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Soil Climate Regimes of Pennsylvania

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William J. Waltman, Edward J. Ciolkosz, Maurice J. Mausbach, Mark D. Svoboda, Douglas A. Miller, and Philip J. Kolb

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Introduction

The landscapes of Pennsylvania reflect a complex history of geomorphic and climatic events, which also have affected soil and ecosystem development significantly. The interaction of soil, climate, and landscape produces considerable natural resource diversity, which Pennsylvania's eight major land resource areas (MLRAs) (Figure 1) encompass.

For many years (USDA, 1941), scientists have recognized that orographic effects and rainshadows create many of Pennsylvania's patterns of natural and agro-ecosystems. Both global and local processes greatly affect Pennsylvania's present climatic patterns. At the local scale, topography strongly influences precipitation, growing degree-days, and frost-free periods, and landscape models can predict these patterns reasonably well (Roth, 1991; Ollinger et al., 1995).

Marbut (1935) and Jenny (1941; 1980) described many of the earliest relationships between climate and soils. For example, Jenny (1941;1980) drew quantitative relationships between soil organic matter, nitrogen content, clay content, carbonate accumulation, leaching, and aggregation with climatic parameters, largely on a physiographic basis. Using contemporary soil characterization and climate databases, geographic information systems and terrain models can readily test many of these relationships and provide new quantitative interpretations.

As local topography modifies both the continental and maritime climatic character, the moisture and temperature characteristics of soils and the pathways of soil development depart from the broader generalizations. In Pennsylvania, quantifying the effects of microclimate on soils can lead to better recommendations about tillage/conservation practices and cropping systems, as well as lead to a better understanding of soil quality.

During the soil survey of Pennsylvania, soil climate was treated as a static property. Thus, soil climate information has had little impact on the interpretations and uses of Pennsylvania soils. However, with current advances in precision farming and integrated crop management, there is a need to improve existing soil survey information and the evaluation of soil quality. Our objectives in this study were therefore: 1) to summarize the soil climatology of Pennsylvania from 1961 to 1990 normals, 2) to model and spatially estimate Pennsylvania's soil climate regimes, and 3) to derive agro-climatic regions that define relatively homogeneous areas of soil, climate, and landscape that affect agronomic crop production.

Methodology

Figure 1 gives the weather stations in Pennsylvania with 1961 to 1990 normals for both precipitation and temperature (Owenby and Ezell, 1992). Appendix 1 provides a comprehensive listing of all weather stations in Pennsylvania. Appendix 2 provides climate summaries from the Climate Data Access Facility (CDAF). All weather station data used in this report were obtained from the USDA/NRCS CDAF and served as the source for modeling applications.

Newhall Simulation Model

The USDA Natural Resources Conservation Service has used the Newhall Simulation Model (NSM) to estimate soil moisture regimes in *Soil Taxonomy* (Soil Survey Staff, 1975; Newhall and Berdanier, 1996). Van Wambeke (1981, 1982, and 1985) applied the model to map soil moisture regimes across Africa, South America, and Asia. Van Wambeke et al. (1992) modified the original model and introduced new subdivisions of soil moisture regimes and variable soil moisture storage.

The NSM was designed to run on monthly normals for precipitation and temperature. Generally, 30-year normals are most reasonable and appropriate. However, the NSM also can run on monthly records of individual years to develop frequency distributions of soil moisture regimes.

The NSM relies on a modified Thornthwaite (1948) approach for calculating potential evapotranspiration (PET). The model assumes PET to be uniformly distributed during each month. It also arbitrarily divides monthly precipitation between heavy and light events, since it defines "heavy precipitation" as equal to one-half of monthly precipitation and occuring as a fixed event in the middle of the month.

NSM also assumes that all precipitation events are effective (no runoff) unless the soil moisture control section is saturated; there is no subroutine for snowmelt. Similarly, the model assumes that the soil occurs on relatively flat or low slopes and is freely drained (not subject to perched or permanent watertables in the soil profile). Even with these constraints, however, the NSM provides reasonable estimations of soil moisture and temperature regimes, particularly in upland landscapes.

The Van Wambeke et al. (1992) modified version of NSM lacks a flexible relationship between mean annual air temperature and mean annual soil temperature at a depth of 50 cm. For the NSM

calculations in this publication, the 2.5°C relationship (between mean annual soil and air temperature) was changed to 1.2°C, following the recommendations of Carter and Ciolkosz (1980). Appendix 3 provides the data summaries and water balance diagrams from the Newhall Simulation Model for weather stations with 30-year normals of monthly precipitation and temperature and selected stations with discontinuous records in unique physiographic settings.

Terrain Modeling

The study used a terrain modeling approach in conjunction with the NSM (Van Wambeke et al., 1992) to spatially project climatic parameters, such as mean annual precipitation, air temperature, potential evapotranspiration, annual moisture surplus, mean summer moisture deficit, moisture index, biological windows, growing-degree days, and frost-free period, as well as soil climate regimes.

The transfer of climatic parameters to terrain (1:250000 USGS digital elevation models; DEMs) followed a methodology similar to that of Ollinger et al. (1995). Regression equations were derived from a population of weather stations with 1961 to 1990 normals in Pennsylvania and from adjacent states. The regressions were based on five landscape parameters: easting (longitude), northing (latitude), elevation, slope, and aspect. Using the **r.slope.aspect** program (from GRASS 4.13; USACOE, 1993), slope and aspect maps were derived from the 3 arc-second DEMs, and these maps provided site characteristics by coincidence for the weather stations modeled. MINITAB (1995) was used to develop the regression equations.

Results and Discussion

Tables 1 and 2 summarize the climatic characteristics and the Newhall Simulation Model results for Pennsylvania weather stations.

Precipitation Characteristics

On a statewide basis, from a population of 161 stations with 1961 to 1990 precipitation normals (only 85 stations have both precipitation and temperature normals for these years), mean annual precipitation averaged 1056 mm (41.56 in) and ranged from 1271 mm (50.86 in) at Long Pond to 796 mm (31.85 in) at the Covington 2 WSW station, which falls within the northcentral Pennsylvania rainshadow (Figure 2). Although lacking a 30-year normal, the Laurel Mountain Ski Lodge appears to be the highest precipitation and elevation station in Pennsylvania, receiving nearly 1342 mm (53.68 in) of moisture and occurring at an elevation of 817 m (2680 ft).

Orographic effects are pronounced in the Pocono Plateau and Laurel Highlands, where the Long Pond and Laurel Mt. Ski Lodge stations, respectively, occur (Figure 2). In portions of both the Pocono Plateau and the Laurel Highlands, precipitation often exceeds potential evapotranspiration through each month of the year, lacking a summer moisture deficit. Growing-season precipitation ranges from 481 mm (18.95 in) to 702 mm (27.62 in) across Pennsylvania.

Table 1. Climatic characteristics of Pennsylvania weather stations.

Variable	N	Mean	Median	Standard Deviation	Standard Error of the Mean	Minimum	Maximum
Elevation (ft)	85	980.0	980.0	570.0	61.8	10.0	2300.0
Aspect (degrees)	85	167.0	177.0	125.0	13.5	0.0	360.0
Slope (%)	85	14.6	12.0	7.0	0.8	0.0	44.0
PPT (in)	85	41.7	41.7	3.6	0.4	32.3	48.6
PPT (mm)	85	1059.0	1059.0	90.7	9.8	820.0	1234.0
MAAT (°F)	85	48.9	48.9	2.9	0.3	42.9	55.9
PET (mm)	85	642.0	648.0	62.8	6.8	304.0	783.0
GDD (heat units)	85	2597.0	2653.0	495.0	53.6	1668.0	3817.0
FFP (days)	85	153.0	153.0	25.8	2.8	80.0	224.0
MSD (mm)	85	-63.9	-68.8	46.4	5.0	-155.0	16.0
BIO5 (days)	85	219.0	219.0	15.8	1.7	186.0	252.0
AMD (mm)	85	416.0	397.0	116.0	12.5	201.0	692.0
PPT DAYS (days)	85	79.0	76.0	11.0	1.2	62.0	105.0

PPT = mean annual precipitation; MAAT = mean annual air temperature; PET = potential evapotranspiration; GDD = growing degree days, base 50°F; FFP = frost-free period; MSD = mean summer deficit; BIO5= biological window at 5°C; AMD = annual water balance; PPT DAYS = days with precipitation > 2.5 mm (0.1 in.).

Table 2. Summary of Newhall Model results for Pennsylvania weather stations based on 1961-1990 normals (CDAF, 1992).

Weather Station	Soil Temperature Regime	Soil Moisture Regime	Biological Windows: Cumulative Days>5°C & moist in moisture control section	Biological Windows: Consecutive Days>8°C & moist in moisture control section	Mean Annual Precipitation (MAP) (mm)	Potential Evapotranspiration (PET) (mm)	MAP-PET (Moisture Surplus/ Deficit) (mm)
Allentown WSO AP	Mesic	Udic	231	211	1105	690	415
Altoona FAA AP	Mesic	Udic	224	204	935	657	278
Bakerstown 3 WNW	Mesic	Udic	224	205	984	688	326
Bloserville 1 N	Mesic	Udic	231	211	998	684	314
Bradford FAA AP	Frigid	Udic	189	170	1138	556	582
Bradford 5 SW RES 5	Frigid	Udic	188	168	1134	585	579
Brookville Sewage Plant	Mesic	Udic	204	184	1109	600	509
Burgettstown 2 W	Mesic	Udic	218	195	1008	626	382
Carrolltown 2 SSE	Frigid	Udic	191	173	1067	568	499
Chambersburg 1 ESE	Mesic	Udic	235	215	996	692	304
Clarion 3 SE	Mesic	Udic	214	195	1136	633	503
Clermont 4 NW	Frigid	Udic	198	178	1147	578	569
Confluence 1 SW Dam	Mesic	Udic	219	197	1125	636	489
Corry	Mesic	Udic	209	189	1204	610	594
Coudersport 4 NW	Frigid	Udic	197	178	1035	575	460
Devault 1 W	Mesic	Udic	236	217	1118	708	410
Donegal 2 NW	Mesic	Udic	212	190	1165	616	549
Donora 1 SW	Mesic	Udic	246	226	917	717	200
DuBois FAA AP	Mesic	Udic	208	190	1067	619	448
Ebensburg Sewage Plant	Mesic	Udic	212	190	1234	608	626
Erie WSO AP	Mesic	Udic	221	201	1055	653	402
Everett	Mesic	Udic	223	201	911	654	257
Ford City 4 S Dam	Mesic	Udic	219	198	1028	639	389
Francis E. Walter Dan	Mesic	Udic	197	179	1094	581	513
Franklin	Mesic	Udic	213	193	1091	629	462
Freeland	Mesic	Udic	199	181	1167	589	578
Graterford 1 E	Mesic	Udic	231	210	1065	680	385
Greenville 2 NE	Mesic	Udic	214	196	979	640	339
Hamburg	Mesic	Udic	221	199	1225	651	574
Hanover	Mesic	Udic	229	220	989	714	275
Harrisburg FAA AP	Mesic	Udic	238	221	1029	723	306
Hawley 1 E	Mesic	Udic	206	185	997	598	399
Holtwood	Mesic	Udic	231	221	927	724	203
Indiana 3 SE	Mesic	Udic	225	204	1151	652	499
Jamestown 2 NW	Mesic	Udic	210	191	1016	621	395
Johnstown	Mesic	Udic	233	214	1213	689	524
Kane 1 NNE	Frigid	Udic	188	167	1159	553	606
Kegg	Mesic	Udic	232	212	927	676	251
Lancaster 2 NE	Mesic	Udic	235	214	1047	697	350
Landisville	Mesic	Udic	238	217	1038	699	339
Laurelton State Village	Mesic	Udic	229	211	1082	685	397
Lebanon 2 W	Mesic	Udic	233	212	1083	691	392
Lewistown	Mesic	Udic	229	210	978	681	297
Madera 2 SE	Mesic	Udic	198	186	964	581	383
Marcus Hook	Mesic	Udic	252	237	1078	783	295
Marion Center 2 SE	Mesic	Udic	206	182	1233	608	625
Matamoras	Mesic	Udic	217	199	1110	651	459
Meadville 1 S	Mesic	Udic	207	187	1131	609	622
Mercer	Mesic	Udic	212	192	1070	627	443

(continues)

Table 2, cont. Summary of Newhall Model results for Pennsylvania weather stations based on 1961-1990 normals (CDAF, 1992).

Weather Station	Soil Temperature Regime	Soil Moisture Regime	Biological Windows: Cumulative Days>5°C & moist in moisture control section	Biological Windows: Consecutive Days>8°C & moist in moisture control section	Mean Annual Precipitation (MAP) (mm)	Potential Evapotranspiration (PET) (mm)	MAP-PET (Moisture Surplus/ Deficit) (mm)
Mercersburg	Mesic	Udic	231	211	1050	682	368
Millville 2 SW	Mesic	Udic	212	192	1025	627	398
Montgomery Lock & Dam	Mesic	Udic	236	215	936	690	246
Montrose	Frigid	Udic	194	175	1079	578	601
Neshaminy Falls	Mesic	Udic	236	214	1206	695	511
New Castle 1 N	Mesic	Udic	215	194	949	638	311
Newport	Mesic	Udic	232	211	1024	685	339
Norristown	Mesic	Udic	246	114	1127	737	390
Palmertown	Mesic	Udic	230	209	1059	680	379
Philadelphia WSCMO AP	Mesic	Udic	250	230	1052	748	304
Philipsburg 8 E	Mesic	Udic	206	185	987	596	391
Phoenixville 1 E	Mesic	Udic	237	215	1081	695	386
Pittsburgh WSCMO AP	Mesic	Udic	229	208	936	671	265
Pleasant Mount 1 W	Frigid	Udic	186	166	1196	553	643
Putneyville 2 SE Dam	Mesic	Udic	212	191	1111	620	491
Reading WB City	Mesic	Udic	230	210	1136	688	448
Renovo	Mesic	Udic	218	198	1007	644	363
Ridgway	Mesic	Udic	199	177	1077	581	496
Salina 3 W	Mesic	Udic	219	197	994	641	353
Selinsgrove 2 S	Mesic	Udic	222	202	1025	660	365
Shippensburg	Mesic	Udic	226	220	958	715	243
Slippery Rock	Mesic	Udic	210	189	1018	615	403
State College	Mesic	Udic	217	198	952	648	304
Stoystown	Mesic	Udic	205	184	1040	594	446
Stroudsburg	Mesic	Udic	226	207	1209	676	533
Tionesta 2 SE Lake	Mesic	Udic	204	184	1086	603	483
Titusville Water Works	Mesic	Udic	197	177	1091	582	509
Tobyhanna	Frigid	Udic	193	172	1206	566	640
Towanda 1 ESE	Mesic	Udic	211	192	853	628	225
Uniontown 1 NE	Mesic	Udic	235	213	1072	676	396
Warren 1 SSW	Mesic	Udic	207	188	1119	618	501
Waynesburg 1 E	Mesic	Udic	226	201	988	649	339
Wellsboro 3 S	Frigid	Udic	194	174	820	568	252
West Chester 1 W	Mesic	Udic	243	223	1165	714	451
Wilkes-Barre-Scranton WSO AP	Mesic	Udic	220	201	919	666	264
Williamsport WSO AP	Mesic	Udic	225	205	1034	669	365
York 3 SSW Pump Stn	Mesic	Udic	244	222	1026	715	311
Weather Stations with Discontinuous Records or Less than 30-year Normals							
Austinburg 2W, 1949-81	Frigid	Typic Udic	196	175	852	577	275
Eagles Mere, 1949-87	Frigid	Typic Udic	194	178	1154	577	577
English Center, 1949-85	Mesic	Typic Udic	202	181	977	593	384
Laurel Mt. Ski Lodge, 1971-90	Mesic	Perudic	197	175	1342	578	764
Lock Haven, 1961-78	Mesic	Typic Udic	218	198	943	649	294
McKeesport, 1961-90	Mesic	Typic Udic	241	216	890	678	212
Mount Pocono 1N, 1927-60	Mesic	Perudic	197	180	1296	580	716
Springs 1SW, 1949-59	Mesic	Typic Udic	202	186	1160	584	576
Tamarack 2S, 1949-1961	Frigid	Typic Udic	182	182	922	586	336

Moisture Deficit and Surplus

Throughout most of Pennsylvania, a significant moisture deficit occurs in June, July, and August. This summer moisture difference (PREC-PET) ranges from +50 mm at Laurel Mt. Ski Lodge to -155 mm at Hanover.

Both Arkley (1967) and Birkeland (1974) have stressed that the water balance (PREC-PET) can be used to describe some of the climatic characteristics of a region that are important to soil formation. Seven stations representing a large area of Northcentral Pennsylvania have a summer moisture surplus (Figure 3), but only the Laurel Mt. Ski Lodge and Mount Pocono 2 N stations have a moisture surplus during each summer month, and thus meet the definition of a perudic soil moisture regime. Mean annual moisture surpluses occur at all weather stations and range from 200 mm to 643 mm (Figure 4). Potential evapotranspiration has a fairly narrow range across the state, from 553 to 783 mm (Figure 5). The magnitude of the summer moisture deficit has significance for agronomic crop production, particularly in the rainshadows of the Ridge and Valley Province, where soils with low moisture-holding capacity are common.

Soil Moisture Regimes

Soil moisture regime refers to the presence or absence of soil water held at a tension of < 15 bars (or between field capacity and permanent wilting point) in specific horizons during key periods of the year (Soil Survey Staff, 1975). Water held at tensions over 15 bars is not considered available to support most mesophytic plants. Soil moisture regime is an important soil property because of its impact on cropping systems, natural plant communities, and tillage/conservation practices. Ranney et al. (1973) found that moisture surplus (precipitation-potential evapotranspiration) correlated negatively with base saturation in Pennsylvania soils. Presumably, moisture surplus affects the intensity of leaching and removal of base cations.

Soil surveys generally have classified Pennsylvania soils as belonging to the Udic moisture regime. This definition implies that, in most years, the moisture control section (the major rooting zone) is not dry in any part for as long as 90 days, cumulatively (Soil Survey Staff, 1994). A soil with a Udic moisture regime also, in six or more years out of ten, is not dry in all parts for as long as 45 consecutive days in the four months following summer solstice.

This definition clearly is associated with soils of humid climates with well distributed rainfall. The Udic soil moisture regime will have a summer drying period in which stored moisture plus summer rainfall sustains plant growth, but evapotranspiration usually exceeds precipitation through June, July, and August.

The moisture regime is considered Perudic if precipitation exceeds evapotranspiration in all months, with only very brief periods when stored moisture is used and when moisture tension is < 1 bar. Traditionally, Perudic moisture regimes have not been recognized in the northeastern U.S.

Although the shale and limestone valleys in Pennsylvania may be associated largely with the Udic moisture regime, the subtle differences in summer moisture deficit, coupled with shallow to moderately deep soils, can modify the productivity or yield behavior of some soil map units. Table 3 illustrates this by comparing the soil moisture regimes of the Berks soil at two locations in MLRA 147, Northern Appalachian Ridges and Valleys, from corresponding weather stations.

For example, in a dominantly Udic moisture regime, the Berks soil, which is moderately deep to bedrock (50 to 100 cm) and loamy-skeletal (>35% rock fragments), has limited available water-holding capacities, commonly less than 100 mm.

From NSM runs, the soil-moisture regimes of the Berks soil were compared under varying available water-holding capacities (AWHC) of 100, 50, and 25 mm. The Berks soil with an AWHC of 25 mm (1 in.) classifies as having an Ustic moisture regime (dry in some or all parts of the soil for 90 or more cumulative days in most years), but soil profiles with an AWHC of 50 mm (2 in.) would remain classified at the drier end of the Udic moisture regime (Dry Tempudic, after Van Wambeke, 1985).

Similarly, as Table 3 points out, the Berks soils with 100 mm AWHC at Chambersburg 1 ESE classify as Dry Tempudic (dry in all parts of the soil for 30 to 45 days); whereas those at Williamsport WSO Airport, with the same AWHC, classify as Typic Udic (dry in all parts of the soil for under 30 days). Thus, on a north-south transect in the Ridge and Valley Province, and given the difference in potential evapotranspiration, the soil moisture regime of the Berks soils will not remain the same, even though the AWHC remains constant.

This comparison clearly suggests the possibility of "islands" of Ustic (Wet Tempustic; Van Wambeke, 1985) soil moisture regimes occurring in Pennsylvania on shallow to moderately deep soils. Most of these soils will classify as having a Wet Tempustic moisture regime; the soil moisture control section is moist in all parts for more than 45 consecutive days during the four months following

Table 3. Comparison of Newhall Simulation Model results for the Berks soils at Chambersburg 1 ESE and Williamsport WSO Airport, under varying water-holding capacities and with 1961 to 1990 normals.

AWHC	Number of cumulative days that the moisture control section is: During one year			When soil temp is above 5°C			Highest number of consecutive days the moisture control section is: Moist in some parts		Dry after summer solstice	Soil Moisture Regime*
(mm)	DRY	M/D	Moist	Dry	M/D	Moist	Year	T>8		
Chambersburg 1 ESE										
100	0	31	329	0	31	203	360	214	0	Dry Tempudic
50	20	38	302	20	38	176	294	83	0	Dry Tempudic
25	66	38	256	66	38	130	260	65	20	Wet Tempustic
Williamsport WSO Airport										
100	0	15	345	0	15	210	360	205	0	Typic Udic
50	11	41	308	11	41	173	326	91	7	Dry Tempudic (Dry "Udic")
25	60	39	261	60	39	126	262	61	19	Wet Tempustic (Wet "Ustic")

*following Van Wambeke (1985)

the summer solstice, and is not completely dry for more than 45 consecutive days during the same four months. Presently, most of these very low AWHC soils are still classified as having Udic moisture regimes, despite their droughtiness.

During drought years, Udic soil moisture regimes may shift to Ustic and even Xeric regimes. Table 4 illustrates the drought years at Towanda 1 ESE, a long-term weather station, and the resulting soil moisture regimes as classified by the Newhall Simulation Model. The Towanda 1 ESE station is located within the broad valley of the North Branch of the Susquehanna River, which acts as a rain shadow to the east of the high summits of the Allegheny Plateau.

For the period of record (1926-1995) at the Towanda 1 ESE, drought events represented about 10% of the years with shifts moving to Ustic or Xeric moisture regimes, and the remaining 90% of the years were classified as Typic Udic.

The Xeric soil moisture regime generally is associated with Mediterranean climates, where winters are moist and cool and summers are warm and dry (Soil Survey Staff, 1975). The soil moisture control section in the Xeric moisture regime is dry in all parts for 45 or more consecutive days within the four months following the summer solstice, and it is moist in all parts for 45 or more consecutive days within the four months following the winter solstice.

In Pennsylvania, moist winters recharge the soil's water-holding capacity following the summer droughts. The shifts of soil moisture regimes generally occur only for a single year, except for the period of 1963 to 1966 (see Table 5).

Table 4. Summary of soil moisture regimes during drought years at Towanda 1 ESE.

Year	Mean Annual Precipitation mm (in)	Soil Climate Regime
1941	655 (25.79)	Mesic, Wet Tempustic
1962	755 (29.72)	Mesic, Wet Tempustic
1963	680 (26.79)	Mesic, Wet Tempustic
1966	764 (30.06)	Mesic, Wet Tempustic
1980	628 (24.72)	Mesic, Typic Xeric
1988	634 (24.98)	Mesic, Dry Tempudic
1926-1990	876 (34.49)	Mesic, Typic Udic

In the Northern Piedmont Province (MLRA 148), the Landisville Agronomy Farm (Figure 6) also provides a good case study for the variation in soil moisture regimes. Table 5 summarizes the drought years and NSM results for the Landisville Agronomy Farm. It also indicates the severity of the droughts in comparison with the 1961 to 1990 normals.

Both 1957 and 1991 represent the most severe shifts in soil moisture regimes, Typic Udic to Typic Xeric; however, 1991 shows an annual moisture (PREC-PET) deficit. For the most part, drought events in Pennsylvania are associated with soil moisture shifts from Typic Udic to Dry Tempudic or Wet Tempustic. The shifts in soil moisture regimes also were associated with limited windows of bio-

logical activity (BIO5), which decreased from 238 days to 102 and 120 days, respectively.

The 1963 to 1966 years represented a prolonged shift in soil moisture regimes at Landisville. The summer moisture deficits and annual water balance for these years also indicate the differences in the severity of droughts and the degree of recovery following the growing season.

In comparison to the Landisville Agronomy Farm, the Larson Agricultural Research Center (Rock Springs) shows a similar drought in 1991, but the change in soil moisture regime was less dramatic (Table 6). Based upon data from Stevenson and Pennypacker (1995), the Larson Agricultural Research Center still retained an annual moisture surplus (119 mm) in 1991 when the Landisville Agronomy Farm experienced a deficit of 11 mm. However, both farms are in the middle of the Mesic soil temperature region rather than near the boundaries or transitions, and, as a result, neither location showed changes in soil temperature regime.

Both research farms classify as a Typic Mesic, Typic Udic soil climate regime, but their biological windows differ by 15 days at 5°C and differ by 14 days at 8°C. PET is about 59 mm higher at the Landisville Agronomy Farm, which corresponds with the MAAT being 1.4 °C higher. However, both research locations well represent the broader agroclimatic regions which surround them.

Another indicator of soil moisture regimes may be the cumulative days with >2.5 mm (0.1 in) of precipitation. Again, Laurel Mountain Ski Lodge

Table 5. Comparison of drought years with the 1961 to 1990 normals at the Landisville Agronomy Farm.

Year	MAAT (°C)	MSAT (°C)	PREC (mm)	GSP (mm)	PET (mm)	PREC-PET (mm)	MSD (mm)	BIO5 (days)	BIO8 (days)	Soil Moisture Regime
1957	10.8	22.0	708	308	690	18	-256	102	124	Typic Xeric
1963	9.4	21.1	775	392	668	107	-177	180	217	Dry Tempudic
1964	9.8	20.5	786	378	656	130	-212	101	132	Wet Tempustic
1965	9.7	20.7	693	352	656	37	-155	132	190	Dry Tempudic
1966	9.5	22.1	826	406	652	174	-252	168	186	Dry Tempudic
1991	13.1	23.9	762	341	773	-11	-303	120	114	Tyic Xeric
1961-1990	11.0	22.1	1038	593	699	339	-78	238	217	Typic Udic

MAAT= mean annual air temperature; MSAT = mean summer air temperature (June-July-August); GSP = growing season precipitation (April to September); BIO5 = cumulative days when soil is > 5°C and moist; BIO8 = consecutive days when soil is > 8°C and moist in some parts.

Table 6. Comparison of Newhall Simulation Model results for the Larson Agricultural Research Center (at Rock Springs) (Stevenson and Pennypacker, 1995; McKee, 1983).

Year	MAAT (°C)	MSAT (°C)	PREC (mm)	GSP (mm)	PET (mm)	PREC-PET (mm)	MSD (mm)	BIO5 (days)	BIO8 (days)	Soil Moisture Regime
1982	9.4	19.0	871	567	634	237	-3	224	199	Typic Udic
1983	10.9	21.5	1118	609	668	450	-143	226	212	Typic Udic
1984	9.5	20.1	1252	717	632	620	+123	207	199	Typic Udic
1985	10.0	19.6	996	492	666	330	-109	235	221	Typic Udic
1986	8.6	19.6	1107	628	642	465	-48	218	201	Typic Udic
1987	9.0	20.8	828	534	639	189	-133	218	213	Typic Udic
1988	9.7	19.8	944	608	630	314	-11	226	191	Typic Udic
1989	9.3	20.4	1079	673	645	434	+18	220	200	Typic Udic
1990	10.7	19.6	1248	657	654	594	-63	241	217	Typic Udic
1991	10.7	20.9	794	415	675	119	-192	174	208	Dry Tempudic
1992	9.0	18.7	817	415	608	209	-139	314	185	Typic Udic
1993	9.2	20.8	939	526	637	302	-217	160	192	Dry Tempudic
1994	9.0	20.6	975	565	640	335	-19	229	206	Typic Udic
1982-1994	9.6	20.1	998	569	641	357	-72	223	203	Typic Udic

MAAT= mean annual air temperature; MSAT = mean summer air temperature (June-July-August); GSP = growing season precipitation (April to September); BIO5 = cumulative days when soil is > 5°C and moist; BIO8 = consecutive days when soil is > 8°C and moist in some parts.

leads all stations with 112 days while Holtwood represents the minimum with only 62 days. The Ebensburg station was the only other monitoring site to exceed 100 days per year, averaging 105 days. The Towanda 1 ESE station averages only 65 days with more than 2.5 mm of precipitation, whereas, the nearby Eagles Mere station on the plateau summit averaged 83 days per year. Statewide, the annual mean for days with more than 2.5mm of precipitation is 79.

Another indicator of soil moisture regimes may be derived from the moisture index (Oliver, 1972; Henderson-Sellers and Robinson, 1986):

$$Im = \{(Precipitation/Potential\ Evapotranspiration) - 1\} \times 100$$

The moisture index originally was developed for the classification of world climates (Thornthwaite, 1948), but it may have sensitivity for subdividing the Udic soil moisture regime. From the weather station data, the average value of the moisture index was 65, but the index ranged from 28 to 116 (Figure 7). Values exceeding 100 correlated with annual moisture surpluses of about 575 mm, mean summer moisture surpluses of 3 mm, and approximately 95 days when precipitation was measurable (>2.5 mm).

The Thornthwaite System for Climate Classification (1948) classified climates with a moisture index of 100 and above as perhumid. In humid regions, the moisture index values range from 20 to 100 and, in subhumid regions, values range from -20 to 20 (Oliver, 1973).

Temperature Characteristics

Based upon the 1961 to 1990 normals, mean annual air temperature across all stations in Pennsylvania averaged 9.3°C (48.8°F) but ranged from 13.3°C (55.9°F) at Marcus Hook to a low of 6.1°C (42.9°F) at Pleasant Mount.

The plateau summits are associated with the cooler mean annual air temperatures, shorter frost-free periods (<100 days) (Figure 8), and less than 1800 growing-degree days (Figure 9). For example, the anomalous Clermont 4 NW station, which rests at an elevation of 492 m (1620 ft) has the shortest frost-free period, averaging just 80 days.

Cold air drainage from surrounding plateau summits shortens the growing season considerably in the dissected plateau country (Figure 9). In comparison, Marcus Hook, which has an elevation of 3 m (10 ft) AMSL and is buffered by the Delaware Bay, has the greatest frost-free period, averaging nearly 224 days. Similarly, growing-degree days range from 1668 heat units at Pleasant Mount 1 W to more than 3800 heat units at Marcus Hook (Figure 9).

