallsington | 0 | 2,005 | 0 | Lamington | 2 | 2,155 | 1,078 |
| Fleetwood | 0 | 11,782 | 0 | Langford | 3 | 36,267 | 12,089 |
| Fluvaquents | 0 | 29,499 | 0 | Lansdale | 4 | 66,807 | 16,702 |
| Fluvents | 0 | 9,241 | 0 | Lawrence | 0 | 7,815 | 0 |
| Fogelsville | 0 | 4,630 | 0 | Lawrenceville | 6 | 30,294 | 5,049 |
| Frankstown | 2 | 3,015 | 1,508 | Leadvale | 0 | 1,229 | 0 |
| Fredon | 0 | 19,369 | 0 | Leck Kill | 10 | 424,398 | 42,440 |
| Frenchtown | 4 | 187,845 | 46,961 | Leetonia | 13 | 92,992 | 7,153 |
| Fresh Water Marsh | 0 | 522 | 0 | Legore | 0 | 10,512 | 0 |
| Germania | 0 | 1,110 | 0 | Lehew | 0 | 152,164 | 0 |
| Gilpin | 6 | 1,613,830 | 268,972 | Lehigh | 2 | 57,189 | 28,594 |
| Ginat | 0 | 331 | 0 | Letort | 2 | 20,585 | 10,292 |
| Glenelg | 3 | 343,969 | 114,656 | Lewisberry | 4 | 54,971 | 13,743 |
| Glenford | 0 | 25,211 | 0 | Library | 4 | 8,364 | 2,091 |
| Glenville | 3 | 80,528 | 26,843 | Lickdale | 0 | 7,968 | 0 |
| Gravelly Terraces | 0 | 175 | 0 | Linden | 8 | 27,332 | 3,416 |
| Gresham | 6 | 11,577 | 1,930 | Lindsay | 4 | 38,621 | 9,655 |
| Guernsey | 5 | 191,875 | 38,375 | Litz | 0 | 17,015 | 0 |
| Gullied Land | 0 | 824 | 0 | Lobdell | 2 | 21,162 | 10,581 |
| Guthrie | 0 | 2,575 | 0 | Lordstown | 4 | 535,908 | 133,977 |
| Hagerstown | 23 | 451,669 | 19,638 | Loudonville | 0 | 23,022 | 0 |
| Halsey | 0 | 31,625 | 0 | Luray | 0 | 4,435 | 0 |
| Hanover | 0 | 148,122 | 0 | Made Land | 0 | 156,329 | 0 |
| Haplaquents | 0 | 1,445 | 0 | Mahoning | 0 | 354 | 0 |
| Hartleton | 4 | 436,078 | 109,020 | Manlius | 2 | 20,627 | 10,314 |
| Hartsells | 0 | 8,969 | 0 | Manor | 8 | 290,387 | 36,298 |
| Hatboro | 0 | 9,502 | 0 | Mardin | 6 | 429,712 | 71,619 |
| Haven | 0 | 11,565 | 0 | Markes | 0 | 6,359 | 0 |
| Hazleton | 25 | 2,739,178 | 109,567 | Marsh | 0 | 1,050 | 0 |
| | | | | Meckesville | 7 | 192,169 | 27,453 |

Table 10 (Cont'd). Map Unit Use File (MUUF) listing of soil series, number of characterized pedons, and acres per pedon in Pennsylvania. The MUUF was obtained in 1991 from Ed White of the USDA-SCS in Harrisburg and is complete for all counties in the state.