In comparison to the predicted values (from terrain modeling) of growing degree-days and frost-free period, the Marcus Hook weather station appears to be a thermal island and strongly influenced by urbanization. From the residuals in the regression analysis, the Marcus Hook station's frost-free period is apparently extended by about 3 weeks and receives an additional 400 heat units in growing degree-days.

Biological Windows

Using the Newhall approach, the simulation estimates the cumulative days that the soil moisture control section is moist and greater than 5°C, as well as the highest number of consecutive days that some part of the soil moisture control section is both moist in some parts and greater than 8°C. For this study, both of these estimates are defined as "biological windows" of plant and microbial activity in soils.

For most microorganisms classified as mesophiles, a control mechanism shuts off protein synthesis if temperatures fall below 5°C. Thus, soil microbes largely carry out mineralization processes when temperatures are greater than 5°C and there is adequate soil moisture (Gilmour et al., 1977; Atlas and Bartha, 1993). In the humid temperate region, soil temperature is often the dominating variable, since soil moisture conditions rarely extend beyond the permanent wilting point for significant periods of time.

In Pennsylvania, based on 1961 to 1990 normals, again Marcus Hook would have the widest biological windows of 252 and 237 days, respectively. The Pleasant Mount 1 W station would have the shortest windows of biological activity, 186 and 166 days, respectively. The mean soil biological window at 5°C calculated for Pennsylvania weather stations is 219 days.

The concept of biological windows may serve as a useful bioclimatic indicator of inherent soil quality, since it integrates both soil moisture and temperature and, presumably, the window of time available for root and microbial activity (Figure 10). The biological windows would relate to soil processes, such as the mineralization of organic matter, soil carbon storage, nitrification, respiration, and root proliferation.

Although this concept is somewhat embedded in *Soil Taxonomy* (Soil Survey Staff, 1975; Smith, 1986), the calculation of soil biological windows has not been considered as a soil property or data

element within soil survey databases. It can, however, be extracted from the NSM and terrain modeled to a soil map unit.

Soil Climate Regimes

Based on the Newhall Simulation Model, using 1961 to 1990 normals and *ad hoc* subdivisions of both soil moisture and temperature regimes, about 12 soil climate regimes can be recognized in Pennsylvania (see Table 7 and Figures 11, 12, 13, and 14). The Mesic soil temperature regime was subdivided at 12°C into a cool and warm phase, following the Holdridge Life Zone separations for cool and warm temperate regions (Holdridge, 1964). The additional classes can provide more distinctions for soil and agronomic interpretations, which also can relate to local terrain features.

Although *Soil Taxonomy* (Soil Survey Staff, 1975;1994) does not recognize these subdivisions, the development of digital elevation models (DEMs) and climate databases indicates that more quantitative spatial and temporal approaches can apply to mapping soil climate regimes. In turn, this may lead to further refinement of taxonomic definitions and better correlation of soil map units.

As Table 8 shows, the Typic Udic, Typic Mesic soil climate regime represents over 41% of the state. Nearly 56% of the agricultural lands in Pennsylvania are associated with the Typic Udic, Typic Mesic soil climate regime. This soil climate regime is associated predominantly with MLRA 147 Northern Appalachian Ridges and Valleys, particularly the valley floor sections, and MLRA 126 Central Allegheny Plateau.

Since the number of weather stations with long-term records is very limited on the higher elevations of the Central Appalachians, the areas of Perudic, Frigid and Perudic, Frigid/Mesic probably are underestimated in our regression analysis. Our terrain modeling recognized only about 60,000 acres of perudic landscapes, but another 1.5 million acres fall within the category of "near or marginally" perudic (i.e., Perudic Udic category), representing about 5.5% of the state. These areas correlate with soil associations such as the Hazleton-Dekalb-Buchanan, Wurtsboro-Swartswood, Gilpin-Wharton-Ernest, Leck Kill-Calvin-Klinesville, and Volusia-Mardin-Lordstown, found in the Pennsylvania State Soil Geographic Database (USDA-SCS, 1993). Most of these areas occur on the High Plateau section of MLRA 127, on the Pocono Plateau of MLRA 140, and along the Chestnut Ridge and Laurel Highlands of MLRA 127.

Table 7. Proposed characteristics of *ad hoc* subdivisions for the Udic soil moisture regime.

Subdivision	Mean Summer Moisture Deficit/Surplus (mm)	Mean Annual Moisture Surplus (mm)	PREC > PET (June-July-Aug)
Perudic Udic	0 to +25	>575	fails in 1 or 2 months
Moist Udic	0 to -25	450 to 575	fails in 1 or 2 months
Typic Udic	-25 to -175	175 to 450	fails in all 3 months
Subhumid Udic	>-175	<175	fails in all 3 months

Table 8. Summary of soil climate regimes of Pennsylvania.

Soil Climate Regime	acres	hectares	% cover
1. Typic Udic, Warm-Phase Mesic	1,544,691	625,128	5.33
2. Typic Udic, Typic Mesic	11,925,580	4,826,216	41.13
3. Typic Udic/Moist Udic, Typic Mesic	3,182,625	1,287,980	10.98
4. Typic Udic/Moist Udic, Cool-Phase Mesic	4,688,248	1,897,308	16.17
5. Moist Udic, Cool-Phase Mesic	4,628,974	1,873,320	15.97
6. Moist Udic, Frigid/Mesic Transition	1,377,918	541,448	4.61
7. Perudic Udic, Cool-Phase Mesic	28,436	11,508	0.10
8. Perudic Udic, Frigid/Mesic Transition	1,481,533	599,568	5.11
9. Perudic Udic, Frigid	113,498	45,932	0.39
10. Perudic, Cool-Phase Mesic	32,993	13,352	0.11
11. Perudic, Frigid/Mesic Transition	15,211	6,156	0.05
12 . Perudic, Frigid	12,721	5,148	0.04
Total	28,992,401	11,733,064	100.00

Only 1.7% of the agricultural lands in Pennsylvania coincide with the Perudic Udic and Perudic soil moisture regimes; most of these agricultural lands are high elevation pastures or hay lands. Similarly, about 95% of the agricultural lands in Pennsylvania are associated with the Cool-Phase Mesic and warmer soil temperature regimes; 5% are associated with Frigid/Mesic transition and Frigid landscapes.

Nearly 6 million acres, or 21% of the landscapes, would fall within the Moist Udic class for soil moisture regime. These areas also are associated with the Cool-Phase Mesic and Frigid/Mesic Transition for soil temperature regime. Most of

these areas are associated with the ridgetops in MLRA 147 and plateau summits in MLRAs 127 and 140.

Table 9 summarizes the assignment of weather stations to the *ad hoc* soil moisture regimes based on 1961 to 1990 normals. In the NSM results (Appendix 3), the Moist Udic and Perudic Udic categories were classified as Typic Udic, which is consistent with *Soil Taxonomy* (Soil Survey Staff, 1975; 1994). In watershed planning, these distinctions can be quite useful in water supply forecasting, such as for identifying high yielding surface water supplies.

Table 9. Summary of soil moisture regimes with *ad hoc* subdivisions for Pennsylvania weather stations.

Moist Udic (0 to -25 mm)	Perudic Udic (0 to +25 mm) PREC > PET fails in at least one month	Perudic (moisture surplus in all months)
Brookville Sewage Plant	Bradford 5 SW 5 RES	Laurel Mt. Ski Lodge
Clarion	Bradford FAA Airport	Mount Pocono 2N
Corry	Clermont 4 NW	Kregar 4 SE
Coudersport 4 NW	Kane 1 NNE	
Donegal 2 NW	Marion Center 2 SE	
Eagles Mere	Pleasant Mount 1 W	
Ebensburg Sewage Plant	Springs 1 SW	
Francis E. Walter Dam		
Franklin		
Freeland		
Madera		
Meadville 1S		
Ridgway		
Tionesta 2 SE Lake		
Titusville Waterworks		
Tobyhanna		
Warren 1 SSW		

Agro-Climatic Regions

Agro-climatic regions are derived from coupling the annual water balance with growing-degree days (base 50°F), which led to the grouping of twelve regions in Pennsylvania (Fig. 15). The dominant agro-climatic region has between 351 and 450 mm of annual moisture surplus and ranges from 2601 to 3000 growing degree-days.

As Figure 15 illustrates, rainshadows occur in southcentral Pennsylvania in the Ridge and Valley Province and along the Susquehanna River Valley from Harrisburg to Holtwood. The Northern Coastal Plain (MLRA 149A), however, has the lowest annual moisture surplus and highest number of growing degree-days. The regions with the highest moisture surpluses and fewest growing degree-days seem to coincide with the areas of Northern Hardwood (Maple-Beech-Birch-Hemlock) forests, along with some of the boreal forest remnants in the Unglaciated and Glaciated Allegheny Plateaus (MLRAs 127 and 140), and compare favorably to maps of Braun (1950), Goodlett and Lyford (1963), and Powell et al. (1992).

Similarly, the central Susquehanna Valley from about Sunbury to Williamsport appears as an outlier and more closely approximates the Great Valley portion of the Ridge and Valley Province to the south. Also, the larger portion of the Ridge and Valley Province is agro-climatically similar to the Central Allegheny Plateau (MLRA 126).

About 11% of Pennsylvania's landscapes have fewer than 2000 growing degree-days on average, and 17% of the state receives more than 3000 heat units. Only 2% of the state, mostly restricted to Potter, Tioga, and Sullivan Counties, has less than 1800 heat units. Some ridge tops in the Ridge and Valley Province (i.e., Bald Eagle Mountain, Nittany Mountain, and the White Deer Mountains) appear climatically equivalent to portions of the Allegheny Plateau, with a greater annual moisture surplus (100 to 200 mm or more) and about 400 heat units less than the valley floors.

The mapping of agro-climatic regions helps define landscapes of similar or more homogenous character for adaptation of crops, cropping systems, and tillage management practices (Davidson, 1992). As Figure 15 illustrates, the Landisville Agronomy Farm and the Biglerville Fruit Research Station tend to belong to a similar agro-climatic setting, while the Rodale Research Center occurs along an agro-climatic edge or boundary. The Larson Agricultural Research Center perhaps represents the broadest agro-climatic region in the state (27%).

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Appendix 1
Comprehensive Listing of Weather Stations in Pennsylvania

Appendix 1. Comprehensive listing of weather stations in Pennsylvania from the Climate Data Access Facility (USDA/NRCS,1992).

No.	ST	CTY	Type	HUC	Station NCDC ID	Lat.	Long.	Elev. (ft)	Site Name
1	42	003	CLIM	05010009	0022	4032	07949	750	Acmetonia Lock 3
2	42	049	CLIM	04120101	0062	4154	08022	920	Albion
3	42	065	CLIM	05010006	0099	4112	07854	1600	Allens Mills
4	42	077	CLIM	02040106	0111	4036	07528	250	Allentown Gas Company
5	42	077	CLIM	02040106	0106	4039	07526	390	Allentown WSO AP
6	42	013	CLIM	02050302	0140	4030	07828	1320	Altoona 3 W
7	42	013	CLIM	02050302	0130	4018	07819	1480	Altoona FAA AP
8	42	013	CLIM	02050302	0134	4030	07829	1500	Altoona Horseshoe Curve
9	42	001	CLIM	02050306	0229	3955	07718	710	Arendtsville
10	42	009	CLIM	02070003	0256	3945	07826	920	Artemas
11	42	009	CLIM	02070003	0259	3945	07828	1250	Artemas 1 WNW
12	42	105	CLIM	02050202	0310	4141	07807	1780	Austin 4 NNW
13	42	101	CLIM	02050104	0313	4200	07732	1590	Austinburg 2 W
14	42	079	CLIM	02050107	0319	4121	07544	920	Avoca CAA AP
15	42	003	CLIM	05010009	0355	4039	07959	1230	Bakerstown 3 WNW
16	42	123	CLIM	05010003	0409	4140	07902	1320	Barnes
17	42	011	CLIM	02040203	0428	4026	07539	310	Barto 4 NW
18	42	079	CLIM	02040106	0455	4107	07544	1510	Bear Creek Dam
19	42	037	CLIM	02050107	0457	4050	07630	900	Bear Gap
20	42	007	CLIM	05030104	0475	4046	08019	760	Beaver Falls 1 NE
21	42	109	CLIM	02050301	0482	4046	07709	540	Beavertown 1 NE
22	42	011	CLIM	02040203	0488	4023	07537	460	Bechtelsville 1 ENE
23	42	035	CLIM	02050204	0499	4104	07734	570	Beech Creek Stn
24	42	027	CLIM	02050204	0530	4051	07747	1110	Bellefonte 4 S
25	42	025	CLIM	02040106	0560	4046	07544	740	Beltzville Dam
26	42	011	CLIM	02040203	0599	4031	07600	310	Berne
27	42	037	CLIM	02050107	0611	4104	07615	570	Berwick
28	42	077	CLIM	02040106	0629	4037	07523	240	Bethlehem
29	42	095	CLIM	02040106	0634	4036	07522	360	Bethlehem Lehigh Univ
30	42	001	CLIM	02050306	0656	3956	07715	720	Biglerville
31	42	099	CLIM	02050305	0725	4018	07735	820	Blain 5 SW
32	42	063	CLIM	05010007	0738	4026	07909	2020	Blairsville 5 E
33	42	063	CLIM	05010007	0734	4026	07911	1860	Blairsville 5 E No. 2
34	42	063	CLIM	05010007	0736	4027	07909	2040	Blairsville 6 ENE
35	42	089	CLIM	02040106	0743	4106	07536	1650	Blakeslee Corners
36	42	041	CLIM	02050305	0763	4016	07722	650	Bloserville 1 N
37	42	011	CLIM	02040203	0785	4023	07602	350	Blue Marsh Lake
38	42	111	CLIM	05010007	0821	4009	07902	1830	Boswell 1 SW
39	42	111	CLIM	05010007	0820	4010	07908	2570	Boswell 6 WNW
40	42	003	CLIM	05020005	0861	4024	07952	730	Braddock Lock 2
41	42	083	CLIM	05010001	0875	4159	07842	2250	Bradford 3 NW
42	42	083	CLIM	05010001	0873	4158	07844	2300	Bradford 4 NW H Summit
43	42	083	CLIM	05010001	0871	4155	07842	1530	Bradford 4 SW
44	42	083	CLIM	05010001	0868	4157	07844	1680	Bradford 4 W Res 1
45	42	083	CLIM	05010001	0869	4153	07839	1520	Bradford 5 S
46	42	083	CLIM	05010001	0867	4157	07839	1500	Bradford Cntrl Fire Stn

Appendix 1. Comprehensive listing of weather stations in Pennsylvania from the Climate Data Access Facility (USDA/NRCS,1992), cont.

No.	ST	CTY	Type	HUC	Station NCDC ID	Lat.	Long.	Elev. (ft)	Site Name
47	42	083	CLIM	05010001	0865	4148	07838	2140	Bradford FAA Airport
48	42	009	CLIM	02050303	0905	4000	07814	1350	Breezewood
49	42	065	CLIM	05010006	1002	4109	07906	1420	Brookville FAA Airport
50	42	065	CLIM	05010006	1004	4109	07905	1210	Brookville Sewage Plant
51	42	003	CLIM	05020005	1033	4018	07959	1040	Bruceton 1 S
52	42	111	CLIM	05010007	1073	4004	07850	2460	Buckstown 1 SE
53	42	017	CLIM	02040105	1080	4031	07512	560	Bucksville
54	42	009	CLIM	02050303	1087	3957	07839	1310	Buffalo Mills
55	42	125	CLIM	05030101	1105	4023	08026	980	Burgettstown 2 W
56	42	061	CLIM	02050304	1115	4005	07752	990	Burnt Cabins 2 NE
57	42	019	CLIM	05030105	1130	4052	07954	1100	Butler
58	42	019	CLIM	05030105	1139	4051	07955	1000	Butler 2 SW
59	42	019	CLIM	05030105	1133	4053	07959	1330	Butler 5 WNW
60	42	019	CLIM	05030105	1135	4051	07953	1140	Butler Substn
61	42	041	CLIM	02050305	1198	4015	07655	460	Camp Hill
62	42	081	CLIM	02050205	1203	4116	07720	590	Camp Kline
63	42	015	CLIM	02050106	1212	4139	07651	1160	Canton
64	42	015	CLIM	02050106	1215	4140	07652	1520	Canton 1 NW
65	42	041	CLIM	02050305	1234	4012	07713	470	Carlisle
66	42	021	CLIM	02050201	1255	4035	07842	2040	Carrolltown 2 SSE
67	42	105	CLIM	02050203	1262	4137	07745	2030	Carter Camp 2 W
68	42	081	CLIM	02050205	1301	4131	07727	800	Cedar Run
69	42	029	CLIM	02040205	1342	3952	07537	170	Chadds Ford
70	42	051	CLIM	05020006	1350	3951	07935	1980	Chalk Hill 2 ENE
71	42	055	CLIM	02070004	1354	3956	07738	640	Chambersburg 1 ESE
72	42	125	CLIM	05020005	1372	4008	07955	1040	Charleroi
73	42	129	CLIM	05020005	1377	4009	07954	750	Charleroi Lock 4
74	42	045	CLIM	02040202	1423	3951	07522	90	Chester
75	42	027	CLIM	02050204	1480	4103	07756	1390	Clarence
76	42	031	CLIM	05010005	1485	4112	07926	1110	Clarion 3 SW
77	42	077	CLIM	02040106	1505	4037	07539	670	Claussville
78	42	125	CLIM	05030106	1513	4006	08026	1240	Claysville 2 SW
79	42	125	CLIM	05030106	1512	4007	08028	1000	Claysville 3 W
80	42	033	CLIM	02050201	1519	4101	07827	1140	Clearfield
81	42	033	CLIM	02050201	1522	4107	07832	2120	Clearfield 8 NW Nursery
82	42	083	CLIM	05010001	1529	4141	07830	2100	Clermont
83	42	083	CLIM	05010001	1534	4144	07832	1620	Clermont 8 SW
84	42	107	CLIM	02040106	1572	4050	07556	1030	Coaldale 2 NW
85	42	033	CLIM	02050201	1581	4045	07832	1480	Coalport
86	42	029	CLIM	02040205	1594	3959	07549	340	Coatesville
87	42	029	CLIM	02040205	1589	3958	07550	340	Coatesville 1 SW
88	42	029	CLIM	02040205	1591	3959	07552	640	Coatesville 2 SW
89	42	081	CLIM	02050206	1631	4121	07706	640	Cogan Stn 2 N
90	42	071	CLIM	02050306	1675	4002	07630	300	Columbia
91	42	015	CLIM	02050106	1680	4150	07648	1100	Columbia Cross Roads
92	42	111	CLIM	05020006	1710	3950	07922	1330	Confluence 1 NW
93	42	111	CLIM	05020006	1705	3948	07922	1490	Confluence 1 SW Dam
94	42	039	CLIM	04120101	1720	4145	08022	970	Conneautville
95	42	039	CLIM	05010004	1719	4144	08017	1270	Conneautville 4 Ese
96	42	039	CLIM	05010004	1721	4146	08015	1110	Conneautville 6 E
97	42	051	CLIM	05020006	1723	4001	07936	870	Connellsville
98	42	051	CLIM	05020006	1728	4001	07934	1140	Connellsville 1 E
99	42	051	CLIM	05020006	1729	4001	07933	1300	Connellsville 2 E
100	42	051	CLIM	05020006	1726	4000	07936	900	Connellsville 2 SSW
101	42	051	CLIM	05020006	1727	4000	07935	1060	Connellsville 3
102	42	091	CLIM	02040203	1737	4004	07519	70	Conshohocken

Appendix 1. Comprehensive listing of weather stations in Pennsylvania from the Climate Data Access Facility (USDA/NRCS,1992), cont.

No.	ST	CTY	Type	HUC	Station NCDC ID	Lat.	Long.	Elev. (ft)	Site Name
103	42	031	CLIM	05010005	1749	4120	07913	---	Cooksburg
104	42	031	CLIM	05010005	1752	4121	07913	1460	Cooksburg 2 NNW
105	42	003	CLIM	05030101	1773	4030	08005	720	Coraopolis Neville Is
106	42	049	CLIM	05010001	1790	4155	07938	1440	Corry
107	42	105	CLIM	05010001	1804	4147	07801	1690	Coudersport 1 NNE
108	42	105	CLIM	05010001	1805	4148	07803	2220	Coudersport 2 NW
109	42	105	CLIM	05010001	1806	4150	07804	2300	Coudersport 4 NW
110	42	105	CLIM	05010001	1815	4151	07803	2180	Coudersport 5 NW
111	42	105	CLIM	05010001	1809	4146	07753	2420	Coudersport 7 E
112	42	117	CLIM	02050104	1833	4144	07707	1750	Covington 2 WSW
113	42	117	CLIM	02050104	1832	4145	07707	1580	Covington 3 W
114	42	063	CLIM	05010006	1881	4041	07912	1050	Creekside
115	42	021	CLIM	02050201	1894	4028	07834	2300	Cresson 1 E Summit
116	42	021	CLIM	02050201	1896	4027	07834	2230	Cresson 1 SE
117	42	021	CLIM	02050201	1895	4027	07834	2540	Cresson 2 SE
118	42	033	CLIM	02050201	1966	4103	07835	2220	Curwensville WB AP
119	42	083	CLIM	05010001	1978	4155	07841	2120	Custer City 2 W
120	42	093	CLIM	02050107	2013	4058	07637	460	Danville
121	42	043	CLIM	02050301	2029	4025	07656	1300	Dauphin 3 N
122	42	129	CLIM	05010008	2108	4018	07920	1060	Derry 4 SW
123	42	029	CLIM	02040203	2116	4005	07533	360	Devault 1 W
124	42	103	CLIM	02040104	2160	4113	07452	430	Dingmans Ferry
125	42	131	CLIM	02050106	2171	4134	07554	620	Dixon
126	42	129	CLIM	05010008	2183	4008	07924	1800	Donegal 2 NW
127	42	125	CLIM	05020005	2190	4010	07952	760	Donora 1 SW
128	42	017	CLIM	02040201	2221	4018	07508	360	Doylestown
129	42	101	CLIM	02040203	2236	3957	07511	30	Drexel Univ
130	42	023	CLIM	02050202	2245	4120	07808	820	Driftwood
131	42	033	CLIM	02050201	2265	4106	07838	1670	Du Bois 7 E
132	42	065	CLIM	05010006	2260	4111	07854	1810	Du Bois FAA AP
133	42	021	CLIM	05010007	2298	4017	07843	2360	Dunlo
134	42	113	CLIM	02050206	2323	4132	07624	1580	Dushore
135	42	113	CLIM	02050206	2320	4132	07622	1780	Dushore 2 E
136	42	113	CLIM	02050206	2325	4129	07625	1910	Dushore 2 SSW
137	42	113	CLIM	02050106	2324	4133	07621	1750	Dushore 3 NE
138	42	113	CLIM	02050206	2343	4124	07635	1990	Eagles Mere
139	42	031	CLIM	05010006	2363	4059	07937	850	East Brady
140	42	053	CLIM	05010003	2395	4134	07924	1080	East Hickory
141	42	089	CLIM	02040104	2442	4100	07510	520	East Stroudsburg Univer
142	42	099	CLIM	02050305	2459	4021	07733	2130	East Waterford 3 E
143	42	021	CLIM	05010007	2466	4029	07843	2090	Ebensburg
144	42	021	CLIM	05010007	2470	4028	07844	1940	Ebensburg Sewage Plant
145	42	103	CLIM	02040104	2501	4116	07500	1300	Edgemere
146	42	049	CLIM	05010004	2514	4152	08008	1220	Edinboro
147	42	049	CLIM	05010004	2520	4153	08005	1460	Edinboro 3 E
148	42	039	CLIM	05010004	2519	4150	08014	1140	Edinboro 6 SW
149	42	001	CLIM	02070009	2537	3948	07716	520	Eisenhower Nat Hist
150	42	083	CLIM	05010001	2541	4158	07823	1450	Eldred 1 N
151	42	083	CLIM	05010001	2548	4158	07820	1660	Eldred 3 ENE
152	42	071	CLIM	02050306	2560	4008	07637	480	Elizabethtown 1 SW
153	42	023	CLIM	02050202	2629	4130	07814	1040	Emporium
154	42	023	CLIM	02050202	2633	4131	07813	1160	Emporium 1 E
155	42	023	CLIM	02050202	2635	4132	07814	1560	Emporium 1 N
156	42	023	CLIM	02050202	2634	4128	07815	1740	Emporium 2 SSW
157	42	081	CLIM	02050205	2644	4126	07717	880	English Center
158	42	071	CLIM	02050306	2662	4010	07610	510	Ephrata

Appendix 1. Comprehensive listing of weather stations in Pennsylvania from the Climate Data Access Facility (USDA/NRCS,1992), cont.

No.	ST	CTY	Type	HUC	Station NCDC ID	Lat.	Long.	Elev. (ft)	Site Name
159	42	127	CLIM	02040101	2669	4151	07513	900	Equinunk
160	42	127	CLIM	02040101	2671	4152	07516	890	Equinunk 2 WNW
161	42	049	CLIM	04120101	2677	4207	08005	690	Erie WB City
162	42	049	CLIM	04120101	2682	4205	08011	730	Erie WSO AP
163	42	009	CLIM	02050303	2721	4001	07822	1000	Everett
164	42	085	CLIM	05030102	2814	4113	08031	850	Farrell Sharon
165	42	005	CLIM	05010006	2942	4043	07930	930	Ford City 4 S Dam
166	42	079	CLIM	02040106	3018	4107	07544	1510	Francis E Walter Dam
167	42	121	CLIM	05010003	3028	4123	07949	990	Franklin
168	42	011	CLIM	02040203	3047	4026	07540	950	Fredericksville 1 SE
169	42	079	CLIM	02040106	3056	4101	07554	1900	Freeland
170	42	105	CLIM	02050205	3130	4144	07738	1370	Galeton
171	42	123	CLIM	05010001	3158	4149	07927	1300	Garland 1 SW
172	42	011	CLIM	02050306	3189	4012	07550	400	Geigertown
173	42	017	CLIM	02040201	3200	4013	07456	140	George School
174	42	105	CLIM	02050203	3211	4139	07740	1940	Germania
175	42	001	CLIM	02070009	3218	3950	07714	540	Gettysburg
176	42	001	CLIM	02070009	3223	3948	07714	530	Gettysburg 1 S
177	42	083	CLIM	05010001	3237	4151	07836	2220	Gifford
178	42	047	CLIM	05010005	3310	4133	07836	1540	Glen Hazel 1 NE Dam
179	42	047	CLIM	05010005	3311	4134	07836	1730	Glen Hazel 2 NE Dam
180	42	033	CLIM	02050201	3316	4048	07830	1370	Glen Hope
181	42	133	CLIM	02050306	3330	3948	07644	620	Glen Rock
182	42	111	CLIM	02070002	3298	3949	07850	1610	Glencoe
183	42	029	CLIM	02040205	3321	4006	07547	440	Glenmoore
184	42	003	CLIM	05030101	3343	4033	08013	710	Glenwillard Dash Dam
185	42	107	CLIM	02050301	3372	4038	07630	1500	Good Springs 1 NW
186	42	107	CLIM	02050301	3379	4045	07620	900	Gordon
187	42	127	CLIM	02040106	3394	4115	07527	1890	Gouldsboro
188	42	043	CLIM	02050305	3422	4022	07641	510	Grantville 2 SW
189	42	091	CLIM	02040203	3435	4014	07527	150	Graterford
190	42	091	CLIM	02040203	3437	4014	07526	240	Graterford 1 E
191	42	043	CLIM	02050301	3438	4038	07643	760	Gratz 1 N
192	42	051	CLIM	05020005	3503	3947	07955	790	Greensboro Lock 7
193	42	129	CLIM	05020006	3515	4018	07931	1230	Greensburg 2 E
194	42	129	CLIM	05020006	3510	4016	07933	980	Greensburg 2 S
195	42	129	CLIM	05020006	3516	4017	07930	1240	Greensburg 3 SE Unity
196	42	085	CLIM	05030102	3526	4125	08022	1130	Greenville 2 NE
197	42	011	CLIM	02040203	3632	4033	07559	350	Hamburg
198	42	011	CLIM	02040203	3633	4034	07559	380	Hamburg 2
199	42	133	CLIM	02050306	3662	3948	07659	600	Hanover
200	42	133	CLIM	02050305	3699	4013	07651	340	Harrisburg FAA AP
201	42	043	CLIM	02050305	3704	4018	07654	320	Harrisburg North
202	42	127	CLIM	02040103	3758	4129	07510	890	Hawley 1 E
203	42	127	CLIM	02040103	3761	4128	07511	1200	Hawley 1 S Wallen Dam
204	42	127	CLIM	02040103	3764	4127	07516	1460	Hawley 4 SW
205	42	009	CLIM	02070003	3897	3944	07832	840	Hewitt 2 S
206	42	013	CLIM	02050302	4001	4026	07825	990	Hollidaysburg
207	42	127	CLIM	02040103	4008	4123	07526	1370	Hollisterville
208	42	071	CLIM	02050306	4019	3950	07620	200	Holtwood
209	42	063	CLIM	05010006	4027	4045	07906	1220	Home
210	42	127	CLIM	02040103	4043	4137	07519	1410	Honesdale 4 NW
211	42	127	CLIM	02040103	4044	4139	07516	1040	Honesdale 6 N
212	42	029	CLIM	02040205	4047	4005	07550	670	Honey Brook 1 S
213	42	111	CLIM	05010007	4058	4009	07855	1670	Hooversville
214	42	115	CLIM	02050106	4066	4143	07543	900	Hop Bottom 2 SE

Appendix 1. Comprehensive listing of weather stations in Pennsylvania from the Climate Data Access Facility (USDA/NRCS,1992), cont.

No.	ST	CTY	Type	HUC	Station NCDC ID	Lat.	Long.	Elev. (ft)	Site Name
215	42	011	CLIM	02040203	4076	4012	07547	550	Hopewell Village
216	42	027	CLIM	02050204	4099	4059	07743	680	Howard 4 SW
217	42	079	CLIM	02050107	4141	4115	07603	1180	Hunlock Creek 4 N
218	42	061	CLIM	02050302	4159	4030	07801	670	Huntingdon 1 WNW
219	42	041	CLIM	02050305	4166	4006	07718	620	Huntsdale
220	42	009	CLIM	02070002	4190	3949	07844	960	Hyndman
221	42	063	CLIM	05010007	4219	4037	07910	1300	Indiana
222	42	063	CLIM	05010007	4214	4036	07907	1100	Indiana 3 SE
223	42	129	CLIM	05020005	4276	4020	07942	1100	Irwin
224	42	117	CLIM	02050104	4304	4157	07701	1690	Jackson Summit
225	42	039	CLIM	05030102	4325	4130	08028	1040	Jamestown 2 NW
226	42	081	CLIM	02050205	4363	4112	07717	610	Jersey Shore
227	42	025	CLIM	02040106	4370	4052	07545	830	Jim Thorpe
228	42	021	CLIM	05010007	4385	4020	07855	1210	Johnstown
229	42	021	CLIM	05010007	4390	4019	07855	1280	Johnstown 2
230	42	087	CLIM	02050304	4425	4022	07749	560	Juniata House
231	42	083	CLIM	05010001	4432	4141	07848	1750	Kane 1 NNE
232	42	047	CLIM	05010005	4437	4136	07846	2010	Kane 5 SE
233	42	027	CLIM	02050201	4450	4107	07806	950	Karthaus
234	42	105	CLIM	05010001	4466	4141	07811	1840	Keating Summit
235	42	033	CLIM	02050201	4477	4106	07809	1370	Keewaydin
236	42	009	CLIM	02050303	4481	3959	07843	1280	Kegg
237	42	071	CLIM	02050306	4597	3951	07605	430	Kirkwood 1 SW
238	42	005	CLIM	05010006	4611	4049	07932	790	Kittanning Lock 7
239	42	129	CLIM	05020006	4667	4006	07914	2530	Kregar 4 SE
240	42	089	CLIM	02040106	4672	4054	07532	830	Kresgeville 2 W
241	42	083	CLIM	05010001	4706	4148	07840	2130	Lafayette Mc Kean Park
242	42	103	CLIM	02040104	4727	4113	07503	1360	Lake Minisink
243	42	127	CLIM	02040103	4733	4127	07516	1440	Lakeville 2 NNE
244	42	071	CLIM	02050306	4750	3959	07614	400	Lampeter Scs 1a
245	42	071	CLIM	02050306	4763	4003	07617	270	Lancaster 2 NE Filt Pl
246	42	071	CLIM	02050306	4758	4003	07617	260	Lancaster 2 NE Pump Stn
247	42	071	CLIM	02050306	4768	4004	07617	360	Lancaster 3 NE
248	42	071	CLIM	02050306	4778	4007	07626	360	Landisville
249	42	025	CLIM	02040203	4804	4050	07553	1140	Lansford
250	42	025	CLIM	02040203	4809	4050	07553	1040	Lansford Foremans Shop
251	42	129	CLIM	05010008	4832	4019	07923	1000	Latrobe
252	42	129	CLIM	05010007	4836	4010	07909	2680	Laurel Mtn Ski Lodge
253	42	119	CLIM	02050301	4853	4054	07713	800	Laurelton State Village
254	42	117	CLIM	02050104	4873	4158	07708	920	Lawrenceville 2 S
255	42	015	CLIM	02050106	4972	4141	07643	1040	Le Roy
256	42	075	CLIM	02050305	4896	4020	07628	450	Lebanon 2 W
257	42	075	CLIM	02050305	4891	4020	07629	460	Lebanon 3 W
258	42	075	CLIM	02050305	4893	4021	07629	590	Lebanon 4 WNW
259	42	033	CLIM	02050201	4904	4109	07820	2320	Lecontes Mills 5 NW
260	42	025	CLIM	02040106	4934	4050	07543	580	Lehighton
261	42	083	CLIM	05010001	4983	4152	07839	1560	Lewis Run
262	42	083	CLIM	05010001	4984	4150	07839	1740	Lewis Run 3 SE
263	42	087	CLIM	02050304	4992	4035	07735	460	Lewistown
264	42	039	CLIM	05030102	5050	4139	08026	1030	Linesville 1 S
265	42	035	CLIM	02050204	5104	4108	07725	550	Lock Haven
266	42	035	CLIM	02050204	5109	4107	07727	570	Lock Haven Sew Plt
267	42	089	CLIM	02040106	5160	4103	07530	1860	Long Pond 2 W
268	42	129	CLIM	05010008	5212	4027	07929	990	Loyalhanna Dam
269	42	129	CLIM	05020006	5259	4014	07924	1420	Lycippus 1 E
270	42	053	CLIM	05010003	5275	4136	07903	1300	Lynch

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No.	ST	CTY	Type	HUC	Station NCDC ID	Lat.	Long.	Elev. (ft)	Site Name
271	42	029	CLIM	02040205	5279	4005	07546		Lyndell 2 NW
272	42	033	CLIM	02050201	5336	4048	07824	1600	Madera 2 SE
273	42	033	CLIM	02050201	5342	4053	07844	1280	Mahaffey
274	42	107	CLIM	02050301	5344	4050	07608	1710	Mahanoy City 2 N
275	42	091	CLIM	02040202	5368	4011	07512	380	Maple Glen
276	42	061	CLIM	02050304	5381	4024	07756	580	Mapleton Depot
277	42	045	CLIM	02040202	5390	3949	07525	10	Marcus Hook
278	42	053	CLIM	05010005	5400	4129	07906	1780	Marienville
279	42	063	CLIM	05010006	5408	4045	07902	1610	Marion Center 2 SE
280	42	083	CLIM	05010001	5435	4151	07845	2120	Marshburg
281	42	013	CLIM	02050302	5454	4018	07819	1480	Martinsburg FAA AP
282	42	013	CLIM	02050302	5453	4018	07820	1360	Martinsburg 1 SW
283	42	103	CLIM	02040104	5470	4122	07442	400	Matamoras
284	42	025	CLIM	02040106	5479	4052	07545	830	Mauch Chunk
285	42	053	CLIM	05010003	5490	4136	07913	1150	Mayburg
286	42	057	CLIM	02070004	5526	3956	07800	860	McConnellsburg
287	42	061	CLIM	02050302	5534	4030	07808	2340	McConnellstown 4 NW
288	42	003	CLIM	05020006	5573	4021	07952	720	McKeesport
289	42	069	CLIM	02040106	5601	4113	07538	1910	Meadow Run Ponds
290	42	039	CLIM	05010004	5606	4138	08010	1070	Meadville 1 S
291	42	039	CLIM	05010004	5611	4143	08014	1130	Meadville 7 NW
292	42	047	CLIM	02050202	5627	4117	07824	1100	Medix Run
293	42	085	CLIM	05030102	5651	4113	08014	1220	Mercer
294	42	085	CLIM	05030102	5652	4117	08017	1320	Mercer 4 NW
295	42	085	CLIM	05030102	5650	4112	08021	1280	Mercer 6 W
296	42	085	CLIM	05030102	5654	4114	08015	1250	Mercer Hiway Shed
297	42	085	CLIM	05030102	5649	4117	08012	1290	Mercer WB Airport
298	42	055	CLIM	02070004	5662	3950	07754	540	Mercersburg
299	42	089	CLIM	02040106	5676	4058	07528	990	Merwinsburg
300	42	111	CLIM	05020006	5684	3949	07901	2100	Meyersdale
301	42	111	CLIM	05020006	5685	3949	07901	2290	Meyersdale 1 ENE
302	42	111	CLIM	05020006	5686	3947	07903	2000	Meyersdale 2 SSW
303	42	043	CLIM	02050305	5703	4012	07646	370	Middletown Olmsted Fld
304	42	007	CLIM	05030101	5710	4038	08028	690	Midland Dam 7 Lower
305	42	015	CLIM	02050105	5731	4156	07631	770	Milan
306	42	127	CLIM	02040101	5738	4140	07504	760	Milanville
307	42	043	CLIM	02050301	5775	4032	07655	450	Millersburg 2 E
308	42	027	CLIM	02050301	5790	4053	07729	1070	Millheim
309	42	037	CLIM	02050107	5816	4107	07632	650	Millville
310	42	037	CLIM	02050107	5817	4106	07634	860	Millville 2 SW
311	42	087	CLIM	02050304	5825	4044	07738	1030	Milroy
312	42	061	CLIM	02050302	5884	4042	07754	1200	Monroe Furnace
313	42	015	CLIM	02050106	5889	4142	07628	2200	Monroeton 2 S
314	42	007	CLIM	05030101	5902	4039	08023	690	Montgomery Lock And Dam
315	42	115	CLIM	02050106	5915	4150	07552	1560	Montrose
316	42	115	CLIM	02050106	5920	4150	07552	1850	Montrose
317	42	107	CLIM	02040203	5946	4046	07610	1460	Morea Colliery 1 SW
318	42	071	CLIM	02050306	5956	4009	07554	590	Morgantown
319	42	005	CLIM	05010006	5987	4054	07929	810	Mosgrove Lock 8
320	42	071	CLIM	02050306	6028	4014	07626	670	Mount Gretna 2 SE
321	42	129	CLIM	05020006	6042	4008	07933	1180	Mount Pleasant
322	42	051	CLIM	05020006	6046	4006	07926	1950	Mount Pleasant 6 SE
323	42	089	CLIM	02040106	6055	4109	07522	1920	Mount Pocono 2 N
324	42	087	CLIM	02050304	6067	4024	07753	820	Mount Union I N
325	42	079	CLIM	02050107	6090	4113	07608	1110	Muhlenburg 1 SE
326	42	003	CLIM	05020005	6111	4025	07944	860	Murrysville 2 SW

Appendix 1. Comprehensive listing of weather stations in Pennsylvania from the Climate Data Access Facility (USDA/NRCS,1992), cont.

No.	ST	CTY	Type	HUC	Station NCDC ID	Lat.	Long.	Elev. (ft)	Site Name
327	42	075	CLIM	02040203	6126	4022	07618	480	Myerstown
328	42	101	CLIM	02040202	6419	4005	07501	100	N E Philadelphia Arpt
329	42	003	CLIM	05010009	6151	4037	07943	760	Natrona Lock 4
330	42	003	CLIM	05010009	6152	4037	07943	800	Natrona Lock 4 Upper
331	42	061	CLIM	02050302	6174	4040	07755	900	Neffs Mills 4 NE
332	42	017	CLIM	02040201	6194	4009	07457	60	Neshaminy Falls
333	42	073	CLIM	05030102	6233	4101	08022	830	New Castle 1 N
334	42	133	CLIM	02050306	6289	3944	07630	780	New Park
335	42	129	CLIM	05020006	6310	4012	07938	950	New Stanton 1 SW
336	42	077	CLIM	02040106	6326	4041	07541	690	New Tripoli 4 E
337	42	055	CLIM	02050305	6225	4009	07737	740	Newburg 3 W
338	42	125	CLIM	05020005	6246	4005	07954	810	Newell
339	42	099	CLIM	02050304	6297	4029	07708	380	Newport
340	42	091	CLIM	02040203	6370	4007	07521	70	Norristown
341	42	049	CLIM	04120101	6396	4212	07949	1060	North East 2 SE
342	42	071	CLIM	02050306	6508	3948	07603	260	Octoraro Lake
343	42	015	CLIM	02050106	6622	4155	07618	1600	Orwell 2 NW
344	42	015	CLIM	02050106	6621	4155	07616	1620	Orwell 3 N
345	42	009	CLIM	02050303	6636	4010	07831	1150	Osterburg
346	42	091	CLIM	02040203	6681	4023	07530	300	Palm 3 SE
347	42	025	CLIM	02040106	6689	4048	07537	410	Palmerton
348	42	075	CLIM	02050305	6694	4018	07635	480	Palmyra
349	42	107	CLIM	02050301	6734	4051	07607	1930	Park Place WB
350	42	005	CLIM	05010006	6721	4105	07941	1060	Parker
351	42	031	CLIM	05010006	6724	4106	07940	1100	Parker 1 E
352	42	005	CLIM	05010006	6719	4106	07941	880	Parkers Landing
353	42	005	CLIM	05010006	6720	4106	07941	1010	Parkers Landing 2
354	42	103	CLIM	02040103	6762	4124	07514	1360	Paupack 2 WNW
355	42	103	CLIM	02040104	6786	4117	07506	1380	Pecks Pond
356	42	109	CLIM	02050301	6822	4052	07703	530	Penns Creek
357	42	017	CLIM	02040203	6840	4022	07518	400	Perkasie
358	42	101	CLIM	02040203	6910	3957	07511	20	Phila 23d & Market
359	42	101	CLIM	02040203	6884	3958	07510	100	Philadelphia Franklin
360	42	101	CLIM	02040202	6909	3957	07509	30	Philadelphia City
361	42	101	CLIM	02040203	6879	3957	07511	30	Philadelphia Drexel U
362	42	101	CLIM	02040203	6899	3955	07512	30	Philadelphia Point Bree
363	42	091	CLIM	02040203	6904	4002	07515	70	Philadelphia Shawmont
364	42	045	CLIM	02040202	6907	3958	07517	240	Philadelphia Upper Darby
365	42	101	CLIM	02040202	6889	3953	07514	10	Philadelphia WSCMO AP
366	42	101	CLIM	02040202	6888	3957	07509	210	Philadelphia WSFO
367	42	027	CLIM	02050201	6916	4055	07804	2000	Philipsburg 8 E
368	42	029	CLIM	02040203	6927	4007	07530	110	Phoenixville 1 E
369	42	103	CLIM	02040104	6936	4115	07504	1320	Pickerel Lake
370	42	079	CLIM	02050107	6939	4118	07608	1320	Pikes Creek
371	42	089	CLIM	02040106	6944	4102	07530	2220	Pimple Hill
372	42	107	CLIM	02050305	6954	4034	07622	540	Pine Grove 1 NE
373	42	041	CLIM	02050305	6955	4002	07718	890	Pine Grove Furnace
374	42	027	CLIM	02050302	6962	4043	07754	2060	Pine Grove Mills 1 S
375	42	003	CLIM	05020005	6992	4021	07956	1250	Pittsburgh Allegheny Co
376	42	003	CLIM	05030101	6993	4030	08013	1150	Pittsburgh WSCMO 2 AP
377	42	003	CLIM	05010009	6997	4027	08000	750	Pittsburgh WSO City
378	42	123	CLIM	05010001	7000	4147	07932	1600	Pittsfield 9 WSW
379	42	127	CLIM	02040103	7029	4144	07527	1800	Pleasant Mount 1 W
380	42	083	CLIM	05010001	7103	4149	07817	1480	Port Allegany
381	42	083	CLIM	05010001	7108	4147	07817	1580	Port Allegany 3 SW
382	42	107	CLIM	02040203	7116	4035	07602	450	Port Clinton

Appendix 1. Comprehensive listing of weather stations in Pennsylvania from the Climate Data Access Facility (USDA/NRCS,1992), cont.

No.	ST	CTY	Type	HUC	Station NCDC ID	Lat.	Long.	Elev. (ft)	Site Name
383	42	095	CLIM	02040105	7127	4055	07506	300	Portland
384	42	091	CLIM	02040203	7149	4015	07539	120	Pottstown
385	42	107	CLIM	02040203	7156	4041	07612	820	Pottsville
386	42	107	CLIM	02040203	7161	4042	07611	690	Pottsville
387	42	021	CLIM	02050201	7167	4039	07833	1520	Prince Gallitzin Sta Pk
388	42	065	CLIM	05010006	7217	4057	07900	1300	Punxsutawney 1
389	42	065	CLIM	05010006	7222	4056	07858	1360	Punxsutawney 2
390	42	005	CLIM	05010006	7229	4056	07917	1280	Putneyville 2 SE Dam
391	42	017	CLIM	02040105	7239	4026	07520	490	Quakertown
392	42	081	CLIM	02050206	7272	4130	07657	850	Ralston
393	42	105	CLIM	04130002	7310	4152	07752	2200	Raymond
394	42	061	CLIM	02050303	7312	4026	07800	840	Raystown Lake 2
395	42	011	CLIM	02040203	7322	4025	07556	40	Reading 4 NNW
396	42	011	CLIM	02040203	7318	4020	07558	270	Reading WB City
397	42	129	CLIM	05010008	7338	4010	07916	1330	Rector 3 SSW
398	42	035	CLIM	02050203	7409	4120	07744	660	Renovo
399	42	035	CLIM	02050203	7411	4122	07744	1640	Renovo 3 NNE
400	42	035	CLIM	02050204	7410	4114	07746	2030	Renovo 5 S
401	42	079	CLIM	02050107	7417	4112	07606	570	Retreat 1 SW
402	42	083	CLIM	05010001	7425	4154	07832	2250	Rew
403	42	059	CLIM	05020005	7443	3957	08000	780	Rices Landing L 6
404	42	059	CLIM	05020005	7444	3957	08000		Rices Landing L 6 Upper
405	42	047	CLIM	05010005	7477	4125	07845	1360	Ridgway
406	42	107	CLIM	02050107	7497	4052	07614	1090	Ringtown
407	42	007	CLIM	05030104	7540	4043	08018	900	Rochester 1 N
408	42	011	CLIM	02040203	7578	4033	07543	550	Rodale Research Center
409	42	115	CLIM	02050106	7694	4147	07603	1000	Rush
410	42	115	CLIM	02050106	7727	4147	07607	870	Rushville
411	42	123	CLIM	05010002	7729	4156	07908	1240	Russell
412	42	123	CLIM	05010002	7728	4156	07904	1500	Russell 3 E
413	42	117	CLIM	02050104	7730	4150	07728	200	Sabinsville 3 SE
414	42	071	CLIM	02050306	7732	3955	07623	270	Safe Harbor
415	42	005	CLIM	05010006	7735	4047	07914	1160	Sagamore
416	42	005	CLIM	05010006	7739	4046	07914	1320	Sagamore 1 S
417	42	129	CLIM	05010008	7782	4031	07933	1110	Salina 3 W
418	42	129	CLIM	05010008	7796	4027	07929	850	Saltsburg
419	42	009	CLIM	02050303	7846	4012	07815	780	Saxton
420	42	123	CLIM	05010001	7855	4155	07902	2120	Scandia 2 E
421	42	005	CLIM	05010006	7863	4041	07940	780	Schenley Lock 5
422	42	069	CLIM	02050107	7902	4125	07540	750	Scranton
423	42	079	CLIM	02050107	7905	4120	07544	930	Scranton WB AP
424	42	109	CLIM	02050301	7931	4046	07652	420	Selinsgrove 2 S
425	42	017	CLIM	02040203	7938	4023	07520	530	Sellersville 2 NW
426	42	111	CLIM	05020006	7942	4001	07918	2840	Seven Springs
427	42	129	CLIM	05010007	7956	4025	07901	1120	Seward
428	42	061	CLIM	02050304	7965	4011	07752	920	Shade Gap 2 NE
429	42	097	CLIM	02050301	7978	4048	07633	770	Shamokin
430	42	085	CLIM	05030102	8000	4116	08028	950	Sharpsville
431	42	123	CLIM	05010003	8026	4142	07908	1920	Sheffield 6 W
432	42	079	CLIM	02050107	8057	4112	07608	800	Shickshinny 3 N
433	42	041	CLIM	02050305	8073	4003	07713	680	Shippensburg
434	42	007	CLIM	05030101	8078	4037	08026	730	Shippingport WB
435	42	023	CLIM	02050202	8145	4119	07806	820	Sinnemahoning
436	42	105	CLIM	02050202	8155	4136	07810	1290	Sizerville
437	42	019	CLIM	05030105	8184	4103	08004	1250	Slippery Rock 1 SSW
438	42	083	CLIM	05010001	8203	4151	07829	1520	Smethport 4 N

Appendix 1. Comprehensive listing of weather stations in Pennsylvania from the Climate Data Access Facility (USDA/NRCS,1992), cont.

No.	ST	CTY	Type	HUC	Station NCDC ID	Lat.	Long.	Elev. (ft)	Site Name
439	42	083	CLIM	05010001	8190	4149	07826	1470	Smethport Hiway Shed
440	42	111	CLIM	05020006	8244	4000	07905	2100	Somerset
441	42	111	CLIM	05020006	8254	4001	07904	2110	Somerset 2 E Substn
442	42	111	CLIM	05020006	8249	4001	07905	2150	Somerset Water Works
443	42	127	CLIM	02040103	8275	4131	07524	1400	South Canaan 1 NE
444	42	055	CLIM	02070004	8308	3951	07730	1520	South Mountain
445	42	133	CLIM	02050306	8379	3952	07652	450	Spring Grove
446	42	091	CLIM	02040201	8388	4013	07513	240	Spring House
447	42	039	CLIM	04120101	8359	4148	08023	900	Springboro
448	42	111	CLIM	05020006	8395	3944	07910	2500	Springs 1 SW
449	42	061	CLIM	02050302	8405	4037	07809	760	Spruce Creek
450	42	027	CLIM	02050204	8449	4048	07752	1170	State College
451	42	023	CLIM	02050202	8469	4124	07801	930	Stevenson Dam
452	42	111	CLIM	05010007	8560	4006	07857	1800	Stoystown
453	42	011	CLIM	02040203	8570	4029	07611	600	Strausstown
454	42	063	CLIM	05010007	8589	4033	07855	1880	Strongstown
455	42	089	CLIM	02040104	8596	4100	07511	480	Stroudsburg
456	42	089	CLIM	02040104	8601	4059	07511	390	Stroudsburg
457	42	065	CLIM	05010006	8610	4101	07850	1320	Stump Creek
458	42	097	CLIM	02050301	8668	4051	07648	440	Sunbury
459	42	097	CLIM	02050107	8673	4054	07647	450	Sunbury Type A
460	42	115	CLIM	02050101	8692	4157	07536	910	Susquehanna
461	42	129	CLIM	05020006	8699	4014	07948	730	Sutersville
462	42	079	CLIM	02050107	8725	4117	07608	1340	Sweet Valley
463	42	107	CLIM	02040203	8758	4047	07559	930	Tamaqua
464	42	107	CLIM	02040203	8763	4051	07559	1120	Tamaqua 4 N Dam
465	42	035	CLIM	02050203	8770	4124	07751	2220	Tamarack 2 S Fire Tower
466	42	069	CLIM	02040106	8839	4111	07535	1680	Thornhurst 1 NW
467	42	053	CLIM	05010003	8873	4129	07926	1200	Tionesta 2 SE Lake
468	42	039	CLIM	05010003	8885	4138	07940	1550	Titusville
469	42	121	CLIM	05010003	8880	4136	07940	1530	Titusville 2 S
470	42	039	CLIM	05010003	8888	4138	07942	1220	Titusville Water Works
471	42	089	CLIM	02040106	8893	4111	07525	1940	Tobyhanna
472	42	123	CLIM	05010001	8897	4147	07928	1460	Torpedo
473	42	123	CLIM	05010001	8901	4147	07932	1740	Torpedo 4 W
474	42	015	CLIM	02050106	8905	4145	07625	750	Towanda 1 ESE
475	42	107	CLIM	02050301	8908	4035	07634	860	Tower City
476	42	107	CLIM	02050301	8912	4035	07631	840	Tower City 2 E
477	42	043	CLIM	02050305	8910	4031	07637	740	Tower City 5 SW
478	42	015	CLIM	02050106	8959	4147	07647	1110	Troy 1 NE
479	42	131	CLIM	02050106	8982	4134	07554	620	Tunkhannock
480	42	129	CLIM	05010007	8989	4027	07923	890	Tunnelton
481	42	083	CLIM	05010001	9002	4154	07816	1640	Turtlepoint 4 NE
482	42	013	CLIM	02050302	9022	4040	07813	890	Tyrone 1 SE
483	42	013	CLIM	02050302	9024	4043	07812	1020	Tyrone 4 NE Bald Eagle
484	42	049	CLIM	05010004	9041	4154	07952	1240	Union City 1 W
485	42	049	CLIM	05010004	9042	4154	07949	1400	Union City Filt Plant
486	42	051	CLIM	05020005	9050	3955	07943	960	Uniontown 1 NE
487	42	045	CLIM	02040202	9074	3958	07518	2000	Upper Darby
488	42	121	CLIM	05010004	9099	4126	07957	1030	Utica
489	42	121	CLIM	05010003	9115	4119	07939	1180	Van
490	42	005	CLIM	05010008	9128	4036	07933	800	Vandergrift
491	42	129	CLIM	05010008	9133	4036	07936	1000	Vandergrift 2 W
492	42	005	CLIM	05010008	9140	4035	07933	1120	Vandergrift 3 NE
493	42	011	CLIM	02040203	9196	4031	07552	350	Virginville
494	42	031	CLIM	05010005	9206	4125	07914	1620	Vowinckel

Appendix 1. Comprehensive listing of weather stations in Pennsylvania from the Climate Data Access Facility (USDA/NRCS,1992), cont.

No.	ST	CTY	Type	HUC	Station NCDC ID	Lat.	Long.	Elev. (ft)	Site Name
495	42	031	CLIM	05010005	9209	4124	07915	1610	Vowinckel 1 WSW
496	42	079	CLIM	02050107	9705	4120	07544	930	W Barre Scrant WSO AP
497	42	123	CLIM	05010001	9298	4151	07909	1210	Warren 1 SSW
498	42	125	CLIM	05030101	9312	4011	08014	1150	Washington
499	42	125	CLIM	05030101	9318	4011	08011	1280	Washington 3 NE
500	42	125	CLIM	05020005	9322	4006	08019	1240	Washington 6 SW
501	42	117	CLIM	02050205	9340	4137	07733	2420	Watrous 9 S Lee Fire Tower
502	42	097	CLIM	02050206	9345	4105	07652	490	Watsontown
503	42	059	CLIM	05020005	9367	3954	08010	940	Waynesburg 1 E
504	42	059	CLIM	05020005	9362	3954	08013	980	Waynesburg 2 W
505	42	057	CLIM	02070004	9380	3949	07805	910	Webster Mills 3 SW
506	42	047	CLIM	02050202	9385	4118	07829	1760	Weedville 1 N
507	42	117	CLIM	02050205	9407	4145	07717	1320	Wellsboro
508	42	117	CLIM	02050205	9412	4145	07716	1550	Wellsboro 2 E
509	42	117	CLIM	02050205	9408	4142	07716	1860	Wellsboro 3 S
510	42	133	CLIM	02050306	9420	4003	07657	500	Wellsville
511	42	011	CLIM	02040203	9430	4020	07606	410	Wernersville
512	42	029	CLIM	02040205	9464	3958	07538	450	West Chester 1 W
513	42	029	CLIM	02040205	9465	3958	07540	140	West Chester 2 W
514	42	029	CLIM	02040205	9503	3948	07548	450	West Grove 1 SE
515	42	053	CLIM	05010003	9507	4135	07924	1140	West Hickory
516	42	129	CLIM	05020006	9555	4013	07946	770	West Newton
517	42	117	CLIM	02050104	9490	4159	07734	1880	Westfield 5 S
518	42	005	CLIM	05010006	9655	4044	07924	1320	Whitesburg
519	42	079	CLIM	02050107	9702	4114	07553	660	Wilkes Barre
520	42	013	CLIM	02050302	9714	4028	07812	840	Williamsburg
521	42	081	CLIM	02050206	9733	4114	07700	500	Williamsport
522	42	081	CLIM	02050206	9723	4113	07657	1990	Williamsport 4 SE Tower
523	42	081	CLIM	02050206	9728	4115	07655	520	Williamsport WSO AP
524	42	043	CLIM	02050301	9741	4035	07638	780	Williamstown
525	42	043	CLIM	02050301	9742	4035	07637	1180	Williamstown 1 NE
526	42	095	CLIM	02040105	9781	4050	07518	720	Wind Gap 2 SW
527	42	009	CLIM	02050303	9823	4003	07832	1200	Wolfsburg
528	42	133	CLIM	02050306	9938	3956	07644	640	York 2 S Filter Plant
529	42	133	CLIM	02050306	9933	3955	07645	390	York 3 SSW Pump Stn
530	42	133	CLIM	02050306	9950	4007	07643	310	York Haven
531	42	123	CLIM	05010001	9966	4151	07919	1220	Youngsville
532	42	107	CLIM	02050301	9982	4042	07623	1700	Zerbey Airport
533	42	107	CLIM	02050107	9990	4054	07613	940	Zion Grove
534	42	077	CLIM	02040203	9994	4027	07528	820	Zionsville 1 SW
535	42	077	CLIM	02040203	9995	4028	07527	680	Zionsville 3 SE

Appendix 2
Temperature and Precipitation Tables for Pennsylvania Weather Stations (1961-1990 normal and selected stations with discontinuous periods of record)

WETS Station: ALLENTOWN WSO AP, PA 0106

Latitude: 4039 Longitude: 07526 Elevation: 390 ft
State FIPS/County(FIPS): 42077 County Name: Lehigh
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have		average number of days with 0.10 inch or more	total snow fall
	avg daily max	avg daily min	avg	avg	less than	more than		
January	34.3	18.7	26.5	3.16	1.99	3.82	5	9.7
February	37.7	20.9	29.3	2.95	2.21	3.45	5	10.2
March	48.9	29.9	39.4	3.28	2.39	3.86	6	4.7
April	60.5	38.8	49.7	3.52	2.40	4.20	6	0.9
May	71.3	49.4	60.4	4.20	2.41	5.11	7	0.0
June	80.0	58.7	69.3	3.75	2.68	4.43	7	0.0
July	84.5	63.5	74.0	4.14	2.67	4.98	6	0.0
August	82.3	61.9	72.1	4.28	2.77	5.15	6	0.0
September	75.1	54.2	64.6	3.93	2.45	4.75	5	0.0
October	63.9	42.7	53.3	2.94	1.93	3.53	5	0.1
November	51.9	34.4	43.1	3.88	2.56	4.66	6	1.6
December	39.2	24.4	31.8	3.49	2.27	4.20	6	6.2
Annual	—	—	—	-	39.73	46.81	-	
Average	60.8	41.4	51.1	-	-	-	-	
Total				43.52	-	-	70	33.0

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	3/27 to 11/13 231 days	4/7 to 11/2 209 days	4/19 to 10/18 182 days
70 percent *	3/22 to 11/18 241 days	4/3 to 11/5 216 days	4/14 to 10/23 191 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: ALTOONA FAA AP, PA 0130

Latitude: 4018 Longitude: 07819 Elevation: 1480 ft
State FIPS/County(FIPS): 42013 County Name: Blair
Start yr. - 1977 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have			
	avg daily max	avg daily min	avg	avg	less than	more than	average number of days with 0.10 inch or more	total snow fall
January	32.0	19.1	25.6	2.33	1.30	2.84	5	11.2
February	35.3	20.7	28.0	2.41	1.67	2.86	5	7.4
March	46.1	28.6	37.4	3.04	2.18	3.59	5	5.8
April	58.2	38.6	48.4	3.18	2.06	3.82	7	1.2
May	68.8	48.7	58.8	4.23	3.46	4.81	8	0.0
June	76.7	56.4	66.5	3.54	2.72	4.11	7	0.0
July	81.0	61.3	71.2	4.18	2.85	4.99	7	0.0
August	79.2	59.9	69.6	2.90	1.34	3.54	6	0.0
September	72.1	52.9	62.5	2.57	1.67	3.09	6	0.0
October	60.1	41.9	51.0	2.95	1.97	3.53	6	0.2
November	49.8	34.4	42.1	3.04	2.03	3.65	5	2.1
December	37.5	23.8	30.6	2.28	1.64	2.69	5	5.1
Annual	—	—	—	-	32.71	38.58		
Average	58.1	40.5	49.3	-	-	-		
Total				36.64	-	-	72	32.9