| Soil Series or Land Type | Number of Characterized Pedons | Acres in PA | Acres per Pedon | Soil Series or Land Type | Number of Characterized Pedons | Acres in PA | Acres per Pedon |
|--------------------------------|--------------------------------------|-------------------|-----------------------|--------------------------------|--------------------------------------|-------------------|-----------------------|
| Medifibrists | 0 | 1,950 | 0 | Pits And Quarries | 0 | 88,216 | 0 |
| Medihemists | 0 | 5,875 | 0 | Platea | 3 | 39,911 | 13,304 |
| Medisapristis | 0 | 5,403 | 0 | Pocono | 0 | 21,685 | 0 |
| Melvin | 4 | 40,658 | 10,164 | Pope | 10 | 86,196 | 8,620 |
| Mertz | 7 | 21,121 | 3,017 | Purdy | 3 | 23,427 | 7,809 |
| Middlebury | 0 | 17,662 | 0 | Rainsboro | 4 | 21,558 | 5,390 |
| Millheim | 2 | 4,815 | 2,408 | Ramsey | 0 | 5,945 | 0 |
| Mine Wash | 0 | 114 | 0 | Raritan | 2 | 6,385 | 3,192 |
| Miner | 0 | 1,311 | 0 | Ravenna | 3 | 293,678 | 97,893 |
| Minesoil | 25 | 183,094 | 7,324 | Rayne | 6 | 283,121 | 47,187 |
| Minora | 0 | 625 | 0 | Readington | 5 | 101,661 | 20,332 |
| Miscellaneous Areas | 0 | 5,575 | 0 | Reaville | 4 | 60,195 | 15,049 |
| Mixed Alluvium | 0 | 7,037 | 0 | Red Hook | 0 | 38,595 | 0 |
| Monongahela | 4 | 98,910 | 24,728 | Rexford | 0 | 25,398 | 0 |
| Montalto | 2 | 40,071 | 20,036 | Rimer | 0 | 7,917 | 0 |
| Montevallo | 0 | 46,649 | 0 | Riverhead | 0 | 2,923 | 0 |
| Morris | 5 | 586,239 | 117,248 | Riverwash | 0 | 4,659 | 0 |
| Morrison | 6 | 98,134 | 16,356 | Rock Outcrop | 0 | 73,162 | 0 |
| Mount Lucas | 2 | 33,961 | 16,980 | Rohrersville | 0 | 4,379 | 0 |
| Muck | 0 | 447 | 0 | Rowland | 3 | 25,641 | 8,547 |
| Muck And Peat | 0 | 1,225 | 0 | Rubble Land | 0 | 65,884 | 0 |
| Mucky Peat | 0 | 10,164 | 0 | Rushtown | 0 | 1,724 | 0 |
| Murrill | 7 | 128,204 | 18,315 | Ryder | 2 | 17,335 | 8,668 |
| Myersville | 0 | 7,305 | 0 | Sassafras | 2 | 168 | 84 |
| Natalie | 2 | 708 | 354 | Scio | 0 | 11,082 | 0 |
| Neshaminy | 5 | 70,899 | 14,180 | Sciotoville | 2 | 3,025 | 1,512 |
| Newark | 0 | 45,679 | 0 | Sequatchie | 0 | 5,737 | 0 |
| Nolin | 1 | 17,746 | 17,746 | Sheffield | 2 | 29,350 | 14,675 |
| Nolo | 6 | 42,749 | 7,125 | Shelmadine | 4 | 61,985 | 15,496 |
| Norton | 0 | 3,524 | 0 | Shelocta | 0 | 464 | 0 |
| Norwich | 2 | 54,864 | 27,432 | Slag Dump | 0 | 942 | 0 |
| Ochrepts | 0 | 16,102 | 0 | Sloan | 0 | 11,839 | 0 |
| Opequon | 4 | 73,359 | 18,340 | Steep Very | | | |
| Oquaga | 7 | 924,760 | 132,109 | Stony Land | 0 | 275 | 0 |
| Orrville | 0 | 9,060 | 0 | Steff | 2 | 6,370 | 3,185 |
| Othello | 0 | 477 | 0 | Steinsburg | 1 | 6,520 | 6,520 |
| Ottawa | 0 | 7,147 | 0 | Stet | 0 | 10,150 | 0 |
| Palms | 0 | 245 | 0 | Stony Alluvial Land | 0 | 12,854 | 0 |
| Papakating | 2 | 11,423 | 5,712 | Stony Land | 0 | 26,134 | 0 |
| Peat | 0 | 2,613 | 0 | Swartswood | 6 | 91,443 | 15,240 |
| Peat And Muck | 0 | 40 | 0 | Sweden | 7 | 456 | 65 |
| Pekin | 0 | 720 | 0 | Tannery Wastes | 0 | 170 | 0 |
| Penlaw | 3 | 9,440 | 3,147 | Terrace | | | |
| Penn | 8 | 210,044 | 26,256 | Escarpments | 0 | 500 | 0 |
| Pequea | 2 | 13,692 | 6,846 | Thorndale | 3 | 3,365 | 1,122 |
| Phelps | 0 | 25,013 | 0 | Tidal Marsh | 0 | 1,280 | 0 |
| Philo | 4 | 145,896 | 36,474 | Tilsit | 3 | 26,124 | 8,708 |

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