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/2 to 11/10 222 days	4/16 to 10/23 190 days	5/1 to 10/17 169 days
70 percent *	3/28 to 11/15 232 days	4/12 to 10/28 199 days	4/28 to 10/20 175 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: AUSTINBURG 2 W, PA 0313

Latitude: 4200 Longitude: 07732 Elevation: 1590 ft
State FIPS/County(FIPS): 42101 County Name: Philadelphia
Start yr. - 1949 End yr. - 1981

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have		average number	total
	avg daily max	avg daily min	avg	avg	less than	more than	of days with 0.10 inch or more	snow fall
January	30.4	11.4	20.9	1.99	1.26	2.40	5	8.8
February	31.3	10.3	20.8	1.97	1.33	2.36	5	10.3
March	42.7	22.2	32.4	2.52	1.85	2.95	7	7.8
April	55.2	31.3	43.3	2.68	1.82	3.20	6	2.6
May	66.5	41.2	53.9	3.19	2.31	3.77	8	0.3
June	75.4	49.2	62.3	3.59	2.31	4.33	6	0.0
July	79.7	53.3	66.5	3.35	2.52	3.91	7	0.0
August	78.2	51.6	64.9	3.13	2.25	3.70	6	0.0
September	71.2	44.5	57.9	3.19	2.02	3.86	6	0.0
October	59.9	34.8	47.3	2.81	1.77	3.39	6	0.2
November	46.8	28.6	37.7	2.74	1.94	3.24	6	4.2
December	35.1	17.4	26.3	2.41	1.70	2.85	6	9.1
Annual	—	—	—	-	25.26	36.08		-
Average	56.0	33.0	44.5	-	-	-		-
Total				33.58	-	-	74	43.3

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	5/ 1 to 10/15 167 days	5/10 to 9/30 143 days	5/26 to 9/15 112 days
70 percent *	4/25 to 10/21 179 days	5/ 5 to 10/ 5 153 days	5/21 to 9/20 122 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: BAKERSTOWN 3 WNW, PA 0355

Latitude: 4039 Longitude: 07959 Elevation: 01230 ft
State FIPS/County(FIPS):42003 County Name: Allegheny
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have			
	avg daily max	avg daily min	avg	avg	less than	more than	average number of days with 0.10 inch or more	total snow fall
January	35.5	17.4	26.4	2.48	1.29	3.03	7	9.7
February	38.9	19.2	29.0	2.40	1.60	2.87	7	9.6
March	50.3	28.3	39.3	3.11	2.06	3.73	7	4.9
April	62.0	37.7	49.9	3.20	2.14	3.83	7	0.7
May	72.0	47.4	59.7	4.23	3.08	4.98	9	0.1
June	80.1	55.4	67.7	3.84	2.46	4.62	7	0.0
July	83.6	60.2	71.9	4.00	2.75	4.76	7	0.0
August	82.0	58.6	70.3	3.22	2.40	3.77	6	0.0
September	75.9	52.0	64.0	3.09	1.99	3.72	6	0.0
October	64.7	41.1	52.9	2.67	1.85	3.18	6	0.1
November	52.2	33.5	42.8	3.25	2.12	3.90	7	2.4
December	39.7	23.1	31.4	2.95	2.22	3.45	7	6.8
Annual	—	—	—	-	29.13	39.98		-
Average	61.4	39.5	50.5	-	-	-		-
Total				38.44	-	-	83	34.2

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/10 to 11/ 4 207 days	4/23 to 10/26 185 days	5/ 6 to 10/11 159 days
70 percent *	4/ 6 to 11/ 8 216 days	4/19 to 10/29 193 days	5/ 1 to 10/16 168 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: BLOSERVILLE 1 N, PA 0763

Latitude: 4016 Longitude: 07722 Elevation: 00650 ft
State FIPS/County(FIPS): 42041 County Name: Cumberland,,
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
	avg daily max	avg daily min	avg	avg	30% chance will have less than	30% chance will have more than	average number of days with 0.10 inch or more	total snow fall
January	35.8	18.9	27.3	2.79	1.69	3.37	6	9.0
February	38.7	20.5	29.6	2.57	1.42	3.14	5	8.9
March	49.2	29.6	39.4	3.06	2.13	3.63	6	6.1
April	60.4	39.1	49.8	3.27	2.12	3.93	6	0.6
May	71.2	48.7	59.9	3.93	2.60	4.71	7	0.0
June	79.7	57.2	68.5	3.81	2.27	4.62	7	0.0
July	84.6	62.1	73.3	3.75	2.50	4.49	6	0.0
August	82.9	60.6	71.8	3.21	2.12	3.85	5	0.0
September	75.9	53.4	64.6	3.79	2.35	4.59	5	0.0
October	64.3	42.2	53.3	3.26	1.85	3.97	5	0.0
November	52.3	34.1	43.2	3.18	2.16	3.79	6	1.7
December	40.2	24.1	32.1	2.83	2.00	3.49	5	5.6
Annual	—	—	—	-	34.93	42.03		-
Average	61.3	40.9	51.1	-	-	-		-
Total				39.43	-	-	69	31.9

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	3/27 to 11/13 230 days	4/10 to 10/29 202 days	4/24 to 10/18 177 days
70 percent *	3/21 to 11/19 242 days	4/ 6 to 11/ 2 211 days	4/20 to 10/23 186 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: BRADFORD FAA AIRPORT, PA 0865

Latitude: 4148 Longitude: 07838 Elevation: 02140 ft
State FIPS/County(FIPS): 42083 County Name: Mckean
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have			
	avg daily max	avg daily min	avg	avg	less than	more than	average number of days with 0.10 inch or more	total snow fall
January	26.7	11.8	19.2	2.96	2.15	3.48	7	17.1
February	29.7	12.4	21.1	2.86	2.02	3.39	7	17.3
March	40.2	22.1	31.1	3.40	2.60	3.95	8	11.3
April	52.6	32.0	42.3	3.39	2.60	3.93	7	4.2
May	64.3	41.0	52.7	4.02	2.87	4.75	9	0.6
June	72.4	49.4	60.9	5.10	3.46	6.09	8	0.0
July	76.4	53.9	65.2	4.27	3.49	4.86	8	0.0
August	74.6	52.6	63.6	4.07	3.05	4.75	7	0.0
September	67.4	46.2	56.8	4.03	2.98	4.73	7	0.0
October	56.3	36.8	46.6	3.20	2.36	3.76	7	1.3
November	43.4	28.7	36.1	3.79	2.84	4.43	9	7.8
December	31.5	18.0	24.7	3.74	2.95	4.30	10	20.0
Annual	—	—	—	-	41.19	47.99	-	
Average	53.0	33.8	43.4	-	-	-	-	
Total				44.82	-	-	94	79.6

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/29 to 10/23 177 days	5/15 to 10/ 1 139 days	5/31 to 9/14 106 days
70 percent *	4/25 to 10/27 185 days	5/ 9 to 10/ 7 151 days	5/26 to 9/19 116 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: BROOKVILLE SEWAGE PLANT, PA 1004

Latitude: 4109 Longitude: 07905 Elevation: 1210 ft
State FIPS/County(FIPS): 42065 County Name: Jefferson
Start yr. - 1964 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have		average number	total
	avg daily max	avg daily min	avg	avg	less than	more than	of days with 0.10 inch or more	snow fall
January	33.7	15.4	24.6	2.70	1.79	3.23	7	13.4
February	37.4	16.1	26.8	2.51	1.69	3.00	6	11.1
March	48.2	25.0	36.6	3.45	2.59	4.03	8	6.6
April	60.8	33.9	47.3	3.39	2.48	3.99	8	1.4
May	70.8	43.4	57.1	4.32	3.11	5.10	9	0.0
June	78.3	51.6	65.0	4.95	2.92	6.01	8	0.0
July	81.9	56.1	69.0	4.78	3.56	5.59	8	0.0
August	80.2	55.2	67.7	4.08	3.15	4.73	7	0.0
September	73.7	49.0	61.3	3.95	2.94	4.63	7	0.0
October	62.6	37.9	50.3	3.21	2.42	3.75	7	0.0
November	50.7	31.2	41.0	3.56	2.61	4.19	7	2.5
December	38.5	21.9	30.2	3.49	2.52	4.11	8	9.8
Annual	—	—	—	-	39.90	47.31		
Average	59.7	36.4	48.1	-	-	-		
Total				44.39	-	-	90	44.7

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/23 to 10/24 184 days	5/ 2 to 10/15 166 days	5/21 to 9/27 129 days
70 percent *	4/19 to 10/28 192 days	4/29 to 10/19 173 days	5/17 to 10/ 1 138 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: BURGETTSTOWN 2 W, PA 1105

Latitude: 4023 Longitude: 08026 Elevation: 00980 ft
State FIPS/County(FIPS): 42125 County Name: Washington
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have			
	avg daily max	avg daily min	avg	avg	less than	more than	average number of days with 0.10 inch or more	total snow fall
January	34.8	13.3	24.1	2.53	1.79	3.00	6	8.0
February	37.1	14.4	25.7	2.36	1.51	2.84	6	8.0
March	49.4	24.8	37.1	3.32	2.44	3.90	8	3.9
April	60.5	33.3	46.9	3.34	2.41	3.94	7	0.1
May	71.6	42.1	56.8	3.90	2.84	4.59	8	0.0
June	79.0	51.2	65.1	3.74	2.61	4.44	7	0.0
July	82.9	55.8	69.3	4.23	3.18	4.94	7	0.0
August	80.7	54.7	67.7	3.68	2.43	4.41	6	0.0
September	74.5	48.0	61.2	3.18	1.80	3.87	6	0.0
October	63.4	36.4	49.9	2.75	1.78	3.30	6	0.1
November	51.7	30.0	40.8	3.26	2.31	3.87	7	0.7
December	39.6	21.4	30.5	2.80	2.12	3.27	7	4.4
Annual	—	—	—	-	28.58	43.40		
Average	60.4	35.4	47.9	-	-	-		
Total				39.08	-	-	81	25.3

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/23 to 10/24 184 days	5/ 4 to 10/13 161 days	5/20 to 9/27 130 days
70 percent *	4/20 to 10/28 191 days	4/30 to 10/17 170 days	5/16 to 10/ 2 139 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: CHAMBERSBURG 1 ESE, PA 1354

Latitude: 3956 Longitude: 07738 Elevation: 00640 ft
State FIPS/County(FIPS): 42055 County Name: Franklin
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have		average number	total
	avg daily max	avg daily min	avg	avg	less than	more than	of days with 0.10 inch or more	snow fall
January	35.8	19.3	27.6	2.70	1.63	3.27	5	10.1
February	39.4	21.6	30.5	2.67	1.68	3.23	5	9.4
March	50.6	30.2	40.4	3.45	2.42	4.10	7	5.7
April	62.2	39.2	50.7	3.36	2.20	4.04	7	0.6
May	72.6	49.3	60.9	3.79	2.47	4.56	7	0.0
June	80.9	57.9	69.4	3.83	2.47	4.60	6	0.0
July	84.8	62.0	73.4	3.45	2.38	4.11	6	0.0
August	83.4	60.4	71.9	3.16	2.29	3.73	6	0.0
September	76.4	53.2	64.8	3.15	2.02	3.80	5	0.0
October	64.5	41.4	53.0	3.04	1.71	3.70	5	0.0
November	52.5	33.8	43.1	3.31	2.30	3.93	6	2.0
December	40.5	24.7	32.6	3.17	2.13	3.80	6	6.2
Annual	—	—	—	-	34.78	41.96		
Average	62.0	41.1	51.5	-	-	-		
Total				39.09	-	-	71	34.1

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	3/31 to 11/ 8 222 days	4/12 to 10/22 193 days	4/29 to 10/14 168 days
70 percent *	3/26 to 11/13 233 days	4/ 7 to 10/26 202 days	4/24 to 10/19 178 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: CLARION 3 SW, PA 1485

Latitude: 4112 Longitude: 07926 Elevation: 1110 ft
State FIPS/County(FIPS): 42031 County Name: Clarion
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have		average number	total
	avg daily max	avg daily min	avg	avg	less than	more than	of days with 0.10 inch or more	snow fall
January	32.1	13.7	22.9	2.77	2.07	3.24	7	12.0
February	36.0	14.9	25.5	2.46	1.58	2.96	6	10.7
March	47.2	24.0	35.6	3.30	2.47	3.86	7	5.0
April	60.1	33.2	46.6	3.67	2.70	4.30	8	1.1
May	71.7	42.9	57.3	4.09	2.96	4.83	9	0.1
June	79.2	51.5	65.4	5.06	3.21	6.10	8	0.0
July	82.7	56.1	69.4	4.55	3.29	5.37	7	0.0
August	80.4	55.5	68.0	4.29	3.43	4.91	8	0.0
September	73.7	48.9	61.3	4.29	3.24	5.00	7	0.0
October	62.4	37.9	50.2	3.31	2.27	3.95	7	0.0
November	49.0	30.5	39.8	3.80	2.58	4.54	7	1.9
December	36.8	20.6	28.7	3.27	2.57	3.77	8	10.0
Annual	—	—	—	-	39.92	47.47		
Average	59.3	35.8	47.6	-	-	-		
Total				44.86	-	-	89	40.8

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/25 to 10/29 187 days	5/10 to 10/14 157 days	5/20 to 9/28 131 days
70 percent *	4/22 to 11/ 1 193 days	5/ 4 to 10/19 168 days	5/15 to 10/ 3 141 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: CLERMONT 8 SW, PA 1534

Latitude: 4144 Longitude: 07832 Elevation: 1620 ft
State FIPS/County(FIPS): 42083 County Name: Mckean
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
	avg daily max	avg daily min	avg	avg	30% chance will have less than	30% chance will have more than	average number of days with 0.10 inch or more	total snow fall
January	30.7	11.1	20.9	2.93	2.30	3.39	8	17.5
February	34.2	11.9	23.0	2.50	1.66	2.99	7	15.3
March	44.9	21.6	33.3	3.49	2.76	4.02	8	9.9
April	57.4	30.1	43.7	3.48	2.78	3.98	9	3.5
May	69.2	38.9	54.1	3.90	2.86	4.59	9	0.3
June	76.6	47.4	62.0	5.40	3.81	6.40	9	0.0
July	80.3	52.2	66.3	4.22	3.53	4.76	8	0.0
August	77.9	51.3	64.6	4.22	3.27	4.89	8	0.0
September	71.1	45.3	58.2	4.21	3.12	4.94	7	0.0
October	60.4	35.1	47.7	3.44	2.41	4.08	8	0.5
November	47.6	28.9	38.3	3.82	2.91	4.45	9	5.9
December	35.1	18.3	26.7	3.67	2.93	4.20	10	16.8
Annual	—	—	—	-	41.49	47.84		
Average	57.1	32.7	44.9	-	-	-		
Total				45.28	-	-	100	69.7

GROWING SEASON DATES

Probability	Temperature		
	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	5/15 to 10/ 7 145 days	5/30 to 9/21 114 days	6/14 to 9/ 2 80 days
70 percent *	5/10 to 10/12 155 days	5/25 to 9/26 124 days	6/ 7 to 9/ 8 93 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: CONFLUENCE 1 SW DAM, PA 1705

Latitude: 3948 Longitude: 07922 Elevation: 1490 ft
State FIPS/County(FIPS): 42111 County Name: Somerset
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have			
	avg daily max	avg daily min	avg	avg	less than	more than	average number of days with 0.10 inch or more	total snow fall
January	35.1	15.1	25.1	3.07	2.12	3.66	7	19.6
February	38.3	16.2	27.3	2.72	1.74	3.27	7	16.3
March	49.2	25.3	37.2	3.80	2.83	4.45	9	10.3
April	60.3	34.3	47.3	3.93	2.97	4.58	9	2.0
May	71.1	43.7	57.4	4.30	3.04	5.09	9	0.1
June	79.5	52.3	65.9	4.00	2.76	4.77	8	0.0
July	82.8	57.1	69.9	5.00	3.64	5.89	9	0.0
August	81.8	56.5	69.1	3.67	2.89	4.23	7	0.0
September	75.6	49.8	62.7	3.71	2.63	4.40	7	0.0
October	63.8	38.0	50.9	3.07	2.00	3.68	6	0.2
November	51.8	30.2	41.0	3.46	2.43	4.10	8	3.9
December	39.3	21.1	30.2	3.53	2.55	4.16	8	12.4
Annual	—	—	—	-	40.62	47.20		
Average	60.7	36.6	48.7	-	-	-		
Total				44.25	-	-	94	

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/16 to 10/30 197 days	4/28 to 10/20 175 days	5/11 to 10/ 5 147 days
70 percent *	4/13 to 11/ 2 204 days	4/24 to 10/24 183 days	5/ 6 to 10/ 9 156 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: CORRY, PA 1790

Latitude: 4155 Longitude: 07938 Elevation: 1440 ft
State FIPS/County(FIPS): 42049 County Name: Erie
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have		average number	total
	avg daily max	avg daily min	avg	avg	less than	more than	of days with 0.10 inch or more	snow fall
January	30.5	14.5	22.5	3.07	2.34	3.57	8	33.3
February	34.1	15.1	24.6	2.72	1.88	3.24	7	23.8
March	44.7	24.2	34.5	3.49	2.75	4.02	9	17.8
April	57.0	33.7	45.4	3.65	2.85	4.22	9	6.3
May	68.6	43.5	56.0	3.82	2.93	4.43	8	0.4
June	76.4	52.3	64.4	4.63	3.39	5.45	8	0.0
July	80.0	56.5	68.2	4.67	3.78	5.32	7	0.0
August	77.9	55.4	66.7	4.45	3.37	5.19	8	0.0
September	71.3	49.6	60.5	4.26	3.10	5.01	7	0.0
October	60.5	39.6	50.1	3.87	3.00	4.48	9	1.6
November	47.5	31.8	39.6	4.42	3.43	5.11	11	15.4
December	35.3	21.3	28.3	4.38	3.66	4.93	12	38.4
Annual	—	—	—	-	44.19	50.12		
Average	57.0	36.4	46.7	-	-	-		
Total				47.42	-	-	103	136.9

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/22 to 11/ 1 194 days	5/ 6 to 10/16 163 days	5/24 to 9/29 128 days
70 percent *	4/18 to 11/ 4 200 days	5/ 2 to 10/21 172 days	5/20 to 10/ 3 137 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: COUDERSPORT 4 NW, PA 1806

Latitude: 4150 Longitude: 07804 Elevation: 2300 ft
State FIPS/County(FIPS): 42105 County Name: Potter
Start yr. - 1961 End yr. - 1987

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have			
	avg daily max	avg daily min	avg	avg	less than	more than	average number of days with 0.10 inch or more	total snow fall
January	27.5	10.5	19.0	2.38	1.66	2.84	7	16.7
February	31.8	12.5	22.1	2.40	1.69	2.85	6	15.1
March	41.5	21.8	31.7	2.91	2.24	3.37	8	13.1
April	54.9	31.7	43.3	3.20	2.48	3.70	8	4.5
May	66.5	41.4	54.0	3.69	2.94	4.23	9	0.3
June	74.2	49.4	61.8	5.29	3.99	6.17	8	0.0
July	77.5	53.5	65.5	3.92	3.15	4.48	8	0.0
August	76.2	52.4	64.3	3.69	2.93	4.24	7	0.0
September	69.2	45.9	57.5	3.78	2.72	4.47	7	0.0
October	58.3	36.6	47.5	3.19	2.07	3.84	7	0.9
November	44.2	28.3	36.3	3.79	2.99	4.35	9	9.1
December	32.5	17.6	25.0	2.97	2.31	3.43	8	18.4
Annual	—	—	—	-	38.15	43.72		
Average	54.5	33.5	44.0	-	-	-		
Total				41.19	-	-	92	78.1

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/27 to 10/17 172 days	5/14 to 9/29 138 days	5/29 to 9/13 107 days
70 percent *	4/21 to 10/24 186 days	5/ 8 to 10/ 6 151 days	5/21 to 9/20 121 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: DEVAULT 1 W, PA 2116

Latitude: 4005 Longitude: 07533 Elevation: 360 ft
State FIPS/County(FIPS): 42029 County Name: Chester
Start yr. - 1961 End yr. - 1989

Month	Temperature (°F)			Precipitation (in.)				
	avg daily max	avg daily min	avg	avg	30% chance will have less than	30% chance will have more than	average number of days with 0.10 inch or more	total snow fall
January	35.7	19.5	27.6	3.44	2.20	4.15	6	11.2
February	39.3	21.9	30.6	2.89	2.07	3.42	6	11.6
March	49.4	30.6	40.0	3.61	2.62	4.26	7	4.8
April	61.0	40.1	50.5	3.86	2.46	4.65	7	1.0
May	72.0	50.7	61.3	3.87	2.33	4.69	7	0.0
June	79.8	59.7	69.7	3.96	1.94	4.84	6	0.0
July	84.3	64.0	74.1	4.48	2.64	5.45	6	0.0
August	83.1	62.9	73.0	3.48	2.10	4.22	5	0.0
September	76.2	55.6	65.9	4.25	2.53	5.16	5	0.0
October	65.0	44.7	54.9	2.98	1.77	3.62	4	0.3
November	52.7	35.5	44.1	3.69	2.34	4.45	7	1.1
December	41.2	25.8	33.5	3.66	2.27	4.43	6	6.0
Annual	—	—	—	-	29.72	49.45		
Average	61.6	42.6	52.1	-	-	-		
Total				44.17	-	-	72	35.9

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	3/28 to 11/14 231 days	4/ 6 to 11/ 5 213 days	4/20 to 10/27 190 days
70 percent *	3/23 to 11/20 242 days	3/31 to 11/12 226 days	4/13 to 11/ 2 202 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: DONEGAL 2 NW, PA 2183

Latitude: 4008 Longitude: 07924 Elevation: 1800 ft
State FIPS/County(FIPS): 42129 County Name: Westmoreland
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have			
	avg daily max	avg daily min	avg	avg	less than	more than	average number of days with 0.10 inch or more	total snow fall
January	33.1	15.1	24.1	3.05	2.20	3.61	8	12.0
February	36.1	16.7	26.4	2.94	2.03	3.49	7	11.0
March	46.6	25.3	35.9	3.79	2.55	4.54	8	4.8
April	57.7	34.4	46.0	4.10	2.98	4.83	8	1.2
May	68.3	44.0	56.2	4.13	3.15	4.81	8	0.0
June	76.3	52.8	64.6	4.79	3.21	5.73	8	0.0
July	80.1	57.0	68.5	4.43	3.07	5.27	7	0.0
August	79.2	55.8	67.5	4.25	3.21	4.96	6	0.0
September	72.8	49.7	61.2	3.95	2.54	4.75	6	0.0
October	61.1	38.9	50.0	3.22	2.29	3.81	6	0.1
November	49.4	31.1	40.2	3.72	2.75	4.37	8	1.2
December	38.2	21.1	29.7	3.48	2.59	4.07	8	5.8
Annual	—	—	—	-	41.14	47.23		
Average	58.2	36.8	47.5	-	-	-		
Total				45.85	-	-	88	36.1

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/14 to 10/30 199 days	5/ 1 to 10/12 165 days	5/15 to 10/ 6 144 days
70 percent *	4/ 8 to 11/ 4 210 days	4/24 to 10/19 178 days	5/10 to 10/12 155 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: DONORA 1 SW, PA 2190

Latitude: 4010 Longitude: 07952 Elevation: 760 ft
State FIPS/County(FIPS): 42125 County Name: Washington
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
	avg daily max	avg daily min	avg	avg	30% chance will have less than	30% chance will have more than	average number of days with 0.10 inch or more	total snow fall
January	39.0	19.7	29.4	2.21	1.28	2.68	5	6.4
February	42.4	21.7	32.1	2.15	1.36	2.59	5	5.8
March	54.4	30.5	42.4	3.33	1.94	4.05	7	3.7
April	65.1	38.7	51.9	3.14	2.20	3.73	7	0.2
May	75.0	48.5	61.8	3.76	2.86	4.37	8	0.1
June	81.9	57.3	69.6	3.57	2.32	4.30	7	0.0
July	85.2	61.5	73.4	3.51	2.32	4.21	6	0.0
August	84.0	60.8	72.4	3.60	2.61	4.24	6	0.0
September	78.4	54.7	66.5	2.97	1.71	3.62	5	0.0
October	67.5	42.7	55.1	2.51	1.87	2.94	5	0.0
November	55.2	34.6	44.9	2.73	1.76	3.29	6	0.7
December	43.4	25.1	34.2	2.59	1.80	3.09	6	4.8
Annual	—	—	—	-	31.45	38.53		
Average	64.3	41.3	52.8	-	-	-		
Total				36.08	-	-	73	21.7

GROWING SEASON DATES

Probability	Temperature		
	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/ 5 to 11/ 9 218 days	4/17 to 10/29 196 days	5/ 1 to 10/18 169 days
70 percent *	3/31 to 11/15 229 days	4/12 to 11/ 3 205 days	4/27 to 10/22 177 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: DU BOIS FAA AP, PA 2260

Latitude: 4111 Longitude: 07854 Elevation: 1810 ft
State FIPS/County(FIPS): 42065 County Name: Jefferson
Start yr. - 1962 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have			
	avg daily max	avg daily min	avg	avg	less than	more than	average number of days with 0.10 inch or more	total snow fall
January	29.4	15.4	22.4	2.75	2.03	3.23	7	14.8
February	32.8	16.8	24.8	2.64	1.89	3.12	7	14.2
March	43.8	26.0	34.9	3.50	2.74	4.04	8	9.7
April	56.4	36.1	46.3	3.22	2.43	3.75	7	2.3
May	67.4	46.3	56.8	4.10	2.94	4.84	9	0.2
June	75.6	54.6	65.1	4.78	2.91	5.79	8	0.0
July	79.3	59.1	69.2	3.78	2.83	4.42	7	0.0
August	77.4	57.6	67.5	4.07	2.97	4.79	7	0.0
September	70.0	50.7	60.3	3.67	2.67	4.33	6	0.0
October	58.6	40.3	49.5	2.84	2.04	3.36	6	0.4
November	46.2	32.0	39.1	3.30	2.40	3.88	8	5.3
December	34.2	21.2	27.7	3.46	2.75	3.97	9	13.3
Annual	—	—	—	-	35.67	44.99		
Average	55.9	38.0	47.0	-	-	-		
Total				42.11	-	-	89	60.1

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/11 to 11/ 5 208 days	4/23 to 10/25 184 days	5/ 6 to 10/10 157 days
70 percent *	4/ 7 to 11/ 9 216 days	4/19 to 10/29 193 days	5/ 1 to 10/14 165 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: EAGLES MERE, PA 2343

Latitude: 4124 Longitude: 07635 Elevation: 1990 ft
State FIPS/County(FIPS): 42113 County Name: Sullivan
Start yr. - 1949 End yr. - 1987

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have		average number	total
	avg daily max	avg daily min	avg	avg	less than	more than	of days with 0.10 inch or more	snow fall
January	28.5	13.0	20.8	2.98	1.89	3.60	6	12.1
February	31.0	14.0	22.5	2.99	2.18	3.52	7	14.8
March	39.2	21.4	30.3	3.06	2.19	3.61	7	14.6
April	53.2	33.8	43.5	4.12	3.36	4.69	8	4.1
May	65.1	44.2	54.7	3.98	2.78	4.73	7	0.1
June	71.3	53.0	62.2	4.44	3.22	5.24	7	0.0
July	75.8	58.2	67.0	4.25	3.13	4.98	8	0.0
August	73.8	56.6	65.2	4.44	3.15	5.26	7	0.0
September	66.5	49.5	58.0	4.02	2.72	4.80	6	0.0
October	56.6	39.4	48.0	3.63	2.12	4.41	6	0.9
November	44.3	29.6	36.9	4.22	3.14	4.94	7	6.2
December	31.8	17.8	24.8	3.41	2.34	4.07	7	13.2
Annual	—	—	—	-	23.67	44.46		-
Average	53.1	35.9	44.5	-	-	-		-
Total				45.54	-	-	83	66.0

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/15 to 11/ 4 204 days	4/25 to 10/20 178 days	5/ 5 to 10/ 5 153 days
70 percent *	4/11 to 11/ 8 210 days	4/22 to 10/23 184 days	4/30 to 10/10 164 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: EBENSBURG SEWAGE PLANT, PA 2470

Latitude: 4028 Longitude: 07844 Elevation: 01940 ft
State FIPS/County(FIPS): 42021 County Name: Cambria
Start yr. - 1964 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have		average number	total
	avg daily max	avg daily min	avg	avg	less than	more than	of days with 0.10 inch or more	snow fall
January	33.9	14.7	24.3	3.80	2.81	4.45	10	29.0
February	37.1	15.4	26.2	3.31	2.47	3.87	9	26.1
March	47.8	24.1	35.9	4.34	3.38	5.02	10	19.3
April	59.5	33.1	46.3	4.18	3.22	4.85	10	6.3
May	69.7	42.2	55.9	4.88	3.80	5.64	10	0.0
June	77.5	50.3	63.9	4.54	3.29	5.36	9	0.0
July	81.1	55.0	68.0	4.96	3.69	5.81	8	0.0
August	79.5	54.0	66.8	4.00	3.18	4.59	7	0.0
September	73.1	47.8	60.5	4.16	3.00	4.92	7	0.0
October	61.7	36.7	49.2	3.40	2.49	4.00	7	0.4
November	49.9	29.9	39.9	3.95	3.03	4.58	9	7.5
December	38.3	20.5	29.4	3.85	2.97	4.46	9	20.0
Annual	—	—	—	-	45.71	51.81		
Average	59.1	35.3	47.2	-	-	-		
Total				49.38	-	-	105	

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/25 to 10/18 176 days	5/10 to 10/ 7 150 days	5/29 to 9/19 113 days
70 percent *	4/20 to 10/23 185 days	5/ 6 to 10/11 158 days	5/25 to 9/22 119 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: ENGLISH CENTER, PA 2644

Latitude: 4126 Longitude: 07717 Elevation: 880 ft
State FIPS/County(FIPS): 42081 County Name: Lycoming
Start yr. - 1949 End yr. - 1985

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have		average number	total
	avg daily max	avg daily min	avg	avg	less than	more than	of days with 0.10 inch or more	snow fall
January	32.4	10.2	21.3	2.46	1.64	2.95	6	11.1
February	35.5	11.2	23.3	2.76	1.85	3.31	6	8.4
March	45.1	21.1	33.1	3.45	2.59	4.04	7	6.9
April	58.8	30.6	44.7	3.15	2.26	3.73	7	1.0
May	70.1	39.7	54.9	3.69	2.55	4.40	7	0.0
June	78.3	48.4	63.4	3.97	2.44	4.81	7	0.0
July	82.5	52.7	67.6	3.53	2.76	4.08	7	0.0
August	81.0	51.8	66.4	3.07	2.04	3.68	5	0.0
September	73.5	45.1	59.3	3.22	2.07	3.87	6	0.0
October	61.9	34.0	47.9	3.04	1.80	3.69	5	0.2
November	49.4	28.1	38.8	3.38	2.26	4.05	6	2.0
December	36.4	17.6	27.0	2.82	1.85	3.39	6	5.9
Annual	—	—	—	-	35.15	40.74		-
Average	58.7	32.5	45.6	-	-	-		-
Total				38.56	-	-	75	35.5

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/25 to 10/21 178 days	5/ 9 to 10/10 154 days	5/24 to 9/25 123 days
70 percent *	4/21 to 10/25 187 days	5/ 4 to 10/14 162 days	5/19 to 9/30 134 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: ERIE WSO AP, PA 2682

Latitude: 4205 Longitude: 08011 Elevation: 730 ft
State FIPS/County(FIPS): 42049 County Name: Erie
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have			
	avg daily max	avg daily min	avg	avg	less than	more than	average number of days with 0.10 inch or more	total snow fall
January	31.2	18.1	24.6	2.28	1.76	2.64	6	24.4
February	32.8	18.0	25.4	2.29	1.53	2.74	6	16.9
March	43.0	26.8	34.9	3.01	2.19	3.54	7	9.6
April	54.1	36.5	45.3	3.24	2.44	3.78	8	2.3
May	65.3	46.7	56.0	3.44	2.67	3.99	7	0.0
June	74.4	56.2	65.3	4.09	3.04	4.79	7	0.0
July	78.8	61.6	70.2	3.43	2.41	4.07	5	0.0
August	77.5	60.7	69.1	4.06	2.81	4.83	6	0.0
September	71.1	54.5	62.8	4.39	3.10	5.20	8	0.0
October	60.1	44.5	52.3	3.77	2.77	4.43	8	0.4
November	48.5	35.6	42.1	4.02	2.99	4.71	10	9.0
December	37.0	25.3	31.1	3.60	3.04	4.04	9	23.5
Annual	—	—	—	-	37.91	44.68		
Average	56.1	40.4	48.3	-	-	-		
Total				41.61	-	-	86	

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/ 6 to 11/23 231 days	4/15 to 11/ 6 205 days	5/ 3 to 10/26 176 days
70 percent *	4/ 1 to 11/27 240 days	4/11 to 11/10 213 days	4/28 to 10/30 185 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: EVERETT, PA 2721

Latitude: 4001 Longitude: 07822 Elevation: 1000 ft
State FIPS/County(FIPS): 42009 County Name: Bedford
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have		average number	total
	avg daily max	avg daily min	avg	avg	less than	more than	of days with 0.10 inch or more	snow fall
January	35.1	16.7	25.9	1.91	1.13	2.32	4	6.1
February	38.7	19.5	29.1	2.31	1.19	2.83	5	10.0
March	48.8	28.1	38.4	2.63	1.84	3.12	6	5.3
April	60.1	36.9	48.5	3.24	1.87	3.94	6	0.3
May	71.7	46.9	59.3	3.59	2.49	4.27	7	0.0
June	79.7	54.5	67.1	3.37	1.99	4.09	6	0.0
July	84.1	59.1	71.6	3.34	1.56	4.07	5	0.0
August	82.7	57.8	70.2	2.84	1.95	3.38	5	0.0
September	75.9	51.0	63.5	3.22	2.37	3.78	6	0.0
October	64.6	39.7	52.2	3.10	1.45	3.79	5	0.0
November	51.7	31.9	41.8	2.90	2.13	3.41	6	1.3
December	39.9	23.3	31.6	2.59	1.57	3.14	5	5.1
Annual	—	—	—	-	23.70	35.47		
Average	61.1	38.8	49.9	-	-	-		
Total				35.03	-	-	66	28.1

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/ 6 to 10/31 209 days	4/17 to 10/21 187 days	5/ 5 to 10/ 4 152 days
70 percent *	4/ 1 to 11/ 5 219 days	4/12 to 10/26 197 days	4/30 to 10/10 163 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: FORD CITY 4 S DAM, PA 2942

Latitude: 4043 Longitude: 07930 Elevation: 930 ft
State FIPS/County(FIPS): 42005 County Name: Armstrong
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have			
	avg daily max	avg daily min	avg	avg	less than	more than	average number of days with 0.10 inch or more	total snow fall
January	34.0	15.0	24.5	2.52	1.70	3.01	6	11.3
February	37.2	16.1	26.7	2.38	1.48	2.88	6	9.7
March	48.5	26.0	37.2	3.28	2.42	3.84	7	5.6
April	60.0	35.0	47.5	3.20	2.31	3.78	7	0.9
May	71.0	44.3	57.7	4.16	3.24	4.80	9	0.1
June	78.7	53.2	65.9	4.36	2.90	5.23	8	0.0
July	82.8	58.0	70.4	4.12	2.85	4.90	7	0.0
August	81.2	56.7	69.0	4.09	3.05	4.78	7	0.0
September	74.9	49.9	62.4	3.53	2.21	4.27	6	0.0
October	63.4	38.1	50.7	2.82	1.94	3.36	6	0.1
November	51.3	31.3	41.3	3.19	2.24	3.79	7	1.9
December	39.2	21.8	30.5	2.90	2.24	3.36	7	7.0
Annual	—	—	—	-	37.47	42.81		
Average	60.2	37.1	48.6	-	-	-		
Total				40.54	-	-	83	36.6

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/12 to 10/29 200 days	4/28 to 10/22 177 days	5/ 8 to 10/10 155 days
70 percent *	4/ 8 to 11/ 2 208 days	4/25 to 10/25 183 days	5/ 4 to 10/14 162 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: FRANCIS E WALTER DAM, PA 3018

Latitude: 4107 Longitude: 07544 Elevation: 1510 ft
State FIPS/County(FIPS): 42079 County Name: Luzerne
Start yr. - 1964 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
	avg daily max	avg daily min	avg	avg	30% chance will have less than	30% chance will have more than	average number of days with 0.10 inch or more	total snow fall
January	30.6	10.8	20.7	2.70	1.53	3.29	5	13.7
February	33.4	12.5	23.0	2.54	1.66	3.05	5	12.6
March	43.5	22.0	32.7	2.91	2.11	3.43	6	8.8
April	55.3	32.0	43.7	3.46	2.44	4.10	7	3.1
May	67.0	42.3	54.7	4.58	3.19	5.45	8	0.3
June	74.7	50.4	62.5	4.57	2.95	5.50	7	0.0
July	79.1	55.2	67.2	4.56	3.23	5.40	7	0.0
August	77.5	53.9	65.7	4.19	3.17	4.88	7	0.0
September	69.8	46.2	58.0	4.15	2.64	5.00	6	0.0
October	58.8	35.1	46.9	3.49	2.50	4.13	6	0.1
November	47.4	27.9	37.7	3.51	2.48	4.16	6	3.9
December	35.1	17.3	26.2	3.10	1.95	3.74	5	9.4
Annual	—	—	—	-	39.33	47.08		
Average	56.0	33.8	44.9	-	-	-		
Total				43.75	-	-	75	52.0

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/19 to 10/18 182 days	5/ 9 to 10/ 8 153 days	5/23 to 9/23 123 days
70 percent *	4/14 to 10/22 191 days	5/ 5 to 10/12 161 days	5/18 to 9/28 134 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: FRANKLIN, PA 3028

Latitude: 4123 Longitude: 07949 Elevation: 990 ft
State FIPS/County(FIPS): 42121 County Name: Venango
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have			
	avg daily max	avg daily min	avg	avg	less than	more than	average number of days with 0.10 inch or more	total snow fall
January	32.6	14.9	23.8	2.46	1.85	2.88	6	14.7
February	35.3	15.7	25.5	2.39	1.54	2.88	6	12.6
March	46.0	24.8	35.4	3.25	2.40	3.81	8	7.2
April	58.4	34.4	46.4	3.53	2.77	4.07	8	1.6
May	69.9	43.8	56.9	3.79	2.72	4.48	9	0.0
June	78.6	53.2	65.9	4.69	3.34	5.55	8	0.0
July	82.5	57.7	70.1	4.79	3.53	5.62	8	0.0
August	80.5	56.8	68.6	4.08	3.25	4.68	7	0.0
September	73.4	50.4	61.9	3.88	3.06	4.46	7	0.0
October	62.1	39.5	50.8	3.16	2.10	3.79	7	0.1
November	49.6	32.3	40.9	3.77	2.64	4.48	8	2.5
December	37.3	22.1	29.7	3.25	2.36	3.83	9	10.7
Annual	—	—	—	-	39.58	45.71		
Average	58.8	37.1	48.0	-	-	-		
Total				43.03	-	-	91	49.5

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/12 to 11/ 6 208 days	4/26 to 10/28 185 days	5/ 8 to 10/15 160 days
70 percent *	4/ 8 to 11/10 217 days	4/23 to 10/31 192 days	5/ 4 to 10/18 167 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: FREELAND, PA 3056

Latitude: 4101 Longitude: 07554 Elevation: 1900 ft
State FIPS/County(FIPS): 42079 County Name: Luzerne
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have		average number	total
	avg daily max	avg daily min	avg	avg	less than	more than	of days with 0.10 inch or more	snow fall
January	29.2	13.4	21.3	2.30	1.56	2.75	5	11.7
February	32.6	15.9	24.3	2.80	1.70	3.39	5	12.2
March	42.0	24.1	33.1	2.89	2.00	3.44	5	8.3
April	54.7	34.4	44.5	4.00	2.47	4.84	7	3.3
May	66.3	44.9	55.6	4.10	2.26	5.00	7	0.1
June	73.5	53.4	63.5	4.66	2.87	5.64	7	0.0
July	77.4	58.5	67.9	4.37	2.91	5.23	7	0.0
August	75.5	56.9	66.2	4.50	3.47	5.22	6	0.0
September	68.3	49.8	59.0	4.25	2.66	5.13	6	0.0
October	57.8	39.4	48.6	3.38	1.91	4.11	5	0.8
November	45.6	30.9	38.2	4.21	2.90	5.01	6	4.2
December	33.5	19.4	26.4	3.07	1.96	3.70	6	8.4
Annual	—	—	—	-	29.59	48.45		
Average	54.7	36.8	45.7	-	-	-		
Total				44.53	-	-	72	48.8

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/15 to 10/30 198 days	4/24 to 10/21 180 days	5/ 6 to 10/ 7 154 days
70 percent *	4/11 to 11/ 3 206 days	4/18 to 10/27 192 days	5/ 1 to 10/12 164 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: GRATERFORD 1 E, PA 3437

Latitude: 4014 Longitude: 07526 Elevation: 00240 ft
State FIPS/County(FIPS): 42091 County Name: Montgomery
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have			
	avg daily max	avg daily min	avg	avg	less than	more than	average number of days with 0.10 inch or more	total snow fall
January	35.9	18.5	27.2	3.08	1.78	3.75	6	5.5
February	38.4	20.3	29.3	2.51	1.60	3.03	5	7.9
March	49.0	29.3	39.1	3.02	1.85	3.65	6	1.6
April	60.1	38.3	49.2	3.67	2.49	4.38	6	0.3
May	70.4	48.2	59.3	4.02	2.75	4.80	7	0.0
June	79.6	57.1	68.4	3.28	1.98	3.98	6	0.0
July	84.4	61.9	73.2	4.13	2.40	5.02	6	0.0
August	82.5	59.6	71.1	3.89	2.50	4.68	6	0.0
September	76.0	52.1	64.0	3.68	2.27	4.45	5	0.0
October	64.7	39.8	52.2	2.71	1.72	3.27	4	0.0
November	53.5	33.6	43.5	3.59	2.24	4.33	5	0.4
December	41.1	24.3	32.7	3.12	1.74	3.81	5	3.9
Annual	—	—	—	-	35.12	41.41		
Average	61.3	40.2	50.8	-	-	-		
Total				40.71	-	-	67	19.6

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	3/30 to 11/ 2 217 days	4/18 to 10/21 186 days	4/30 to 10/11 164 days
70 percent *	3/23 to 11/ 8 230 days	4/10 to 10/29 202 days	4/22 to 10/19 179 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: GREENVILLE 2 NE, PA 3526

Latitude: 4125 Longitude: 08022 Elevation: 01130 ft
State FIPS/County(FIPS): 42085 County Name: Mercer
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have		average number	total
	avg daily max	avg daily min	avg	avg	less than	more than	of days with 0.10 inch or more	snow fall
January	32.8	15.4	24.1	2.02	1.35	2.41	5	13.3
February	36.6	16.9	26.7	1.96	1.21	2.37	5	12.6
March	47.6	26.3	37.0	2.95	2.31	3.40	8	9.8
April	60.0	35.5	47.7	3.30	2.45	3.86	8	2.6
May	71.3	45.3	58.3	3.76	2.80	4.41	8	0.2
June	79.6	54.3	66.9	4.30	3.30	4.99	7	0.0
July	83.3	58.1	70.7	3.76	2.63	4.47	7	0.0
August	81.8	56.6	69.2	3.47	2.40	4.14	7	0.0
September	75.3	50.3	62.8	3.85	2.85	4.51	7	0.0
October	63.4	39.9	51.6	2.90	1.95	3.46	6	0.2
November	50.3	32.8	41.6	3.61	2.69	4.22	8	4.6
December	37.8	22.3	30.0	2.85	2.06	3.36	7	13.6
Annual	—	—	—	-	34.95	41.43		
Average	60.0	37.8	48.9	-	-	-		
Total				38.72	-	-	83	56.9

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/14 to 11/ 3 203 days	4/28 to 10/21 176 days	5/13 to 10/ 4 144 days
70 percent *	4/10 to 11/ 8 211 days	4/24 to 10/25 184 days	5/ 8 to 10/10 155 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: HAMBURG, PA 3632

Latitude: 4033 Longitude: 07559 Elevation: 00350 ft
State FIPS/County(FIPS): 42011 County Name: Berks
Start yr. - 1979 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have			
	avg daily max	avg daily min	avg	avg	less than	more than	average number of days with 0.10 inch or more	total snow fall
January	35.2	16.9	26.0	2.37	1.49	2.86	5	6.2
February	40.2	21.1	30.7	2.82	1.86	3.38	6	5.6
March	49.3	28.9	39.1	2.71	1.94	3.20	6	2.2
April	61.0	39.1	50.0	3.87	2.50	4.66	7	0.7
May	71.9	49.2	60.5	5.80	3.92	6.93	8	0.0
June	80.3	57.0	68.7	3.96	2.84	4.68	7	0.0
July	85.1	63.1	74.1	4.41	3.08	5.24	6	0.0
August	82.5	60.9	71.7	3.51	2.51	4.16	6	0.0
September	74.7	52.4	63.5	3.88	2.21	4.73	5	0.0
October	62.9	40.4	51.7	3.54	2.56	4.17	6	0.0
November	52.2	32.7	42.5	4.31	3.22	5.05	6	0.3
December	39.3	22.7	31.0	2.99	1.55	3.66	5	3.3
Annual	—	—	—	-	34.41	45.62		
Average	61.2	40.4	50.8	-	-	-		
Total				44.18	-	-	73	18.4

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	3/24 to 11/14 234 days	3/31 to 10/29 212 days	4/16 to 10/18 185 days
70 percent *	3/21 to 11/17 241 days	3/26 to 11/ 4 222 days	4/11 to 10/22 194 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: HANOVER, PA 3662

Latitude: 3948 Longitude: 07659 Elevation: 600 ft
State FIPS/County(FIPS): 42133 County Name: York
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
	avg daily max	avg daily min	avg	avg	30% chance will have less than	30% chance will have more than	average number of days with 0.10 inch or more	total snow fall
January	37.3	20.0	28.7	2.98	1.87	3.60	6	10.3
February	40.6	21.7	31.1	2.72	1.69	3.28	6	10.6
March	51.5	30.7	41.1	3.22	2.47	3.75	6	4.3
April	62.7	40.2	51.5	3.42	2.32	4.08	6	0.4
May	73.6	49.7	61.6	3.73	2.35	4.50	7	0.0
June	82.0	59.0	70.5	3.53	1.74	4.32	6	0.0
July	86.4	63.5	75.0	2.96	1.67	3.61	5	0.0
August	84.9	61.4	73.2	3.30	2.42	3.88	5	0.0
September	78.0	54.1	66.1	3.60	1.99	4.39	5	0.0
October	66.2	42.4	54.3	2.97	2.09	3.67	5	0.1
November	54.6	34.6	44.6	3.23	2.11	3.87	5	1.3
December	42.6	25.3	34.0	3.15	2.00	3.80	5	5.0
Annual	—	—	—	-	33.79	41.10		
Average	63.4	41.9	52.6	-	-	-		
Total				38.82	-	-	67	32.0

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	3/22 to 11/17 239 days	4/ 5 to 11/ 1 210 days	4/17 to 10/20 186 days
70 percent *	3/17 to 11/22 249 days	3/31 to 11/ 6 220 days	4/12 to 10/25 196 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: HARRISBURG FAA AP, PA 3699

Latitude: 4013 Longitude: 07651 Elevation: 340 ft
State FIPS/County(FIPS): 42133 County Name: York
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have			
	avg daily max	avg daily min	avg	avg	less than	more than	average number of days with 0.10 inch or more	total snow fall
January	35.9	21.3	28.6	2.84	1.77	3.43	5	10.8
February	39.2	23.4	31.3	2.93	1.99	3.50	6	11.4
March	50.2	32.0	41.1	3.28	2.48	3.83	6	5.4
April	61.9	41.2	51.5	3.24	2.17	3.88	7	0.7
May	72.5	51.1	61.8	4.26	2.71	5.14	7	0.0
June	81.2	60.6	70.9	3.85	2.02	4.70	6	0.0
July	85.8	65.5	75.7	3.59	2.36	4.32	6	0.0
August	83.8	64.2	74.0	3.31	2.39	3.90	5	0.0
September	76.3	56.5	66.4	3.51	1.99	4.27	5	0.0
October	64.7	44.6	54.7	2.93	1.72	3.56	4	0.0
November	52.7	36.1	44.4	3.53	2.46	4.20	6	2.1
December	40.6	26.6	33.6	3.24	2.06	3.90	6	6.9
Annual	—	—	—	-	36.73	43.76		
Average	62.1	43.6	52.8	-	-	-		
Total				40.52	-	-	69	37.3

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	3/20 to 11/21 245 days	3/30 to 11/ 6 222 days	4/14 to 10/24 193 days
70 percent *	3/15 to 11/26 257 days	3/26 to 11/11 230 days	4/ 9 to 10/28 202 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: HAWLEY 1 E, PA 3758

Latitude: 4129 Longitude: 07510 Elevation: 00890 ft
State FIPS/County(FIPS): 42127 County Name: Wayne
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
	avg daily max	avg daily min	avg	avg	30% chance will have less than	30% chance will have more than	average number of days with 0.10 inch or more	total snow fall
January	33.3	10.9	22.1	2.67	1.55	3.25	5	11.0
February	35.8	12.2	24.0	2.64	1.80	3.14	5	10.9
March	45.1	22.4	33.8	2.87	2.05	3.40	6	9.0
April	56.8	32.3	44.6	3.35	2.38	3.97	7	2.8
May	68.0	42.2	55.1	3.98	2.69	4.75	7	0.1
June	75.1	51.3	63.2	3.79	2.30	4.60	7	0.0
July	79.6	56.2	67.9	3.43	2.34	4.09	6	0.0
August	78.0	55.0	66.5	3.57	2.49	4.24	6	0.0
September	71.1	47.5	59.3	3.45	2.28	4.14	6	0.0
October	61.9	36.0	48.9	2.91	1.73	3.53	5	0.1
November	50.1	29.0	39.5	3.45	2.55	4.04	6	3.8
December	37.2	18.4	27.8	3.07	2.05	3.68	6	11.0
Annual	—	—	—	-	34.66	41.89		
Average	57.7	34.4	46.1	-	-	-		
Total				39.18	-	-	72	48.8

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/14 to 10/23 192 days	4/29 to 10/14 168 days	5/12 to 10/ 3 144 days
70 percent *	4/11 to 10/26 198 days	4/25 to 10/19 177 days	5/ 9 to 10/ 6 150 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: HOLTWOOD, PA 4019

Latitude: 3950 Longitude: 07620 Elevation: 00200 ft
State FIPS/County(FIPS): 42071 County Name: Lancaster
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have			
	avg daily max	avg daily min	avg	avg	less than	more than	average number of days with 0.10 inch or more	total snow fall
January	36.5	21.9	29.2	2.72	1.59	3.31	5	9.2
February	39.1	24.0	31.6	2.20	1.21	2.68	5	9.6
March	49.4	32.6	41.0	2.65	1.96	3.11	5	2.1
April	60.4	41.7	51.0	3.10	2.03	3.72	6	0.1
May	71.4	52.3	61.9	3.57	2.25	4.31	6	0.0
June	80.1	61.6	70.9	3.42	1.95	4.16	6	0.0
July	84.4	66.6	75.5	3.69	2.31	4.46	6	0.0
August	82.8	65.5	74.2	3.26	2.14	3.91	5	0.0
September	76.0	58.2	67.1	3.03	1.54	3.71	4	0.0
October	64.4	46.4	55.4	2.73	1.60	3.32	5	0.0
November	53.1	37.1	45.1	3.16	1.99	3.81	5	0.4
December	41.3	27.3	34.3	2.77	1.57	3.37	5	4.3
Annual	—	—	—	-	30.62	39.10		
Average	61.6	44.6	53.1	-	-	-		
Total				36.30	-	-	63	25.7

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	3/19 to 12/ 3 259 days	3/27 to 11/18 236 days	4/ 8 to 11/ 3 209 days
70 percent *	3/14 to 12/ 7 268 days	3/23 to 11/22 244 days	4/ 3 to 11/ 7 218 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: INDIANA 3 SE, PA 4214

Latitude: 4036 Longitude: 07907 Elevation: 01100 ft
State FIPS/County(FIPS): 42063 County Name: Indiana
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
	avg daily max	avg daily min	avg	avg	30% chance will have less than	30% chance will have more than	average number of days with 0.10 inch or more	total snow fall
January	34.8	16.6	25.7	3.10	2.22	3.66	8	16.6
February	38.2	17.9	28.1	2.97	2.04	3.54	7	14.5
March	49.6	27.3	38.5	3.83	2.94	4.45	8	8.6
April	61.2	35.8	48.5	3.65	2.75	4.25	8	2.0
May	71.4	45.4	58.4	4.42	3.38	5.14	9	0.0
June	79.1	53.9	66.5	4.62	2.83	5.60	8	0.0
July	82.4	58.5	70.4	4.92	3.57	5.80	7	0.0
August	80.7	57.7	69.2	3.81	2.80	4.48	7	0.0
September	74.3	51.3	62.8	4.05	2.77	4.83	7	0.0
October	63.4	40.0	51.7	3.01	2.07	3.59	6	0.1
November	51.4	32.4	41.9	3.69	2.77	4.32	8	2.8
December	39.7	22.9	31.3	3.27	2.49	3.81	8	9.9
Annual	—	—	—	-	42.05	48.27		
Average	60.5	38.3	49.4	-	-	-		
Total				45.35	-	-	91	54.5

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/18 to 10/29 194 days	4/29 to 10/21 175 days	5/13 to 10/ 7 146 days
70 percent *	4/13 to 11/ 3 203 days	4/24 to 10/25 183 days	5/ 8 to 10/11 156 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: JAMESTOWN 2 NW, PA 4325

Latitude: 4130 Longitude: 08028 Elevation: 1040 ft
State FIPS/County(FIPS): 42039 County Name: Crawford
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have			
	avg daily max	avg daily min	avg	avg	less than	more than	average number of days with 0.10 inch or more	total snow fall
January	31.6	13.1	22.3	2.19	1.61	2.57	6	16.5
February	34.1	14.1	24.1	2.24	1.40	2.71	5	13.2
March	44.9	24.7	34.8	3.03	2.32	3.52	8	10.2
April	56.9	34.5	45.7	3.29	2.50	3.83	8	2.3
May	68.4	44.2	56.3	3.88	2.92	4.54	8	0.1
June	77.2	53.3	65.2	4.01	3.00	4.70	7	0.0
July	81.4	57.3	69.3	3.99	3.05	4.64	7	0.0
August	79.7	55.9	67.8	3.80	2.74	4.48	7	0.0
September	73.1	49.4	61.2	3.79	2.90	4.41	7	0.0
October	61.7	38.7	50.2	2.99	1.82	3.62	7	0.5
November	49.0	31.5	40.3	3.60	2.59	4.25	9	5.3
December	36.5	20.8	28.7	3.23	2.50	3.74	8	16.7
Annual	—	—	—	-	36.89	42.81		
Average	57.9	36.5	47.2	-	-	-		
Total				40.05	-	-	87	64.7

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/19 to 11/ 4 199 days	5/ 1 to 10/21 173 days	5/18 to 10/ 1 136 days
70 percent *	4/15 to 11/ 8 207 days	4/27 to 10/24 180 days	5/14 to 10/ 5 144 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: JOHNSTOWN, PA 4385

Latitude: 4020 Longitude: 07855 Elevation: 1210 ft
State FIPS/County(FIPS): 42021 County Name: Cambria
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
	avg daily max	avg daily min	avg	avg	30% chance will have less than	30% chance will have more than	average number of days with 0.10 inch or more	total snow fall
January	36.2	18.8	27.5	3.68	2.42	4.41	9	12.9
February	39.2	20.6	29.9	3.59	2.40	4.30	8	11.1
March	50.0	29.2	39.6	3.93	2.75	4.67	8	6.7
April	62.2	38.7	50.5	3.77	2.50	4.51	9	0.5
May	73.0	48.2	60.6	4.31	3.17	5.07	9	0.0
June	81.8	56.2	69.0	4.45	2.84	5.36	8	0.0
July	85.8	60.6	73.2	5.10	3.33	6.12	8	0.0
August	83.8	58.9	71.3	4.16	3.03	4.91	7	0.0
September	76.8	52.6	64.7	3.77	2.53	4.50	7	0.0
October	64.8	41.0	52.9	3.21	2.05	3.87	7	0.1
November	52.7	33.9	43.3	3.78	2.73	4.46	9	2.3
December	40.3	24.1	32.2	3.50	2.54	4.13	9	7.9
Annual	—	—	—	-	43.41	48.92		
Average	62.2	40.2	51.2	-	-	-		
Total				47.24	-	-	98	41.7

GROWING SEASON DATES

Probability	Temperature		
	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	3/31 to 11/11 226 days	4/14 to 10/26 196 days	4/30 to 10/15 169 days
70 percent *	3/25 to 11/17 237 days	4/ 9 to 10/31 206 days	4/25 to 10/20 179 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: KANE 1 NNE, PA 4432

Latitude: 4141 Longitude: 07848 Elevation: 1750 ft
State FIPS/County(FIPS): 42083 County Name: Mckean
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have			
	avg daily max	avg daily min	avg	avg	less than	more than	average number of days with 0.10 inch or more	total snow fall
January	29.2	10.2	19.7	2.91	2.12	3.43	7	20.7
February	32.2	10.1	21.2	2.82	2.03	3.33	7	19.0
March	42.4	20.1	31.3	3.52	2.78	4.05	8	13.1
April	54.4	30.3	42.4	3.60	2.86	4.13	9	4.0
May	66.7	38.7	52.7	4.10	3.02	4.82	9	0.3
June	74.7	47.4	61.0	4.87	3.46	5.76	9	0.0
July	78.7	51.6	65.1	4.23	3.35	4.87	7	0.0
August	76.6	50.2	63.4	4.29	3.17	5.03	7	0.0
September	69.9	44.1	57.0	4.17	3.12	4.88	8	0.0
October	58.5	34.3	46.4	3.45	2.41	4.09	8	0.7
November	45.7	28.1	36.9	3.92	3.06	4.52	9	8.2
December	33.5	17.9	25.7	3.77	3.01	4.32	9	21.6
Annual	—	—	—	-	41.57	48.12		
Average	55.2	31.9	43.6	-	-	-		
Total				45.64	-	-	97	87.6

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	5/ 3 to 10/20 170 days	5/22 to 9/28 128 days	6/ 5 to 9/11 98 days
70 percent *	4/29 to 10/25 179 days	5/18 to 10/ 2 138 days	5/31 to 9/16 108 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: KEGG, PA 4481

Latitude: 3959 Longitude: 07843 Elevation: 1280 ft
State FIPS/County(FIPS): 42009 County Name: Bedford
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have		average number	total
	avg daily max	avg daily min	avg	avg	less than	more than	of days with 0.10 inch or more	snow fall
January	36.8	18.4	27.6	2.54	1.52	3.08	5	5.0
February	40.8	19.6	30.2	2.59	1.65	3.13	6	7.0
March	51.6	27.9	39.7	3.29	1.98	3.98	6	3.5
April	63.1	36.6	49.9	3.28	2.08	3.96	7	0.0
May	74.6	46.1	60.3	3.40	2.03	4.12	7	0.0
June	80.9	53.7	67.3	3.67	1.72	4.49	6	0.0
July	85.5	58.5	72.0	4.05	2.33	4.93	6	0.0
August	83.8	57.1	70.5	2.85	1.98	3.39	5	0.0
September	77.4	50.9	64.1	2.71	1.38	3.31	5	0.0
October	65.8	39.0	52.4	2.67	1.29	3.26	5	0.0
November	53.7	31.7	42.7	2.92	1.75	3.54	6	1.5
December	41.3	22.4	31.9	2.73	1.68	3.30	6	5.3
Annual	—	—	—	-	23.74	35.67		
Average	62.9	38.5	50.7	-	-	-		
Total				36.70	-	-	70	22.2

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/ 9 to 10/26 200 days	4/25 to 10/13 172 days	5/ 8 to 9/30 145 days
70 percent *	4/ 4 to 10/31 209 days	4/19 to 10/18 182 days	5/ 2 to 10/ 6 158 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: LANCASTER 2 NE FILT PL, PA 4763

Latitude: 4003 Longitude: 07617 Elevation: 270 ft
State FIPS/County(FIPS): 42071 County Name: Lancaster
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have			
	avg daily max	avg daily min	avg	avg	less than	more than	average number of days with 0.10 inch or more	total snow fall
January	37.1	20.2	28.6	3.00	1.79	3.63	5	9.1
February	41.3	22.5	31.9	2.46	1.51	2.97	5	6.9
March	52.6	30.9	41.7	3.01	2.23	3.52	6	1.7
April	63.2	40.1	51.7	3.55	2.34	4.26	7	0.8
May	73.7	50.3	62.0	4.86	3.84	5.59	9	0.0
June	81.8	58.3	70.0	3.84	2.54	4.61	7	0.0
July	86.1	63.7	74.9	4.74	2.96	5.72	6	0.0
August	84.1	62.5	73.3	3.92	2.45	4.73	6	0.0
September	77.0	54.8	65.9	3.47	2.01	4.22	4	0.0
October	65.5	43.1	54.3	3.38	2.37	4.01	6	0.0
November	54.4	35.3	44.9	3.80	2.84	4.44	6	0.3
December	42.8	25.8	34.3	3.14	1.70	3.83	5	2.8
Annual	—	—	—	-	37.12	44.86		
Average	63.3	42.3	52.8	-	-	-		
Total				43.15	-	-	72	21.6

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	3/29 to 11/17 233 days	4/ 8 to 10/26 201 days	4/22 to 10/18 179 days
70 percent *	3/24 to 11/21 241 days	4/ 4 to 10/30 208 days	4/18 to 10/21 185 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: LANDISVILLE, PA 4778

Latitude: 4007 Longitude: 07626 Elevation: 00360 ft
State FIPS/County(FIPS): 42071 County Name: Lancaster
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have		average number	total
	avg daily max	avg daily min	avg	avg	less than	more than	of days with 0.10 inch or more	snow fall
January	36.3	18.3	27.3	2.74	1.59	3.34	5	9.1
February	39.7	20.3	30.0	2.27	1.43	2.74	5	8.9
March	51.2	30.1	40.7	2.91	2.27	3.37	6	3.5
April	62.4	38.2	50.3	3.44	2.14	4.16	6	0.4
May	73.0	48.3	60.7	3.95	2.54	4.76	7	0.0
June	81.7	57.6	69.6	4.23	2.60	5.13	7	0.0
July	85.4	61.6	73.5	4.85	2.91	5.89	6	0.0
August	83.5	59.9	71.7	3.44	2.41	4.08	6	0.0
September	77.3	52.4	64.9	3.40	1.95	4.13	5	0.0
October	66.0	41.1	53.6	3.01	2.11	3.71	5	0.1
November	53.7	33.5	43.6	3.49	2.36	4.17	6	0.9
December	41.3	24.4	32.9	3.13	1.92	3.78	5	4.6
Annual	—	—	—	-	36.76	44.10		
Average	62.6	40.5	51.6	-	-	-		
Total				40.87	-	-	69	27.5

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/ 4 to 10/30 209 days	4/16 to 10/20 187 days	5/ 1 to 10/ 8 160 days
70 percent *	3/31 to 11/ 3 216 days	4/12 to 10/25 197 days	4/26 to 10/13 170 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: LAUREL MTN SKI LODGE, PA 4836

Latitude: 4010 Longitude: 07909 Elevation: 2680 ft
State FIPS/County(FIPS): 42129 County Name: Westmoreland
Start yr. - 1971 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have			
	avg daily max	avg daily min	avg	avg	less than	more than	average number of days with 0.10 inch or more	total snow fall
January	30.2	14.2	22.2	3.79	2.68	4.49	10	27.2
February	32.5	15.2	23.9	3.47	2.51	4.09	9	22.9
March	42.6	24.2	33.4	4.12	3.22	4.76	11	19.8
April	53.8	33.4	43.6	4.53	3.31	5.33	9	4.8
May	63.7	44.4	54.1	5.29	4.26	6.05	11	0.3
June	71.0	54.0	62.5	5.57	3.99	6.58	9	0.0
July	74.3	58.7	66.5	4.86	3.64	5.68	8	0.0
August	73.3	57.8	65.5	4.93	3.84	5.70	10	0.0
September	66.5	51.0	58.8	4.71	3.49	5.52	9	0.0
October	54.9	38.5	46.7	3.76	2.34	4.54	8	0.6
November	45.6	29.6	37.6	3.65	2.77	4.25	8	9.1
December	35.2	19.6	27.4	4.08	3.19	4.71	9	18.2
Annual	—	—	—	-	32.22	52.84		-
Average	53.6	36.7	45.2	-	-	-		-
Total				52.75	-	-	111	102.8

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/22 to 10/31 192 days	5/ 2 to 10/24 174 days	5/ 7 to 10/12 158 days
70 percent *	4/18 to 11/ 3 200 days	4/29 to 10/27 182 days	5/ 4 to 10/16 165 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: LAURELTON STATE VILLAGE, PA 4853

Latitude: 4054 Longitude: 07713 Elevation: 800 ft
State FIPS/County(FIPS): 42119 County Name: Union
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
	avg daily max	avg daily min	avg	avg	30% chance will have less than	30% chance will have more than	average number of days with 0.10 inch or more	total snow fall
January	36.2	16.7	26.5	2.58	1.50	3.14	5	8.6
February	40.2	18.8	29.5	2.88	1.55	3.51	5	6.7
March	51.2	27.0	39.1	3.34	2.48	3.91	6	4.3
April	64.3	36.7	50.5	3.21	2.09	3.86	7	0.5
May	74.7	46.3	60.5	4.39	3.05	5.22	8	0.0
June	82.3	54.9	68.6	4.54	2.72	5.51	8	0.0
July	86.3	59.6	72.9	4.29	3.04	5.09	7	0.0
August	84.4	58.0	71.2	3.41	2.38	4.05	6	0.0
September	76.9	51.0	64.0	4.27	2.87	5.11	6	0.0
October	65.2	39.7	52.5	3.66	2.50	4.37	5	0.0
November	52.5	31.6	42.0	3.82	2.60	4.57	7	0.9
December	40.2	22.3	31.2	3.17	1.99	3.82	6	3.8
Annual	—	—	—	-	35.84	47.72		
Average	62.9	38.6	50.7	-	-	-		
Total				43.57	-	-	76	24.7

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/ 7 to 11/ 1 209 days	4/21 to 10/21 183 days	5/ 6 to 10/ 9 155 days
70 percent *	4/ 3 to 11/ 5 216 days	4/17 to 10/25 191 days	5/ 3 to 10/12 162 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: LEBANON 2 W, PA 4896

Latitude: 4020 Longitude: 07628 Elevation: 450 ft
State FIPS/County(FIPS): 42075 County Name: Lebanon
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have			
	avg daily max	avg daily min	avg	avg	less than	more than	average number of days with 0.10 inch or more	total snow fall
January	36.4	19.0	27.7	3.10	1.76	3.77	5	7.4
February	39.6	21.3	30.4	2.42	1.44	2.94	6	8.2
March	50.4	29.7	40.1	3.01	2.21	3.54	6	3.8
April	62.2	38.9	50.6	3.67	2.48	4.39	7	0.1
May	72.1	48.4	60.3	4.86	3.22	5.83	9	0.0
June	81.1	57.4	69.3	4.23	2.54	5.13	7	0.0
July	85.6	62.3	74.0	4.74	3.04	5.71	7	0.0
August	83.8	60.5	72.2	3.62	2.54	4.30	6	0.0
September	76.3	53.4	64.9	4.13	2.41	5.02	6	0.0
October	65.3	41.9	53.6	3.02	2.23	3.55	5	0.0
November	53.4	33.5	43.4	3.66	2.57	4.35	6	1.0
December	41.6	24.8	33.2	3.34	2.02	4.04	6	6.1
Annual	—	—	—	-	37.19	45.04		
Average	62.3	40.9	51.6	-	-	-		
Total				43.81	-	-	76	26.7

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	3/29 to 11/ 7 223 days	4/14 to 10/27 197 days	4/29 to 10/18 172 days
70 percent *	3/25 to 11/11 231 days	4/ 9 to 11/ 1 206 days	4/24 to 10/22 181 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: LEWISTOWN, PA 4992

Latitude: 4035 Longitude: 07735 Elevation: 460 ft
State FIPS/County(FIPS): 42087 County Name: Mifflin
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have		average number	total
	avg daily max	avg daily min	avg	avg	less than	more than	of days with 0.10 inch or more	snow fall
January	35.8	18.1	27.0	2.17	1.32	2.63	5	8.5
February	38.9	19.8	29.3	2.41	1.47	2.91	5	6.3
March	50.1	28.5	39.3	2.99	2.24	3.49	6	3.7
April	62.1	37.9	50.0	2.95	1.81	3.57	7	0.2
May	73.0	47.2	60.1	4.10	2.87	4.87	8	0.0
June	81.1	55.8	68.5	3.91	2.75	4.64	8	0.0
July	85.3	60.8	73.0	4.09	2.65	4.92	6	0.0
August	83.7	59.5	71.6	3.17	2.15	3.79	5	0.0
September	76.2	52.3	64.2	3.28	2.20	3.92	6	0.0
October	64.9	40.9	52.9	2.98	1.58	3.63	5	0.0
November	52.4	33.1	42.7	3.20	2.04	3.86	6	0.8
December	39.5	24.0	31.8	2.80	1.86	3.35	6	6.0
Annual	—	—	—	-	33.24	40.37		
Average	61.9	39.8	50.9	-	-	-		
Total				38.05	-	-	73	25.6

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	3/31 to 11/ 9 223 days	4/11 to 10/27 199 days	4/27 to 10/14 170 days
70 percent *	3/26 to 11/14 234 days	4/ 6 to 11/ 1 208 days	4/21 to 10/20 182 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: LOCK HAVEN, PA 5104

Latitude: 4108 Longitude: 07725 Elevation: 550 ft
State FIPS/County(FIPS): 42035 County Name: Clinton
Start yr. - 1961 End yr. - 1978

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have			
	avg daily max	avg daily min	avg	avg	less than	more than	average number of days with 0.10 inch or more	total snow fall
January	33.8	14.4	24.1	2.20	1.65	2.57	5	10.2
February	36.9	15.9	26.4	2.08	1.25	2.52	5	9.0
March	48.3	25.9	37.1	3.37	2.59	3.90	7	8.2
April	61.0	34.3	47.7	3.06	2.29	3.57	6	1.0
May	72.0	43.7	57.9	3.44	2.38	4.10	7	0.0
June	80.5	52.9	66.7	3.81	2.37	4.61	8	0.0
July	84.7	57.6	71.1	4.31	2.88	5.17	8	0.0
August	82.6	56.3	69.5	3.72	2.68	4.38	7	0.0
September	75.3	49.8	62.6	3.89	2.49	4.68	6	0.0
October	64.9	38.1	51.5	2.67	1.30	3.27	4	0.1
November	50.4	31.3	40.9	3.07	2.16	3.64	5	1.9
December	37.5	21.8	29.7	2.68	1.83	3.20	5	7.3
Annual	—	—	—	-	26.75	39.09		-
Average	60.7	36.8	48.8	-	-	-		-
Total				38.29	-	-	73	37.6

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/ 7 to 10/31 208 days	4/26 to 10/19 176 days	5/11 to 10/ 1 143 days
70 percent *	4/ 3 to 11/ 4 215 days	4/22 to 10/23 184 days	5/ 7 to 10/ 5 151 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: MADERA 2 SE, PA 5336

Latitude: 4048 Longitude: 07824 Elevation: 1600 ft
State FIPS/County(FIPS): 42033 County Name: Clearfield
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have		average number	total
	avg daily max	avg daily min	avg	avg	less than	more than	of days with 0.10 inch or more	snow fall
January	31.0	11.5	21.2	1.80	1.03	2.19	4	12.1
February	33.6	12.0	22.8	2.09	1.22	2.54	5	12.8
March	44.4	21.7	33.1	2.91	2.05	3.46	6	8.7
April	57.2	30.5	43.9	3.12	2.18	3.71	7	1.2
May	68.8	40.1	54.5	3.95	2.85	4.67	8	0.0
June	77.0	48.8	62.9	4.48	2.74	5.43	8	0.0
July	80.6	53.8	67.2	4.37	3.34	5.09	8	0.0
August	78.5	52.5	65.5	3.79	2.90	4.41	7	0.0
September	71.1	45.6	58.3	3.46	2.46	4.10	7	0.0
October	59.1	34.2	46.7	2.63	1.66	3.17	6	0.1
November	47.5	27.7	37.6	2.74	1.97	3.24	6	3.0
December	35.3	17.9	26.6	2.11	1.51	2.49	5	8.9
Annual	—	—	—	-	26.23	40.70		
Average	57.0	33.0	45.0	-	-	-		
Total				37.47	-	-	77	46.8

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/28 to 10/17 172 days	5/12 to 10/ 5 145 days	5/27 to 9/21 117 days
70 percent *	4/24 to 10/22 181 days	5/ 8 to 10/ 9 154 days	5/23 to 9/26 126 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: MARCUS HOOK, PA 5390

Latitude: 3949 Longitude: 07525 Elevation: 00010 ft
State FIPS/County(FIPS): 42045 County Name: Delaware
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have			
	avg daily max	avg daily min	avg	avg	less than	more than	average number of days with 0.10 inch or more	total snow fall
January	38.4	26.4	32.4	2.88	1.81	3.48	5	6.4
February	41.7	28.2	35.0	3.03	2.06	3.61	5	6.6
March	51.6	36.0	43.8	3.81	2.65	4.54	6	2.0
April	62.8	45.0	53.9	3.63	2.34	4.37	6	0.0
May	73.8	55.0	64.4	4.13	2.63	4.97	7	0.0
June	82.9	64.2	73.5	3.73	2.08	4.54	6	0.0
July	87.1	69.2	78.2	4.14	2.43	5.04	5	0.0
August	85.1	68.2	76.6	3.71	2.01	4.52	5	0.0
September	77.4	61.1	69.3	3.88	2.47	4.67	5	0.0
October	65.5	50.0	57.8	2.86	1.77	3.46	4	0.0
November	54.3	41.1	47.7	3.64	1.94	4.44	5	0.3
December	43.1	31.5	37.3	3.40	1.87	4.14	5	2.4
Annual	—	—	—	-	34.86	46.09		
Average	63.6	48.0	55.8	-	-	-		
Total				42.83	-	-	64	17.8

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	3/10 to 12/ 8 273 days	3/19 to 11/29 255 days	4/ 1 to 11/11 224 days
70 percent *	3/ 4 to 12/14 285 days	3/14 to 12/ 3 264 days	3/27 to 11/15 233 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: MARION CENTER 2 SE, PA 5408

Latitude: 4045 Longitude: 07902 Elevation: 1610 ft
State FIPS/County(FIPS): 42063 County Name: Indiana
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
	avg daily max	avg daily min	avg	avg	30% chance will have less than	30% chance will have more than	average number of days with 0.10 inch or more	total snow fall
January	31.0	14.9	23.0	3.34	2.48	3.91	8	18.6
February	34.6	17.1	25.8	3.20	2.27	3.79	8	17.9
March	45.9	26.1	36.0	4.21	3.35	4.83	9	13.8
April	58.2	35.6	46.9	4.10	3.07	4.79	9	4.3
May	68.5	46.0	57.2	4.46	3.50	5.15	9	0.1
June	76.0	54.4	65.2	4.77	3.27	5.68	8	0.0
July	79.4	58.6	69.0	4.90	3.58	5.76	8	0.0
August	77.7	57.8	67.7	4.34	3.36	5.03	7	0.0
September	70.9	51.6	61.2	4.10	2.77	4.90	7	0.0
October	60.1	40.6	50.4	3.15	2.09	3.78	7	0.5
November	48.1	32.2	40.2	3.95	2.98	4.61	9	5.8
December	36.0	21.5	28.7	3.80	3.04	4.35	9	15.1
Annual	—	—	—	-	44.52	51.24		
Average	57.2	38.0	47.6	-	-	-		
Total				48.32	-	-	98	76.2

GROWING SEASON DATES

Probability	Temperature		
	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/17 to 11/ 2 198 days	4/27 to 10/22 178 days	5/10 to 10/ 8 151 days
70 percent *	4/14 to 11/ 6 206 days	4/24 to 10/26 185 days	5/ 5 to 10/14 161 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: MATAMORAS, PA 5470

Latitude: 4122 Longitude: 07442 Elevation: 400 ft
State FIPS/County(FIPS): 42103 County Name: Pike
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have			
	avg daily max	avg daily min	avg	avg	less than	more than	average number of days with 0.10 inch or more	total snow fall
January	34.4	16.0	25.2	3.12	1.89	3.78	6	10.8
February	38.4	18.1	28.2	2.90	1.95	3.47	6	9.8
March	48.8	26.9	37.8	3.42	2.39	4.06	6	6.4
April	61.8	36.3	49.0	3.69	2.73	4.33	7	0.8
May	72.9	46.4	59.6	4.31	2.92	5.14	7	0.0
June	80.2	54.6	67.4	3.80	2.32	4.60	7	0.0
July	84.8	59.5	72.1	4.30	3.15	5.05	7	0.0
August	82.8	58.3	70.5	3.70	2.67	4.36	6	0.0
September	75.2	51.0	63.1	3.87	2.73	4.59	5	0.0
October	64.5	39.7	52.1	3.08	1.81	3.74	5	0.0
November	51.4	32.1	41.8	3.88	2.78	4.59	6	1.6
December	38.5	22.0	30.2	3.35	2.15	4.04	6	8.6
Annual	—	—	—	-	37.62	45.55		
Average	61.1	38.4	49.8	-	-	-		
Total				43.43	-	-	74	38.1

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/ 5 to 10/30 208 days	4/20 to 10/21 184 days	5/ 4 to 10/10 160 days
70 percent *	3/31 to 11/ 4 218 days	4/15 to 10/27 195 days	4/30 to 10/14 166 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: MCKEESPORT, PA 5573

Latitude: 4021 Longitude: 07952 Elevation: 720 ft
State FIPS/County(FIPS): 42003 County Name: Allegheny
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have		average number	total
	avg daily max	avg daily min	avg	avg	less than	more than	of days with 0.10 inch or more	snow fall
January	41.8	19.7	30.8	2.52	1.62	3.03	6	7.3
February	39.3	22.2	30.8	2.32	1.48	2.79	5	5.5
March	52.8	29.3	41.1	3.13	2.17	3.72	7	3.2
April	61.8	39.6	50.7	3.18	2.33	3.73	7	0.0
May	68.9	46.6	57.8	3.67	2.76	4.28	7	0.0
June	78.4	55.8	67.1	3.66	2.45	4.39	6	0.0
July	84.6	62.3	73.5	3.74	2.86	4.35	6	0.0
August	82.0	61.1	71.6	2.88	2.15	3.38	6	0.0
September	74.8	53.2	64.0	3.18	2.13	3.80	5	0.0
October	62.9	41.4	52.1	2.26	1.48	2.71	5	0.0
November	56.0	32.4	44.2	2.33	1.75	2.71	5	0.2
December	43.7	26.3	35.0	2.51	1.78	2.97	6	3.6
Annual	—	—	—	-	26.55	37.83		-
Average	62.2	40.8	51.5	-	-	-		-
Total				35.37	-	-	71	19.8

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	3/31 to 11/ 6 220 days	4/14 to 10/23 192 days	4/22 to 10/17 177 days
70 percent *	3/27 to 11/ 9 227 days	4/ 9 to 10/27 201 days	4/20 to 10/18 181 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: MEADVILLE 1 S, PA 5606

Latitude: 4138 Longitude: 08010 Elevation: 01070 ft
State FIPS/County(FIPS): 42039 County Name: Crawford
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have			
	avg daily max	avg daily min	avg	avg	less than	more than	average number of days with 0.10 inch or more	total snow fall
January	31.4	13.6	22.5	2.69	2.00	3.15	7	29.2
February	34.3	14.3	24.3	2.64	1.75	3.16	6	21.7
March	44.9	24.0	34.4	3.31	2.55	3.84	8	17.3
April	56.8	33.6	45.2	3.30	2.61	3.79	8	5.9
May	68.8	43.1	55.9	3.80	2.90	4.42	8	0.3
June	76.9	51.9	64.4	4.53	3.18	5.38	7	0.0
July	81.0	56.5	68.7	4.49	3.36	5.24	7	0.0
August	79.2	55.5	67.3	4.64	3.42	5.44	7	0.0
September	72.7	49.1	60.9	4.00	3.17	4.60	7	0.0
October	61.4	38.8	50.1	3.62	2.42	4.33	8	1.1
November	49.0	31.6	40.3	4.08	3.05	4.77	9	11.3
December	36.7	21.2	28.9	3.72	2.96	4.27	9	27.2
Annual	—	—	—	-	41.07	46.85		
Average	57.7	36.1	46.9	-	-	-		
Total				44.81	-	-	91	114.0

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/15 to 11/ 6 205 days	4/30 to 10/22 175 days	5/14 to 10/12 151 days
70 percent *	4/11 to 11/10 213 days	4/26 to 10/25 182 days	5/10 to 10/16 159 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: MERCER, PA 5651

Latitude: 4113 Longitude: 08014 Elevation: 1220 ft
State FIPS/County(FIPS): 42085 County Name: Mercer
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
	avg daily max	avg daily min	avg	avg	30% chance will have less than	30% chance will have more than	average number of days with 0.10 inch or more	total snow fall
January	32.5	15.6	24.1	2.50	1.91	2.91	7	13.2
February	36.1	17.7	26.9	2.59	1.69	3.11	7	11.7
March	47.6	27.0	37.3	3.44	2.67	3.99	8	8.5
April	59.1	36.0	47.6	3.37	2.61	3.90	8	1.9
May	69.6	45.5	57.5	3.77	2.81	4.41	8	0.1
June	77.6	54.0	65.8	4.64	3.47	5.42	8	0.0
July	81.5	58.1	69.8	4.16	3.13	4.86	7	0.0
August	79.9	57.0	68.4	3.80	2.83	4.45	7	0.0
September	73.7	50.8	62.3	3.89	2.94	4.54	7	0.0
October	62.5	40.3	51.4	2.92	1.90	3.51	6	0.0
November	49.7	32.8	41.2	3.74	2.79	4.37	8	4.3
December	37.3	22.3	29.8	3.21	2.52	3.69	8	11.9
Annual	—	—	—	-	38.52	43.70		
Average	58.9	38.1	48.5	-	-	-		
Total				42.02	-	-	89	51.7

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/19 to 11/ 1 195 days	4/30 to 10/19 172 days	5/16 to 9/30 137 days
70 percent *	4/14 to 11/ 6 206 days	4/26 to 10/24 181 days	5/10 to 10/ 5 148 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: MERCERSBURG, PA 5662

Latitude: 3950 Longitude: 07754 Elevation: 00540 ft
State FIPS/County(FIPS): 42055 County Name: Franklin
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have			
	avg daily max	avg daily min	avg	avg	less than	more than	average number of days with 0.10 inch or more	total snow fall
January	36.4	17.7	27.0	2.62	1.60	3.18	5	9.5
February	39.7	19.6	29.6	2.75	1.50	3.36	5	10.0
March	50.7	28.4	39.5	3.67	2.67	4.33	7	5.2
April	62.2	38.0	50.1	3.64	2.38	4.38	7	0.2
May	72.5	47.2	59.8	4.02	2.75	4.80	8	0.0
June	81.5	56.7	69.1	4.06	2.56	4.90	7	0.0
July	86.1	60.9	73.5	3.64	2.44	4.35	6	0.0
August	84.8	58.8	71.8	3.75	2.61	4.46	6	0.0
September	77.6	51.3	64.5	3.42	2.20	4.12	5	0.0
October	65.4	39.2	52.3	3.33	1.69	4.07	5	0.0
November	53.1	32.0	42.5	3.47	2.33	4.15	7	1.4
December	41.6	23.3	32.4	3.06	2.09	3.65	5	7.1
Annual	—	—	—	-	31.69	45.58		
Average	62.6	39.4	51.0	-	-	-		
Total				41.45	-	-	73	33.5

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/ 1 to 11/ 1 214 days	4/18 to 10/24 189 days	5/ 1 to 10/ 9 161 days
70 percent *	3/26 to 11/ 7 226 days	4/13 to 10/28 199 days	4/26 to 10/14 171 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: MILLVILLE 2 SW, PA 5817

Latitude: 4106 Longitude: 07634 Elevation: 860 ft
State FIPS/County(FIPS): 42037 County Name: Columbia
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
	avg daily max	avg daily min	avg	avg	30% chance will have less than	30% chance will have more than	average number of days with 0.10 inch or more	total snow fall
January	32.2	13.8	23.0	2.52	1.65	3.03	6	10.7
February	35.3	15.5	25.4	2.42	1.52	2.92	6	8.5
March	46.1	24.9	35.5	2.97	2.25	3.46	6	5.8
April	58.2	34.8	46.5	3.27	2.27	3.89	7	0.9
May	69.3	44.3	56.8	4.03	2.99	4.72	8	0.0
June	77.7	53.0	65.4	4.56	2.64	5.54	8	0.0
July	82.4	57.9	70.2	3.87	2.83	4.55	7	0.0
August	80.6	56.3	68.4	3.51	2.60	4.12	6	0.0
September	73.4	48.8	61.1	3.69	2.31	4.45	6	0.0
October	62.0	37.9	49.9	3.17	1.78	3.87	6	0.1
November	49.4	30.4	39.9	3.40	2.52	3.99	6	2.4
December	36.9	20.5	28.7	3.00	2.00	3.59	6	7.0
Annual	—	—	—	-	36.15	43.01		
Average	58.6	36.5	47.6	-	-	-		
Total				40.40	-	-	78	35.5

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/ 8 to 11/ 1 208 days	4/21 to 10/19 180 days	5/ 6 to 10/ 6 153 days
70 percent *	4/ 4 to 11/ 5 215 days	4/16 to 10/23 190 days	5/ 3 to 10/ 9 160 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: MONTGOMERY LOCK AND DAM, PA 5902

Latitude: 4039 Longitude: 08023 Elevation: 690 ft
State FIPS/County(FIPS): 42007 County Name: Beaver
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have			
	avg daily max	avg daily min	avg	avg	less than	more than	average number of days with 0.10 inch or more	total snow fall
January	36.2	19.5	27.9	2.32	1.57	2.77	6	8.4
February	39.6	21.0	30.3	2.12	1.33	2.56	6	5.2
March	51.3	29.3	40.3	3.25	2.38	3.83	8	3.4
April	63.7	38.1	50.9	3.16	2.33	3.71	8	0.3
May	74.1	47.7	60.9	3.92	2.86	4.62	9	0.0
June	81.5	56.5	69.0	3.48	2.44	4.13	7	0.0
July	84.7	60.9	72.8	4.08	3.03	4.78	7	0.0
August	82.4	60.1	71.2	3.15	2.05	3.79	6	0.0
September	75.6	53.9	64.8	3.07	1.98	3.70	6	0.0
October	64.4	42.7	53.6	2.37	1.48	2.86	5	0.0
November	52.7	34.9	43.8	2.93	2.09	3.47	7	0.7
December	40.5	25.1	32.8	2.94	2.09	3.48	7	4.4
Annual	—	—	—	-	33.93	39.12		
Average	62.2	40.8	51.5	-	-	-		
Total				36.81	-	-	82	22.3

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/10 to 11/12 217 days	4/26 to 10/30 187 days	5/ 5 to 10/17 165 days
70 percent *	4/ 6 to 11/15 223 days	4/21 to 11/ 3 196 days	5/ 1 to 10/20 172 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: MONTROSE, PA 5915

Latitude: 4150 Longitude: 07552 Elevation: 1560 ft
State FIPS/County(FIPS): 42115 County Name: Susquehanna
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
	avg daily max	avg daily min	avg	avg	30% chance will have less than	30% chance will have more than	average number of days with 0.10 inch or more	total snow fall
January	28.6	11.6	20.1	2.90	1.93	3.47	7	20.5
February	31.1	12.6	21.9	2.84	2.04	3.35	7	18.6
March	41.1	22.2	31.6	3.23	2.44	3.77	7	15.7
April	53.1	32.8	43.0	3.62	2.65	4.26	8	7.0
May	65.3	43.0	54.2	4.00	3.09	4.63	8	0.5
June	73.9	51.8	62.8	4.22	2.98	5.01	9	0.0
July	78.5	56.3	67.4	3.88	2.92	4.53	7	0.0
August	76.6	54.5	65.5	3.81	2.78	4.48	7	0.0
September	69.2	47.4	58.3	3.60	2.38	4.31	6	0.0
October	58.0	37.2	47.6	3.41	2.06	4.13	6	0.9
November	45.2	29.0	37.1	3.84	3.00	4.43	8	9.6
December	33.0	17.9	25.4	3.31	2.41	3.90	8	17.8
Annual	—	—	—	-	38.57	45.34		
Average	54.5	34.7	44.6	-	-	-	-	
Total				42.65	-	-	88	90.6

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/17 to 10/28 194 days	4/29 to 10/15 169 days	5/12 to 9/29 140 days
70 percent *	4/13 to 11/ 1 202 days	4/24 to 10/19 179 days	5/ 8 to 10/ 4 149 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: MOUNT POCONO 2 N, PA 6055

Latitude: 4109 Longitude: 07522 Elevation: 1920 ft
State FIPS/County(FIPS): 42089 County Name: Monroe
Start yr. - 1927 End yr. - 1960

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have			
	avg daily max	avg daily min	avg	avg	less than	more than	average number of days with 0.10 inch or more	total snow fall
January	31.9	15.9	23.9	3.47	2.37	4.14	7	11.6
February	32.6	15.3	23.9	3.00	2.23	3.51	7	12.2
March	41.2	22.9	32.0	4.31	3.02	5.12	8	11.5
April	53.7	33.2	43.4	4.20	2.97	4.97	8	3.3
May	65.9	43.1	54.5	4.30	2.77	5.17	8	0.1
June	73.2	51.4	62.3	4.75	3.69	5.49	8	0.0
July	77.6	56.1	66.9	5.12	3.32	6.15	7	0.0
August	75.4	54.7	65.1	5.14	3.06	6.24	7	0.0
September	69.5	48.3	58.9	4.60	2.44	5.62	6	0.0
October	59.8	38.8	49.3	4.45	2.54	5.42	6	0.4
November	45.7	28.8	37.2	4.39	3.03	5.23	7	4.2
December	34.0	18.4	26.2	4.05	2.38	4.92	6	8.4
Annual	—	—	—	-	36.86	54.96		-
Average	55.0	35.6	45.3	-	-	-		-
Total				51.78	-	-	85	51.8

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/13 to 10/26 196 days	5/ 4 to 10/ 8 156 days	5/17 to 9/28 134 days
70 percent *	4/ 8 to 10/30 205 days	4/29 to 10/13 167 days	5/13 to 10/ 2 143 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: NESHAMINY FALLS, PA 6194

Latitude: 4009 Longitude: 07457 Elevation: 60 ft
State FIPS/County(FIPS): 42017 County Name: Bucks
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
	avg daily max	avg daily min	avg	avg	30% chance will have less than	30% chance will have more than	average number of days with 0.10 inch or more	total snow fall
January	41.5	19.3	30.4	3.43	2.19	4.13	6	5.0
February	46.9	24.0	35.5	3.08	2.30	3.61	6	6.4
March	54.8	30.2	42.5	3.89	2.82	4.59	7	2.9
April	64.7	39.2	52.0	4.02	2.82	4.77	6	0.3
May	76.1	49.2	62.7	4.51	2.77	5.46	7	0.0
June	84.6	57.8	71.2	4.11	2.53	4.97	6	0.0
July	88.6	63.5	76.1	5.59	3.64	6.72	6	0.0
August	86.7	61.9	74.3	4.66	2.95	5.62	6	0.0
September	80.0	53.4	66.7	4.41	2.77	5.32	5	0.0
October	69.2	41.9	55.6	3.20	1.95	3.88	5	0.0
November	58.6	33.6	46.1	3.92	2.42	4.74	6	0.3
December	45.0	24.5	34.8	3.79	2.24	4.61	6	3.8
Annual	—	—	—	-	43.09	52.34		
Average	66.4	41.6	54.0	-	-	-		
Total				48.61	-	-	72	18.7

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	3/30 to 11/ 4 219 days	4/16 to 10/23 190 days	4/23 to 10/15 175 days
70 percent *	3/26 to 11/ 8 227 days	4/11 to 10/28 199 days	4/20 to 10/17 180 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: NEW CASTLE 1 N, PA 6233

Latitude: 4101 Longitude: 08022 Elevation: 830 ft
State FIPS/County(FIPS): 42073 County Name: Lawrence
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have			
	avg daily max	avg daily min	avg	avg	less than	more than	average number of days with 0.10 inch or more	total snow fall
January	34.9	17.1	26.0	2.16	1.50	2.56	5	10.4
February	38.6	18.2	28.4	2.14	1.39	2.58	6	8.2
March	50.1	26.6	38.3	3.08	2.29	3.61	7	5.5
April	62.0	35.4	48.7	3.03	2.22	3.57	7	0.7
May	72.8	45.1	58.9	3.51	2.59	4.11	8	0.1
June	80.8	54.0	67.4	4.09	2.97	4.81	7	0.0
July	84.2	58.3	71.2	3.96	2.97	4.63	7	0.0
August	82.5	57.4	69.9	3.38	2.43	3.99	6	0.0
September	76.3	51.1	63.7	3.40	2.43	4.01	6	0.0
October	65.0	39.9	52.4	2.70	1.82	3.23	6	0.1
November	51.9	32.7	42.3	3.08	2.19	3.64	7	2.2
December	39.5	23.2	31.3	2.80	2.17	3.24	7	5.4
Annual	—	—	—	-	34.30	39.95		
Average	61.5	38.2	49.9	-	-	-		
Total				37.32	-	-	79	32.5

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/18 to 11/ 1 197 days	5/ 2 to 10/21 173 days	5/15 to 10/ 6 144 days
70 percent *	4/14 to 11/ 5 206 days	4/28 to 10/25 180 days	5/10 to 10/12 155 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: NEWPORT, PA 6297

Latitude: 4029 Longitude: 07708 Elevation: 00380 ft
State FIPS/County(FIPS): 42099 County Name: Perry
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have		average number	total
	avg daily max	avg daily min	avg	avg	less than	more than	of days with 0.10 inch or more	snow fall
January	35.9	17.8	26.9	2.53	1.47	3.08	5	9.5
February	39.3	19.3	29.3	2.65	1.56	3.21	5	6.7
March	50.7	28.5	39.6	3.20	2.41	3.74	6	3.5
April	62.8	37.8	50.3	3.24	2.10	3.90	6	0.3
May	72.4	47.5	59.9	4.13	2.99	4.88	8	0.0
June	80.8	56.9	68.8	3.73	2.43	4.48	7	0.0
July	85.0	61.8	73.4	3.59	2.48	4.27	6	0.0
August	83.0	60.4	71.7	3.52	2.56	4.15	6	0.0
September	75.6	52.7	64.2	3.80	2.40	4.58	5	0.0
October	64.1	41.2	52.7	3.31	2.31	4.10	5	0.0
November	52.7	32.9	42.8	3.54	2.41	4.23	6	1.4
December	40.1	23.9	32.0	3.16	1.97	3.83	6	4.0
Annual	—	—	—	-	36.54	43.05		
Average	61.9	40.1	51.0	-	-	-		
Total				40.41	-	-	71	25.5

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	3/30 to 11/ 9 224 days	4/11 to 10/27 199 days	4/27 to 10/18 174 days
70 percent *	3/26 to 11/14 233 days	4/ 8 to 10/30 205 days	4/23 to 10/23 183 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: NORRISTOWN, PA 6370

Latitude: 4007 Longitude: 07521 Elevation: 70 ft
State FIPS/County(FIPS): 42091 County Name: Montgomery
Start yr. - 1961 End yr. - 1987

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have			
	avg daily max	avg daily min	avg	avg	less than	more than	average number of days with 0.10 inch or more	total snow fall
January	37.4	21.0	29.2	3.31	2.05	4.00	6	8.7
February	41.0	23.9	32.4	3.06	2.17	3.62	5	8.7
March	50.6	32.1	41.4	3.63	2.71	4.25	6	2.4
April	62.7	41.2	52.0	3.76	2.50	4.50	6	0.5
May	73.5	51.1	62.3	3.97	2.63	4.76	7	0.0
June	82.5	60.3	71.4	3.35	2.10	4.04	6	0.0
July	86.5	65.0	75.7	4.42	2.79	5.34	6	0.0
August	85.0	63.8	74.4	3.99	2.48	4.83	6	0.0
September	78.1	56.2	67.1	4.12	2.48	5.00	5	0.0
October	66.9	44.7	55.8	2.87	1.58	3.50	4	0.0
November	55.0	36.4	45.7	4.15	2.63	5.00	6	0.2
December	43.0	26.8	34.9	3.59	2.34	4.32	6	2.2
Annual	—	—	—	-	37.82	45.98		
Average	63.5	43.5	53.5	-	-	-		
Total				44.22	-	-	69	22.7

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	3/20 to 11/26 251 days	4/ 3 to 11/10 221 days	4/14 to 10/27 195 days
70 percent *	3/16 to 11/30 259 days	3/28 to 11/17 234 days	4/ 9 to 11/ 1 206 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: PALMERTON, PA 6689

Latitude: 4048 Longitude: 07537 Elevation: 410 ft
State FIPS/County(FIPS): 42025 County Name: Carbon
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have		average number	total
	avg daily max	avg daily min	avg	avg	less than	more than	of days with 0.10 inch or more	snow fall
January	35.7	18.4	27.0	2.74	1.39	3.34	4	6.1
February	38.6	20.5	29.5	2.34	1.73	2.74	4	7.0
March	48.6	29.2	38.9	2.95	2.21	3.44	5	3.7
April	60.3	37.6	49.0	3.17	1.95	3.83	6	0.7
May	71.8	47.9	59.8	4.34	2.77	5.23	7	0.0
June	80.1	56.9	68.5	3.84	2.14	4.68	6	0.0
July	84.8	61.9	73.3	4.17	2.96	4.94	6	0.0
August	83.2	60.4	71.8	4.08	2.92	4.82	6	0.0
September	75.1	52.3	63.7	3.91	2.55	4.69	5	0.0
October	64.6	41.3	52.9	3.19	1.86	3.88	4	0.1
November	52.1	33.6	42.8	3.51	2.21	4.24	6	1.2
December	39.9	24.2	32.1	3.11	1.90	3.77	5	4.7
Annual	—	—	—	-	36.30	43.87	-	
Average	61.2	40.3	50.8	-	-	-	-	
Total				41.33	-	-	64	23.5

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	3/29 to 11/ 3 219 days	4/18 to 10/25 190 days	5/ 2 to 10/ 8 159 days
70 percent *	3/24 to 11/ 8 228 days	4/13 to 10/30 200 days	4/27 to 10/12 168 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: PHILADELPHIA WSCMO AP, PA 6889

Latitude: 3953 Longitude: 07514 Elevation: 10 ft
State FIPS/County(FIPS): 42101 County Name: Philadelphia
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have			
	avg daily max	avg daily min	avg	avg	less than	more than	average number of days with 0.10 inch or more	total snow fall
January	37.9	22.8	30.3	3.21	2.14	3.84	6	7.8
February	41.1	24.8	32.9	2.79	2.02	3.30	5	7.5
March	51.6	33.2	42.4	3.46	2.39	4.12	6	3.3
April	62.6	42.1	52.3	3.62	2.45	4.33	6	0.5
May	73.1	52.7	62.9	3.75	2.37	4.53	6	0.0
June	81.7	61.8	71.7	3.74	2.09	4.56	6	0.0
July	86.1	67.2	76.7	4.28	2.86	5.12	5	0.0
August	84.6	66.3	75.5	3.80	2.44	4.58	5	0.0
September	77.6	58.7	68.2	3.42	2.21	4.11	4	0.0
October	66.3	46.4	56.4	2.62	1.70	3.15	4	0.1
November	55.1	37.6	46.4	3.34	1.83	4.08	5	0.6
December	43.3	28.1	35.7	3.38	2.09	4.09	6	3.4
Annual	—	—	—	-	37.70	44.63		
Average	63.4	45.1	54.3	-	-	-		
Total				41.42	-	-	64	23.3

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	3/17 to 11/26 254 days	3/30 to 11/11 227 days	4/10 to 10/28 202 days
70 percent *	3/13 to 11/30 262 days	3/25 to 11/17 237 days	4/ 5 to 11/ 1 210 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: PHILIPSBURG 8 E, PA 6916

Latitude: 4055 Longitude: 07804 Elevation: 2000 ft
State FIPS/County(FIPS): 42027 County Name: Centre
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
	avg daily max	avg daily min	avg	avg	30% chance will have less than	30% chance will have more than	average number of days with 0.10 inch or more	total snow fall
January	29.5	14.2	21.8	2.20	1.44	2.65	5	11.4
February	32.9	15.5	24.2	2.49	1.58	3.01	5	13.8
March	43.1	24.8	34.0	2.99	2.23	3.50	7	9.5
April	55.7	33.9	44.8	2.93	2.02	3.49	7	1.5
May	66.6	43.6	55.1	3.83	2.55	4.59	8	0.0
June	74.6	51.4	63.0	4.50	2.67	5.46	7	0.0
July	78.2	55.7	67.0	4.09	2.90	4.84	7	0.0
August	76.2	54.5	65.3	3.50	2.53	4.13	7	0.0
September	68.9	47.4	58.2	3.71	2.52	4.43	6	0.0
October	58.1	38.2	48.1	3.02	1.87	3.65	6	0.4
November	45.9	30.5	38.2	3.23	2.19	3.85	6	3.9
December	33.9	19.7	26.8	2.54	1.78	3.01	6	9.2
Annual	—	—	—	-	34.55	42.03		
Average	55.3	35.8	45.5	-	-	-		
Total				39.02	-	-	77	49.7

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/23 to 10/21 181 days	5/ 7 to 10/ 8 154 days	5/24 to 9/15 114 days
70 percent *	4/17 to 10/27 193 days	5/ 1 to 10/14 166 days	5/19 to 9/20 124 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: PHOENIXVILLE 1 E, PA 6927

Latitude: 4007 Longitude: 07530 Elevation: 110 ft
State FIPS/County(FIPS): 42029 County Name: Chester
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have		average number of days with 0.10 inch or more	total snow fall
	avg daily max	avg daily min	avg	avg	less than	more than		
January	38.9	19.0	29.0	3.12	1.90	3.78	5	4.0
February	42.4	21.4	31.9	2.85	2.05	3.37	5	5.7
March	53.0	30.5	41.7	3.46	2.43	4.10	6	1.5
April	64.0	38.8	51.4	3.48	2.30	4.17	6	0.1
May	75.3	49.1	62.2	3.88	2.56	4.66	7	0.0
June	82.9	57.9	70.4	3.66	2.13	4.46	6	0.0
July	86.9	62.3	74.6	4.26	2.70	5.14	6	0.0
August	85.2	60.2	72.7	3.40	2.21	4.08	5	0.0
September	78.2	53.4	65.8	3.83	2.39	4.63	5	0.0
October	67.2	42.0	54.6	2.81	1.88	3.36	5	0.0
November	55.7	33.7	44.7	3.76	2.25	4.56	6	0.4
December	43.5	24.5	34.0	3.62	2.14	4.39	6	3.0
Annual	—	—	—	-	36.89	45.04		
Average	64.4	41.1	52.8	-	-	-		
Total				42.13	-	-	68	14.7

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	3/30 to 11/11 226 days	4/ 9 to 10/26 199 days	4/27 to 10/14 170 days
70 percent *	3/24 to 11/17 238 days	4/ 5 to 10/30 208 days	4/21 to 10/20 181 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: PITTSBURGH WSCMO2 AP, PA 6993

Latitude: 4030 Longitude: 08013 Elevation: 1150 ft
State FIPS/County(FIPS): 42003 County Name: Allegheny
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
	avg daily max	avg daily min	avg	avg	30% chance will have less than	30% chance will have more than	average number of days with 0.10 inch or more	total snow fall
January	33.7	18.5	26.1	2.54	1.82	3.01	6	12.6
February	36.9	20.3	28.6	2.39	1.59	2.87	6	10.1
March	49.0	29.8	39.4	3.41	2.53	4.00	8	7.7
April	60.3	38.8	49.5	3.15	2.19	3.75	7	1.7
May	70.6	48.4	59.5	3.59	2.50	4.26	7	0.2
June	78.9	56.9	67.9	3.71	2.50	4.43	7	0.0
July	82.6	61.6	72.1	3.75	2.90	4.34	7	0.0
August	80.8	60.2	70.5	3.21	2.16	3.84	6	0.0
September	74.3	53.5	63.9	2.97	1.89	3.58	6	0.0
October	62.5	42.3	52.4	2.36	1.51	2.85	5	0.2
November	50.4	34.1	42.3	2.85	2.04	3.37	7	3.2
December	38.6	24.4	31.5	2.93	2.10	3.45	7	8.1
Annual	—	—	—	-	33.88	39.47		
Average	59.9	40.7	50.3	-	-	-		
Total				36.87	-	-	79	43.8

GROWING SEASON DATES

Probability	Temperature		
	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/ 4 to 11/ 7 218 days	4/15 to 10/27 195 days	4/30 to 10/15 168 days
70 percent *	3/30 to 11/12 226 days	4/12 to 10/31 202 days	4/27 to 10/19 175 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: PLEASANT MOUNT 1 W, PA 7029

Latitude: 4144 Longitude: 07527 Elevation: 1800 ft
State FIPS/County(FIPS): 42127 County Name: Wayne
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have			
	avg daily max	avg daily min	avg	avg	less than	more than	average number of days with 0.10 inch or more	total snow fall
January	28.0	8.9	18.5	3.06	1.80	3.71	6	18.0
February	30.6	9.8	20.2	2.90	2.01	3.45	6	16.5
March	40.0	19.5	29.7	3.38	2.57	3.94	7	13.1
April	52.2	30.7	41.5	4.07	3.12	4.72	8	4.8
May	64.2	40.8	52.5	4.67	3.34	5.52	8	0.4
June	72.1	49.5	60.8	4.76	3.15	5.71	9	0.0
July	77.0	53.8	65.4	4.02	3.00	4.71	7	0.0
August	75.3	52.5	63.9	4.32	3.19	5.07	7	0.0
September	67.9	45.0	56.5	4.16	2.77	4.99	7	0.0
October	57.4	34.8	46.1	3.89	2.49	4.69	6	0.4
November	44.7	26.9	35.8	4.25	3.23	4.95	8	7.8
December	32.4	15.5	24.0	3.71	2.62	4.40	7	16.0
Annual	—	—	—	-	42.30	50.28		
Average	53.5	32.3	42.9	-	-	-		
Total				47.20	-	-	86	77.0

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/22 to 10/19 180 days	5/ 6 to 10/ 3 150 days	5/21 to 9/22 125 days
70 percent *	4/17 to 10/23 189 days	5/ 1 to 10/ 8 160 days	5/16 to 9/27 134 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: PUTNEYVILLE 2 SE DAM, PA 7229

Latitude: 4056 Longitude: 07917 Elevation: 01280 ft
State FIPS/County(FIPS): 42005 County Name: Armstrong
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
	avg daily max	avg daily min	avg	avg	30% chance will have less than	30% chance will have more than	average number of days with 0.10 inch or more	total snow fall
January	33.0	13.6	23.3	2.83	1.93	3.38	7	12.4
February	35.7	14.6	25.1	2.83	2.03	3.34	7	11.5
March	46.6	24.3	35.4	3.66	2.78	4.26	8	7.3
April	58.6	33.7	46.1	3.52	2.58	4.13	8	1.0
May	69.9	43.2	56.6	4.06	3.06	4.74	8	0.1
June	78.2	51.9	65.1	4.36	2.81	5.25	8	0.0
July	82.1	56.6	69.4	4.51	3.28	5.31	8	0.0
August	80.2	55.3	67.7	4.08	3.07	4.77	7	0.0
September	73.4	48.7	61.0	3.86	2.85	4.53	7	0.0
October	61.8	37.7	49.7	3.14	1.92	3.81	7	0.2
November	49.6	30.6	40.1	3.48	2.48	4.12	8	2.0
December	37.6	20.5	29.0	3.37	2.49	3.95	8	9.2
Annual	—	—	—	-	39.85	46.61		
Average	58.9	35.9	47.4	-	-	-		
Total				43.70	-	-	91	43.7

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/18 to 10/28 193 days	5/ 4 to 10/17 167 days	5/18 to 10/ 3 138 days
70 percent *	4/14 to 11/ 2 202 days	4/29 to 10/21 175 days	5/13 to 10/ 8 149 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: READING 4 NNW, PA 7322

Latitude: 4025 Longitude: 07556 Elevation: 00040 ft
State FIPS/County(FIPS): 42011 County Name: Berks
Start yr. - 1973 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have			
	avg daily max	avg daily min	avg	avg	less than	more than	average number of days with 0.10 inch or more	total snow fall
January	36.0	17.8	26.9	3.69	2.08	4.50	6	2.8
February	40.5	20.2	30.3	2.89	1.99	3.44	6	1.7
March	51.2	29.0	40.1	3.40	2.46	4.00	7	0.9
April	62.0	38.3	50.2	3.96	2.51	4.78	7	0.0
May	72.8	49.0	60.9	5.02	3.67	5.90	8	0.0
June	80.7	58.1	69.4	4.41	3.11	5.23	7	0.0
July	85.3	63.2	74.3	4.17	2.97	4.94	6	0.0
August	83.8	62.0	72.9	4.01	2.57	4.83	7	0.0
September	76.3	53.0	64.6	4.38	2.82	5.27	6	0.0
October	65.2	41.0	53.1	3.13	2.01	3.77	5	0.0
November	54.1	33.5	43.8	3.33	2.15	4.01	6	0.4
December	41.2	23.4	32.3	3.38	1.94	4.11	5	1.1
Annual	—	—	—	-	41.84	48.12		
Average	62.4	40.7	51.6	-	-	-		
Total				45.76	-	-	76	6.8

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	3/29 to 11/13 229 days	4/14 to 10/27 196 days	4/30 to 10/18 170 days
70 percent *	3/24 to 11/17 238 days	4/10 to 11/ 1 205 days	4/26 to 10/21 178 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: RENOVO, PA 7409

Latitude: 4120 Longitude: 07744 Elevation: 660 ft
State FIPS/County(FIPS): 42035 County Name: Clinton
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have		average number	total
	avg daily max	avg daily min	avg	avg	less than	more than	of days with 0.10 inch or more	snow fall
January	33.5	15.3	24.4	1.82	1.28	2.16	4	8.1
February	36.8	16.3	26.5	2.53	1.42	3.08	5	7.5
March	47.0	24.7	35.9	2.95	2.20	3.46	6	5.3
April	60.0	34.5	47.2	3.17	2.23	3.76	7	0.4
May	71.7	43.3	57.5	3.66	2.64	4.33	8	0.0
June	80.6	52.1	66.4	4.04	2.48	4.89	7	0.0
July	84.2	57.3	70.8	3.47	2.63	4.04	7	0.0
August	82.2	55.9	69.1	3.34	2.32	3.97	6	0.0
September	74.6	49.8	62.2	2.99	1.95	3.60	6	0.0
October	63.7	39.1	51.4	2.72	1.49	3.32	5	0.0
November	49.9	31.3	40.6	3.41	2.53	4.00	7	1.7
December	37.6	22.2	29.9	2.47	1.60	2.98	6	5.9
Annual	—	—	—	-	31.75	38.51		-
Average	60.2	36.8	48.5	-	-	-		-
Total				36.59	-	-	74	28.8

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/ 7 to 11/ 7 214 days	4/22 to 10/25 186 days	5/11 to 10/12 155 days
70 percent *	4/ 3 to 11/12 223 days	4/18 to 10/28 193 days	5/ 7 to 10/16 161 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: RIDGWAY, PA 7477

Latitude: 4125 Longitude: 07845 Elevation: 1360 ft
State FIPS/County(FIPS): 42047 County Name: Elk
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have			
	avg daily max	avg daily min	avg	avg	less than	more than	average number of days with 0.10 inch or more	total snow fall
January	31.6	11.7	21.6	2.43	1.68	2.90	6	15.2
February	34.7	12.1	23.4	2.39	1.60	2.86	6	14.2
March	45.0	21.9	33.4	3.30	2.48	3.86	7	8.0
April	56.9	31.0	43.9	3.43	2.67	3.96	8	2.1
May	68.5	39.9	54.2	4.39	3.19	5.17	9	0.1
June	76.2	48.7	62.5	4.69	3.13	5.61	8	0.0
July	80.1	53.4	66.8	4.60	3.64	5.29	8	0.0
August	78.4	52.4	65.4	3.85	3.13	4.38	7	0.0
September	71.7	46.1	58.9	3.63	2.71	4.25	7	0.0
October	60.7	35.4	48.1	3.09	2.13	3.68	7	0.2
November	48.2	28.9	38.6	3.55	2.65	4.15	8	3.7
December	36.0	18.9	27.5	3.05	2.29	3.57	7	13.1
Annual	—	—	—	-	39.33	45.13		
Average	57.3	33.4	45.4	-	-	-		
Total				42.40	-	-	88	56.5

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/27 to 10/24 180 days	5/11 to 10/11 153 days	5/25 to 9/24 122 days
70 percent *	4/24 to 10/28 187 days	5/ 7 to 10/15 161 days	5/21 to 9/28 130 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: SALINA 3 W, PA 7782

Latitude: 4031 Longitude: 07933 Elevation: 1110 ft
State FIPS/County(FIPS): 42129 County Name: Westmoreland
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have			
	avg daily max	avg daily min	avg	avg	less than	more than	average number of days with 0.10 inch or more	total snow fall
January	35.7	16.6	26.1	2.30	1.68	2.71	6	10.6
February	39.0	18.4	28.7	2.29	1.44	2.77	6	8.9
March	50.4	27.0	38.7	3.21	2.27	3.80	7	3.3
April	62.0	35.7	48.8	3.26	2.38	3.84	8	0.4
May	72.3	45.3	58.8	4.00	3.06	4.66	9	0.0
June	80.0	53.8	66.9	3.92	2.52	4.72	7	0.0
July	83.4	58.3	70.8	4.39	3.27	5.14	8	0.0
August	81.9	57.1	69.5	3.59	2.61	4.23	7	0.0
September	75.6	50.8	63.2	3.43	2.27	4.12	6	0.0
October	64.2	39.9	52.0	2.71	1.86	3.23	6	0.0
November	52.1	32.6	42.4	3.23	2.20	3.85	7	1.7
December	40.6	23.0	31.8	2.80	1.96	3.32	7	4.8
Annual	—	—	—	-	36.03	41.47		
Average	61.4	38.2	49.8	-	-	-		
Total				39.13	-	-	84	29.7

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/18 to 10/29 195 days	5/ 1 to 10/20 172 days	5/14 to 10/ 1 140 days
70 percent *	4/14 to 11/ 2 202 days	4/26 to 10/24 181 days	5/ 8 to 10/ 6 152 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: SELINSGROVE 2 S, PA 7931

Latitude: 4046 Longitude: 07652 Elevation: 420 ft
State FIPS/County(FIPS): 42109 County Name: Snyder
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have			
	avg daily max	avg daily min	avg	avg	less than	more than	average number of days with 0.10 inch or more	total snow fall
January	33.4	15.9	24.6	2.50	1.33	3.06	5	11.7
February	37.9	18.3	28.1	2.45	1.53	2.96	6	8.2
March	48.8	26.8	37.8	2.83	2.04	3.35	6	4.7
April	60.5	37.4	49.0	3.53	2.53	4.17	8	0.7
May	71.4	47.1	59.3	4.20	2.58	5.09	8	0.0
June	79.4	55.6	67.5	4.26	2.97	5.06	7	0.0
July	83.7	60.7	72.2	4.03	3.13	4.66	7	0.0
August	81.7	59.0	70.4	3.84	2.63	4.57	6	0.0
September	74.4	51.3	62.9	3.39	2.43	4.01	5	0.0
October	62.5	39.7	51.1	3.64	2.43	4.36	6	0.0
November	51.2	31.8	41.5	3.68	2.51	4.40	6	1.8
December	38.9	22.1	30.5	2.81	1.59	3.43	5	4.3
Annual	—	—	—	-	36.22	43.47		-
Average	60.3	38.8	49.6	-	-	-		-
Total				41.17	-	-	75	31.2

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/ 2 to 11/ 8 221 days	4/14 to 10/25 194 days	4/29 to 10/13 166 days
70 percent *	3/29 to 11/12 229 days	4/11 to 10/28 201 days	4/26 to 10/16 173 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: SHIPPENSBURG, PA 8073

Latitude: 4003 Longitude: 07713 Elevation: 680 ft
State FIPS/County(FIPS): 42041 County Name: Cumberland
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have			
	avg daily max	avg daily min	avg	avg	less than	more than	average number of days with 0.10 inch or more	total snow fall
January	35.7	20.2	27.9	2.70	1.65	3.27	6	11.5
February	39.2	22.2	30.7	2.67	1.78	3.20	5	10.9
March	50.8	30.5	40.7	3.21	2.30	3.79	6	6.3
April	62.2	39.9	51.1	3.23	2.11	3.87	6	0.9
May	72.8	50.0	61.4	3.64	2.58	4.31	7	0.0
June	80.9	58.9	69.9	3.78	2.46	4.54	7	0.0
July	85.1	63.0	74.1	3.35	2.26	4.00	6	0.0
August	83.6	61.6	72.6	2.80	2.15	3.25	6	0.0
September	76.7	54.6	65.6	3.34	2.12	4.03	5	0.0
October	65.1	43.4	54.3	2.89	1.99	3.58	4	0.0
November	52.1	34.9	43.5	3.25	2.24	3.87	6	2.6
December	40.0	25.5	32.7	3.00	2.06	3.58	6	7.0
Annual	—	—	—	-	34.54	40.36		-
Average	62.0	42.1	52.0	-	-	-		-
Total				37.87	-	-	70	39.2

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	3/27 to 11/11 229 days	4/11 to 10/29 200 days	4/21 to 10/18 180 days
70 percent *	3/23 to 11/15 237 days	4/ 7 to 11/ 2 210 days	4/16 to 10/23 190 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: SLIPPERY ROCK 1 SSW, PA 8184

Latitude: 4103 Longitude: 08004 Elevation: 1250 ft
State FIPS/County(FIPS): 42019 County Name: Butler
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have			
	avg daily max	avg daily min	avg	avg	less than	more than	average number of days with 0.10 inch or more	total snow fall
January	33.0	14.2	23.6	2.50	1.76	2.96	6	13.4
February	36.3	15.7	26.0	2.22	1.50	2.66	6	9.9
March	47.1	24.9	36.0	3.19	2.33	3.75	8	7.1
April	58.8	33.6	46.2	3.19	2.40	3.72	8	1.2
May	70.4	43.4	56.9	3.72	2.70	4.38	8	0.0
June	78.2	51.8	65.0	4.50	3.27	5.30	8	0.0
July	81.9	55.8	68.8	4.06	3.03	4.76	7	0.0
August	80.2	54.4	67.3	3.86	2.66	4.59	6	0.0
September	73.9	48.5	61.2	3.53	2.64	4.14	6	0.0
October	62.5	37.8	50.2	2.95	2.01	3.52	6	0.1
November	50.0	30.5	40.3	3.34	2.25	3.99	7	2.6
December	37.6	20.5	29.0	3.04	2.34	3.53	8	8.5
Annual	—	—	—	-	36.35	42.90		-
Average	59.1	35.9	47.5	-	-	-		-
Total				40.10	-	-	84	42.7

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/19 to 10/27 191 days	4/29 to 10/14 168 days	5/19 to 10/ 3 137 days
70 percent *	4/14 to 10/31 200 days	4/23 to 10/20 180 days	5/14 to 10/ 8 147 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: SPRINGS 1 SW, PA 8395

Latitude: 3944 Longitude: 07910 Elevation: 02500 ft
State FIPS/County(FIPS): 42111 County Name: Somerset
Start yr. - 1949 End yr. - 1959

Month	Temperature (°F)			Precipitation (in.)				
	avg daily max	avg daily min	avg	avg	30% chance will have less than	30% chance will have more than	average number of days with 0.10 inch or more	total snow fall
January	37.6	19.5	28.6	3.82	2.89	4.46	10	12.7
February	38.9	20.6	29.7	2.95	2.49	3.30	8	10.0
March	43.5	23.9	33.7	4.36	3.40	5.04	9	15.4
April	57.2	34.2	45.7	3.72	3.13	4.18	10	3.3
May	67.3	42.8	55.1	4.94	3.85	5.71	10	0.1
June	75.0	50.7	62.8	4.67	3.59	5.42	9	0.0
July	78.4	55.4	66.9	4.75	3.70	5.49	9	0.0
August	76.5	53.2	64.8	4.42	2.78	5.33	7	0.0
September	70.2	45.9	58.0	2.97	2.29	3.44	6	0.0
October	61.2	37.6	49.4	3.33	2.03	4.04	6	0.4
November	47.0	26.9	36.9	2.61	1.89	3.08	7	8.5
December	38.2	20.4	29.3	3.49	2.35	4.18	8	13.3
Annual	—	—	—	-	43.28	47.39		-
Average	57.6	35.9	46.8	-	-	-		-
Total				46.03	-	-	99	63.6

GROWING SEASON DATES

Probability	Temperature		
	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/24 to 10/11 170 days	5/ 8 to 10/ 3 148 days	5/24 to 9/18 117 days
70 percent *	4/18 to 10/18 183 days	5/ 5 to 10/ 5 154 days	5/20 to 9/23 126 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: STATE COLLEGE, PA 8449

Latitude: 4048 Longitude: 07752 Elevation: 01170 ft
State FIPS/County(FIPS): 42027 County Name: Centre
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have		average number	total
	avg daily max	avg daily min	avg	avg	less than	more than	of days with 0.10 inch or more	snow fall
January	32.1	16.3	24.2	2.41	1.55	2.91	5	13.8
February	35.5	18.0	26.7	2.58	1.66	3.11	5	12.1
March	46.2	26.9	36.5	3.11	2.34	3.63	7	9.8
April	58.3	37.1	47.7	2.91	1.92	3.49	7	1.8
May	69.7	47.6	58.7	3.63	2.69	4.25	8	0.0
June	78.0	56.2	67.1	3.98	2.49	4.80	7	0.0
July	82.0	60.6	71.3	3.57	2.61	4.21	7	0.0
August	80.4	58.9	69.7	3.16	2.05	3.80	6	0.0
September	73.0	51.6	62.3	3.25	2.43	3.80	6	0.0
October	61.4	40.5	51.0	2.83	1.64	3.44	5	0.2
November	49.3	32.6	41.0	3.30	2.22	3.95	6	2.8
December	36.9	22.5	29.7	2.58	1.83	3.06	6	8.4
Annual	—	—	—	-	32.70	39.08		-
Average	58.6	39.1	48.8	-	-	-		-
Total				37.31	-	-	75	49.0

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/ 4 to 11/ 8 218 days	4/13 to 10/27 197 days	4/28 to 10/15 170 days
70 percent *	3/30 to 11/12 227 days	4/ 9 to 10/31 205 days	4/23 to 10/19 179 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: STOYSTOWN, PA 8560

Latitude: 4006 Longitude: 07857 Elevation: 01800 ft
State FIPS/County(FIPS): 42111 County Name: Somerset
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have		average number	total
	avg daily max	avg daily min	avg	avg	less than	more than	of days with 0.10 inch or more	snow fall
January	31.8	13.9	22.9	2.88	2.18	3.36	8	0.0
February	34.4	15.3	24.8	2.92	2.08	3.45	7	4.6
March	45.1	24.4	34.7	3.63	2.83	4.19	9	0.3
April	56.8	34.5	45.6	3.54	2.52	4.19	8	0.0
May	67.2	43.8	55.5	3.78	2.62	4.49	8	0.0
June	75.0	51.7	63.4	3.83	2.57	4.58	7	0.0
July	78.4	56.1	67.2	3.67	2.33	4.43	7	0.0
August	77.1	54.5	65.8	3.63	2.88	4.17	7	0.0
September	70.6	48.1	59.3	3.41	2.26	4.08	6	0.0
October	58.8	37.0	47.9	2.74	1.93	3.25	6	0.1
November	48.2	29.8	39.0	3.32	2.37	3.93	8	0.5
December	36.0	19.3	27.7	3.18	2.23	3.78	8	3.3
Annual	—	—	—	-	34.53	42.82		-
Average	56.6	35.7	46.1	-	-	-		-
Total				40.53	-	-	89	9.0

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/16 to 10/25 193 days	4/29 to 10/12 166 days	5/14 to 9/28 137 days
70 percent *	4/12 to 10/29 201 days	4/24 to 10/18 177 days	5/ 7 to 10/ 4 149 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: STROUDSBURG, PA 8596

Latitude: 4100 Longitude: 07511 Elevation: 480 ft
State FIPS/County(FIPS): 42089 County Name: Monroe
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have			
	avg daily max	avg daily min	avg	avg	less than	more than	average number of days with 0.10 inch or more	total snow fall
January	34.9	16.4	25.7	3.42	1.85	4.17	6	11.9
February	38.7	18.4	28.5	3.08	2.13	3.66	5	11.9
March	49.6	27.4	38.5	3.69	2.74	4.33	6	6.8
April	61.9	36.3	49.1	3.94	2.71	4.70	7	1.7
May	73.9	46.1	60.0	4.77	3.10	5.73	8	0.0
June	81.5	54.3	67.9	4.21	2.85	5.03	7	0.0
July	85.9	59.2	72.5	4.23	2.81	5.06	7	0.0
August	83.6	58.0	70.8	4.27	3.07	5.04	6	0.0
September	76.2	51.0	63.6	4.28	2.96	5.10	6	0.0
October	64.6	39.6	52.1	3.48	2.14	4.21	5	0.2
November	51.5	32.2	41.9	4.23	2.92	5.04	7	2.3
December	39.1	22.3	30.7	3.95	2.51	4.76	6	8.4
Annual	—	—	—	-	42.25	50.96		-
Average	61.8	38.4	50.1	-	-	-		-
Total				47.55	-	-	76	43.3

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/ 7 to 10/25 201 days	4/24 to 10/13 172 days	5/10 to 10/ 2 144 days
70 percent *	4/ 3 to 10/29 209 days	4/19 to 10/19 183 days	5/ 5 to 10/ 7 155 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: TAMARACK 2 S FIRE TOWER, PA 8770

Latitude: 4124 Longitude: 07751 Elevation: 02220 ft
State FIPS/County(FIPS): 42035 County Name: Clinton
Start yr. - 1949 End yr. - 1961

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have		average number	total
	avg daily max	avg daily min	avg	avg	less than	more than	of days with 0.10 inch or more	snow fall
January	31.5	15.9	23.7	2.71	2.09	3.14	6	10.4
February	33.6	16.2	24.9	2.53	2.10	2.85	7	13.1
March	39.3	20.0	29.6	3.57	3.02	3.99	8	15.9
April	55.2	33.9	44.5	3.54	2.92	4.01	8	4.1
May	66.9	42.7	54.8	3.49	2.09	4.24	7	0.2
June	75.1	53.4	64.2	2.66	1.85	3.17	6	0.0
July	78.0	57.8	67.9	3.50	2.80	4.00	7	0.0
August	77.4	55.7	66.5	3.08	1.95	3.72	4	0.0
September	65.9	47.0	56.5	2.31	1.16	2.82	6	0.0
October	59.3	39.7	49.5	3.15	1.80	3.83	5	0.5
November	44.8	28.4	36.6	2.91	2.06	3.44	6	7.9
December	32.5	17.8	25.2	2.78	1.78	3.34	6	13.7
Annual	—	—	—	-	23.21	30.81		-
Average	54.9	35.7	45.3	-	-	-		-
Total				36.22	-	-	76	65.8

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/12 to 11/ 6 208 days	4/29 to 10/25 179 days	5/ 6 to 10/ 5 152 days
70 percent *	4/ 9 to 11/ 9 213 days	4/26 to 10/29 186 days	5/ 2 to 10/ 9 160 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: TIONESTA 2 SE LAKE, PA 8873

Latitude: 4129 Longitude: 07926 Elevation: 1200 ft
State FIPS/County(FIPS): 42053 County Name: Forest
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have			
	avg daily max	avg daily min	avg	avg	less than	more than	average number of days with 0.10 inch or more	total snow fall
January	31.1	11.2	21.2	2.49	1.77	2.95	6	15.3
February	33.7	11.5	22.6	2.22	1.58	2.62	6	14.2
March	44.7	21.9	33.3	3.27	2.40	3.85	8	10.7
April	57.0	31.8	44.4	3.51	2.58	4.13	8	2.8
May	68.8	41.8	55.3	3.87	3.01	4.47	9	0.1
June	76.8	51.0	63.9	4.56	3.33	5.37	8	0.0
July	80.6	56.0	68.3	4.52	3.29	5.32	8	0.0
August	79.1	55.1	67.1	4.05	3.03	4.73	7	0.0
September	72.3	48.4	60.3	3.94	3.02	4.58	7	0.0
October	60.9	36.7	48.8	3.33	2.32	3.95	7	0.5
November	48.5	29.5	39.0	3.54	2.57	4.16	8	3.9
December	35.8	18.6	27.2	3.18	2.36	3.72	8	14.4
Annual	—	—	—	-	34.47	43.84		-
Average	57.4	34.5	45.9	-	-	-		-
Total				42.48	-	-	90	61.9

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/19 to 11/ 2 197 days	5/ 5 to 10/21 169 days	5/15 to 10/ 8 146 days
70 percent *	4/15 to 11/ 5 204 days	5/ 2 to 10/25 176 days	5/10 to 10/12 155 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: TITUSVILLE WATER WORKS, PA 8888

Latitude: 4138 Longitude: 07942 Elevation: 01220 ft
State FIPS/County(FIPS): 42039 County Name: Crawford
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
	avg daily max	avg daily min	avg	avg	30% chance will have less than	30% chance will have more than	average number of days with 0.10 inch or more	total snow fall
January	31.1	11.1	21.1	2.31	1.65	2.74	6	18.8
February	34.0	11.9	23.0	2.32	1.52	2.78	6	14.9
March	44.3	21.7	33.0	3.08	2.34	3.59	7	10.8
April	56.5	31.5	44.0	3.44	2.78	3.93	9	3.0
May	68.3	40.8	54.6	4.25	3.45	4.85	9	0.1
June	76.6	49.8	63.2	4.52	3.28	5.33	8	0.0
July	80.7	54.1	67.4	4.25	3.13	4.99	7	0.0
August	78.8	52.7	65.8	4.18	3.20	4.86	7	0.0
September	72.1	46.2	59.2	4.13	3.00	4.87	8	0.0
October	61.1	35.6	48.3	3.65	2.59	4.32	8	0.8
November	48.0	28.9	38.4	3.86	2.90	4.50	9	6.0
December	35.4	18.5	26.9	3.19	2.41	3.73	8	18.6
Annual	—	—	—	-	37.81	44.49		-
Average	57.2	33.6	45.4	-	-	-		-
Total				43.20	-	-	92	72.9

GROWING SEASON DATES

Probability	Temperature		
	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/28 to 10/21 176 days	5/11 to 10/ 8 150 days	5/27 to 9/24 120 days
70 percent *	4/23 to 10/27 187 days	5/ 6 to 10/13 159 days	5/22 to 9/28 129 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: TOBYHANNA, PA 8893

Latitude: 4111 Longitude: 07525 Elevation: 1940 ft
State FIPS/County(FIPS): 42089 County Name: Monroe
Start yr. - 1962 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have			
	avg daily max	avg daily min	avg	avg	less than	more than	average number of days with 0.10 inch or more	total snow fall
January	30.3	12.7	21.5	3.39	2.03	4.11	6	16.7
February	33.0	13.8	23.4	3.34	2.28	3.98	6	16.7
March	42.8	22.7	32.8	3.63	2.60	4.29	6	12.5
April	55.2	32.5	43.9	4.12	2.72	4.94	7	4.6
May	66.6	42.3	54.4	4.53	3.00	5.43	8	0.4
June	74.3	50.5	62.4	4.11	2.78	4.92	7	0.0
July	78.4	55.3	66.9	4.24	2.86	5.06	7	0.0
August	76.6	54.4	65.5	4.09	2.94	4.83	6	0.0
September	69.0	47.0	58.0	4.15	2.68	4.99	6	0.0
October	58.6	37.0	47.8	3.71	2.32	4.48	6	0.5
November	46.6	29.2	37.9	4.50	3.21	5.32	7	6.1
December	34.9	18.9	26.9	3.66	2.53	4.54	6	14.1
Annual	—	—	—	-	39.10	51.14		-
Average	55.5	34.7	45.1	-	-	-		-
Total				47.47	-	-	78	71.6

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/19 to 10/21 185 days	5/ 3 to 10/ 7 157 days	5/20 to 9/20 124 days
70 percent *	4/14 to 10/25 194 days	4/28 to 10/11 165 days	5/15 to 9/25 133 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: TOWANDA 1 ESE, PA 8905

Latitude: 4145 Longitude: 07625 Elevation: 750 ft
State FIPS/County(FIPS): 42015 County Name: Bradford
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
	avg daily max	avg daily min	avg	avg	30% chance will have less than	30% chance will have more than	average number of days with 0.10 inch or more	total snow fall
January	33.7	15.3	24.5	1.94	1.10	2.37	4	10.9
February	36.4	16.5	26.4	2.19	1.31	2.66	4	10.8
March	46.7	25.9	36.3	2.40	1.63	2.87	5	7.4
April	59.3	35.1	47.2	2.90	1.95	3.46	6	2.1
May	70.5	44.9	57.7	3.48	2.54	4.10	7	0.1
June	78.5	53.8	66.2	3.52	2.39	4.21	7	0.0
July	82.6	58.4	70.5	3.02	2.23	3.54	6	0.0
August	80.7	57.1	68.9	2.91	2.04	3.45	6	0.0
September	73.4	50.1	61.8	3.14	2.02	3.78	6	0.0
October	62.4	39.4	50.9	2.58	1.67	3.10	5	0.2
November	49.7	31.8	40.8	3.04	2.21	3.58	6	3.1
December	37.9	21.8	29.9	2.40	1.53	2.90	5	9.1
Annual	—	—	—	-	29.75	35.80		-
Average	59.3	37.5	48.4	-	-	-		-
Total				33.52	-	-	67	43.6

GROWING SEASON DATES

Probability	Temperature		
	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/13 to 10/30 200 days	4/28 to 10/17 172 days	5/11 to 10/ 7 149 days
70 percent *	4/ 9 to 11/ 3 208 days	4/24 to 10/21 180 days	5/ 7 to 10/11 157 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: UNIONTOWN 1 NE, PA 9050

Latitude: 3955 Longitude: 07943 Elevation: 960 ft
State FIPS/County(FIPS): 42051 County Name: Fayette
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have			
	avg daily max	avg daily min	avg	avg	less than	more than	average number of days with 0.10 inch or more	total snow fall
January	38.3	19.6	28.9	2.71	2.00	3.18	7	9.8
February	40.9	20.8	30.8	2.58	1.71	3.10	6	9.3
March	52.5	29.3	40.9	3.68	2.68	4.33	8	4.4
April	62.8	37.8	50.3	3.81	2.82	4.47	8	0.5
May	73.1	47.5	60.3	4.25	3.18	4.96	9	0.1
June	80.7	56.3	68.5	4.02	2.78	4.78	7	0.0
July	83.8	60.7	72.2	4.61	3.51	5.36	8	0.0
August	82.5	59.3	70.9	3.76	2.76	4.41	7	0.0
September	76.5	52.3	64.4	3.43	2.56	4.02	6	0.0
October	65.2	40.5	52.9	2.81	1.81	3.38	6	0.0
November	54.1	33.3	43.7	3.37	2.38	4.00	8	1.3
December	42.7	24.9	33.8	3.12	2.27	3.67	8	4.7
Annual	—	—	—	-	38.38	44.57		-
Average	62.8	40.2	51.5	-	-	-		-
Total				42.14	-	-	88	30.2

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/12 to 10/31 203 days	4/25 to 10/20 178 days	5/ 6 to 10/ 8 156 days
70 percent *	4/ 8 to 11/ 5 211 days	4/22 to 10/23 184 days	5/ 2 to 10/12 164 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: WARREN 1 SSW, PA 9298

Latitude: 4151 Longitude: 07909 Elevation: 01210 ft
State FIPS/County(FIPS): 42123 County Name: Warren
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
	avg daily max	avg daily min	avg	avg	30% chance will have less than	30% chance will have more than	average number of days with 0.10 inch or more	total snow fall
January	31.9	15.1	23.5	2.67	2.02	3.11	7	17.4
February	35.4	15.6	25.5	2.40	1.66	2.86	6	14.0
March	45.6	24.3	34.9	3.19	2.45	3.71	8	8.0
April	58.4	33.7	46.0	3.53	2.79	4.05	8	2.7
May	70.2	43.7	56.9	3.97	3.20	4.54	9	0.1
June	78.6	52.6	65.6	4.88	3.74	5.67	8	0.0
July	82.3	57.4	69.8	4.13	3.23	4.77	7	0.0
August	80.0	56.6	68.3	4.26	3.22	4.97	7	0.0
September	72.8	50.1	61.5	4.12	3.16	4.79	7	0.0
October	61.4	39.5	50.5	3.44	2.50	4.05	8	0.7
November	48.7	31.8	40.2	3.92	3.06	4.53	10	6.2
December	36.5	21.7	29.1	3.70	2.93	4.25	10	17.3
Annual	—	—	—	-	41.05	46.57		-
Average	58.5	36.8	47.7	-	-	-		-
Total				44.22	-	-	95	66.3

GROWING SEASON DATES

Probability	Temperature		
	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/20 to 11/ 4 198 days	5/ 2 to 10/19 170 days	5/15 to 10/ 8 146 days
70 percent *	4/16 to 11/ 8 206 days	4/27 to 10/24 180 days	5/10 to 10/12 155 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: WAYNESBURG 1 E, PA 9367

Latitude: 3954 Longitude: 08010 Elevation: 00940 ft
State FIPS/County(FIPS): 42059 County Name: Greene
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have			
	avg daily max	avg daily min	avg	avg	less than	more than	average number of days with 0.10 inch or more	total snow fall
January	37.3	16.1	26.7	2.47	1.73	2.93	6	10.8
February	40.1	17.4	28.8	2.23	1.43	2.68	6	7.9
March	51.8	26.6	39.2	3.41	2.47	4.02	8	4.3
April	62.4	35.3	48.9	3.32	2.40	3.92	7	1.1
May	72.5	44.7	58.6	4.00	2.88	4.72	8	0.0
June	80.3	53.6	67.0	3.80	2.60	4.53	7	0.0
July	83.8	58.1	70.9	4.14	2.78	4.96	7	0.0
August	82.5	56.7	69.6	3.62	2.62	4.26	6	0.0
September	76.4	49.6	63.0	3.08	2.18	3.65	6	0.0
October	65.1	37.2	51.1	2.47	1.69	2.95	6	0.0
November	53.8	30.2	42.0	3.13	2.17	3.73	7	1.8
December	41.8	22.2	32.0	2.78	1.98	3.30	7	5.0
Annual	—	—	—	-	34.15	41.37		-
Average	62.3	37.3	49.8	-	-	-		-
Total				38.46	-	-	81	31.0

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/15 to 10/30 197 days	4/25 to 10/17 175 days	5/ 9 to 10/ 5 149 days
70 percent *	4/11 to 11/ 2 205 days	4/20 to 10/22 185 days	5/ 4 to 10/ 9 158 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: WELLSBORO 3 S, PA 9408

Latitude: 4142 Longitude: 07716 Elevation: 01860 ft
State FIPS/County(FIPS): 42117 County Name: Tioga
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
	avg daily max	avg daily min	avg	avg	30% chance will have less than	30% chance will have more than	average number of days with 0.10 inch or more	total snow fall
January	28.4	12.0	20.2	1.68	0.89	2.05	3	12.4
February	30.8	12.5	21.6	1.78	1.13	2.15	4	12.7
March	40.7	21.6	31.2	2.14	1.52	2.54	5	9.5
April	53.1	32.4	42.7	2.35	1.65	2.78	6	4.2
May	64.3	42.2	53.3	3.33	2.32	3.95	8	0.4
June	72.3	50.8	61.5	4.10	2.76	4.90	7	0.0
July	76.8	55.5	66.1	3.36	2.52	3.93	7	0.0
August	75.3	53.9	64.6	2.82	2.01	3.34	6	0.0
September	68.3	47.0	57.6	3.14	1.95	3.80	6	0.0
October	57.6	37.4	47.5	2.64	1.60	3.19	5	0.6
November	45.6	29.2	37.4	2.62	1.81	3.12	5	4.7
December	32.9	18.2	25.6	2.19	1.32	2.66	5	10.4
Annual	—	—	—	-	28.58	34.79		-
Average	53.8	34.4	44.1	-	-	-		-
Total				32.15	-	-	67	54.7

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/21 to 10/27 190 days	5/ 3 to 10/11 162 days	5/13 to 9/28 138 days
70 percent *	4/15 to 11/ 2 201 days	4/28 to 10/16 171 days	5/ 8 to 10/ 2 147 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: WEST CHESTER 1 W, PA 9464

Latitude: 3958 Longitude: 07538 Elevation: 450 ft
State FIPS/County(FIPS): 42029 County Name: Chester
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have			
	avg daily max	avg daily min	avg	avg	less than	more than	average number of days with 0.10 inch or more	total snow fall
January	38.1	19.3	28.7	3.49	2.18	4.21	6	8.7
February	40.7	21.3	31.0	3.14	2.25	3.71	6	8.6
March	51.3	29.9	40.6	3.48	2.57	4.08	6	1.8
April	61.8	39.3	50.6	3.96	2.88	4.66	7	0.5
May	72.4	49.3	60.9	4.28	2.89	5.12	7	0.0
June	81.1	58.5	69.8	4.20	2.48	5.10	6	0.0
July	85.7	63.3	74.5	4.68	3.19	5.59	7	0.0
August	84.0	61.6	72.8	3.86	2.58	4.63	6	0.0
September	77.4	53.9	65.6	4.20	2.43	5.11	5	0.0
October	66.3	42.0	54.1	3.19	1.95	3.87	5	0.0
November	55.3	34.4	44.8	3.92	2.46	4.73	6	0.6
December	42.8	24.2	33.5	3.57	2.12	4.33	6	4.4
Annual	—	—	—	-	39.26	48.60		-
Average	63.1	41.4	52.2	-	-	-		-
Total				45.97	-	-	73	24.7

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	3/27 to 11/9 227 days	4/11 to 10/28 200 days	4/22 to 10/13 174 days
70 percent *	3/21 to 11/15 239 days	4/7 to 11/2 209 days	4/17 to 10/18 184 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station : W BARRE SCRANT WSO AP, PA 9705

Latitude: 4120 Longitude: 07544 Elevation: 930 ft
State FIPS/County(FIPS): 42079 County Name: Luzerne
Start yr. - 1964 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have			
	avg daily max	avg daily min	avg	avg	less than	more than	average number of days with 0.10 inch or more	total snow fall
January	32.0	17.6	24.8	2.10	1.23	2.56	5	12.4
February	34.7	19.4	27.0	2.14	1.35	2.58	5	10.7
March	45.5	28.3	36.9	2.58	1.89	3.04	5	8.0
April	58.0	38.1	48.0	3.07	2.23	3.62	7	2.8
May	69.3	48.3	58.8	3.81	2.77	4.49	8	0.1
June	77.3	56.6	67.0	4.14	2.69	4.98	7	0.0
July	81.8	61.6	71.7	3.79	2.64	4.50	7	0.0
August	79.8	60.1	70.0	3.32	2.52	3.86	6	0.0
September	72.2	52.8	62.5	3.46	2.24	4.16	6	0.0
October	60.5	41.9	51.2	2.83	2.01	3.36	5	0.1
November	48.8	33.9	41.3	3.00	2.21	3.53	6	4.1
December	37.0	23.8	30.4	2.55	1.76	3.03	6	8.6
Annual	-	-	-	-	33.72	39.48	-	-
Average	58.1	40.2	49.1	-	-	-	-	-
Total	-	-	-	36.80	-	-	73	46.8

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/ 2 to 11/134/13 to 10/274/25 to 10/17 225 days	196 days	176 days
70 percent *	3/28 to 11/184/10 to 10/304/21 to 10/21 234 days	203 days	184 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: WILLIAMSPORT WSO AP, PA 9728

Latitude: 4115 Longitude: 07655 Elevation: 520 ft
State FIPS/County(FIPS): 42081 County Name: Lycoming
Start yr. - 1961 End yr. - 1990

Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have			
	avg daily max	avg daily min	avg	avg	less than	more than	average number of days with 0.10 inch or more	total snow fall
January	33.3	17.1	25.2	2.55	1.61	3.07	5	12.4
February	36.7	19.2	27.9	2.75	1.67	3.33	5	10.8
March	47.8	28.5	38.1	3.19	2.36	3.74	6	7.1
April	60.1	38.1	49.1	3.23	2.11	3.88	7	1.4
May	71.2	48.0	59.6	3.86	2.72	4.58	7	0.0
June	79.1	56.6	67.8	4.32	2.69	5.21	8	0.0
July	83.2	61.5	72.4	3.98	3.10	4.61	7	0.0
August	81.3	60.5	70.9	3.39	2.47	3.99	6	0.0
September	73.8	53.1	63.5	3.39	2.08	4.11	6	0.0
October	62.4	41.6	52.0	3.30	1.96	4.01	5	0.1
November	49.9	33.6	41.8	3.73	2.66	4.41	6	3.1
December	37.9	23.8	30.9	3.04	1.99	3.65	6	8.3
Annual	—	—	—	-	37.01	43.92		-
Average	59.7	40.1	49.9	-	-	-		-
Total				40.72	-	-	74	43.1

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	3/30 to 11/11 226 days	4/12 to 10/27 198 days	4/30 to 10/15 168 days
70 percent *	3/26 to 11/15 235 days	4/ 8 to 10/31 206 days	4/25 to 10/20 178 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

WETS Station: YORK 3 SSW PUMP STN, PA 9933

Latitude: 3955 Longitude: 07645 Elevation: 390 ft
State FIPS/County(FIPS): 42133 County Name: York
Start yr. - 1961 End yr. - 1990

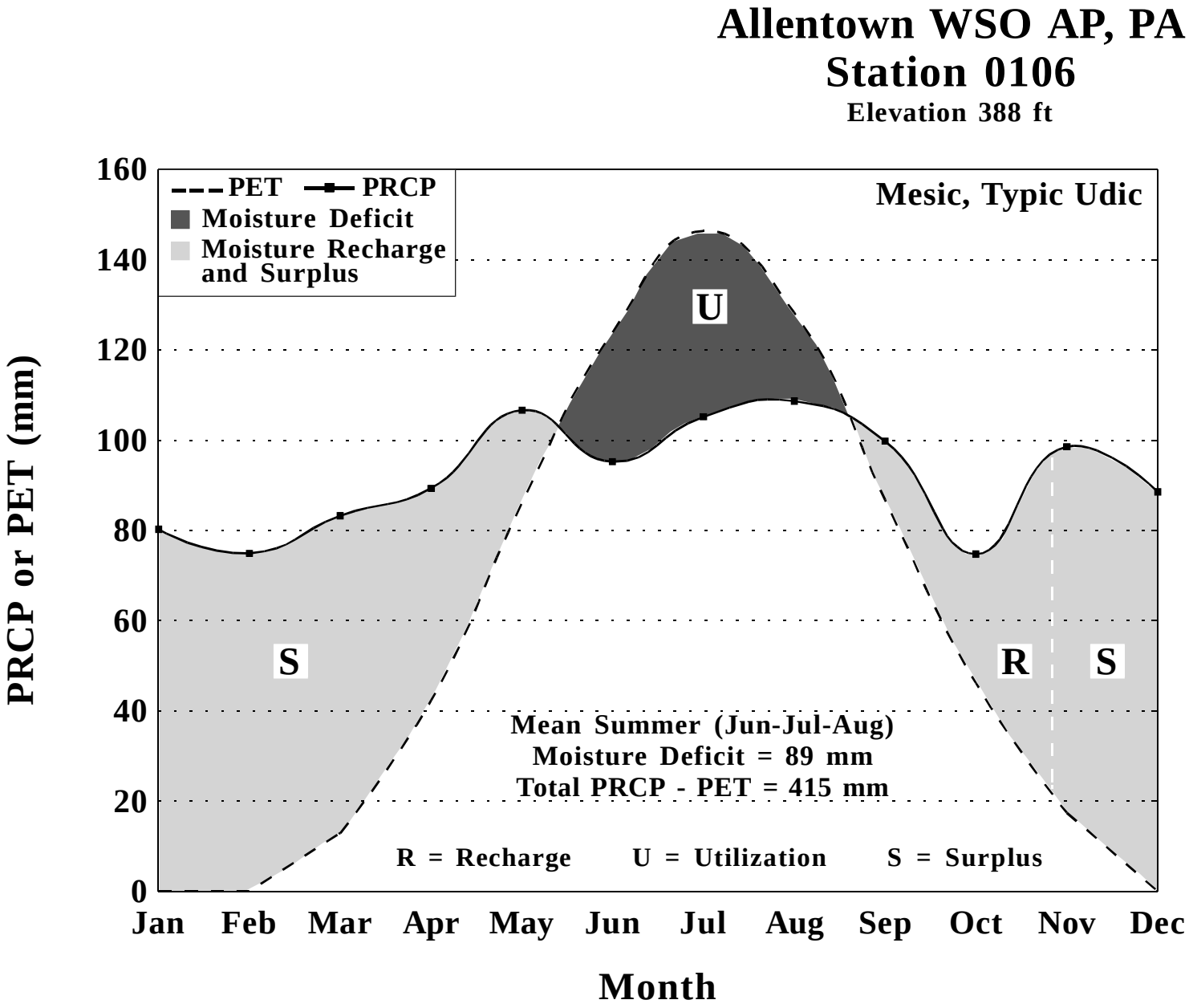
Month	Temperature (°F)			Precipitation (in.)				
					30% chance will have		average number	total
	avg daily max	avg daily min	avg	avg	less than	more than	of days with 0.10 inch or more	snow fall
January	38.6	19.4	29.0	2.89	1.83	3.49	5	10.1
February	42.3	21.6	31.9	2.75	1.78	3.31	6	10.3
March	53.7	30.4	42.0	3.14	2.47	3.61	6	4.0
April	64.5	38.5	51.5	3.60	2.47	4.29	7	0.4
May	75.2	48.6	61.9	3.73	2.34	4.50	7	0.0
June	83.2	57.6	70.4	4.26	2.32	5.19	7	0.0
July	86.9	62.2	74.5	3.63	2.45	4.34	6	0.0
August	85.2	60.8	73.0	3.39	2.33	4.04	6	0.0
September	78.7	53.6	66.1	3.34	1.86	4.08	5	0.0
October	67.8	41.9	54.8	3.04	1.66	3.70	5	0.1
November	54.9	33.9	44.4	3.43	2.31	4.10	6	1.4
December	42.9	25.0	34.0	3.22	2.03	3.89	6	5.3
Annual	—	—	—	-	36.21	43.75		-
Average	64.5	41.1	52.8	-	-	-		-
Total				40.41	-	-	72	31.6

GROWING SEASON DATES

	Temperature		
Probability	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/1 to 11/3 216 days	4/19 to 10/22 186 days	5/5 to 10/10 158 days
70 percent *	3/28 to 11/8 225 days	4/15 to 10/25 193 days	5/1 to 10/13 165 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

Appendix 3
Newhall Simulations
for
Pennsylvania Weather Stations
(1961-1990 normal and selected stations
with discontinuous periods of record)



Moisture balance for Allentown WSO Airport, Pennsylvania, based upon a period of 1961-1990. PET calculated by Newhall Simulation Model (Van Wambeke et al., 1992).

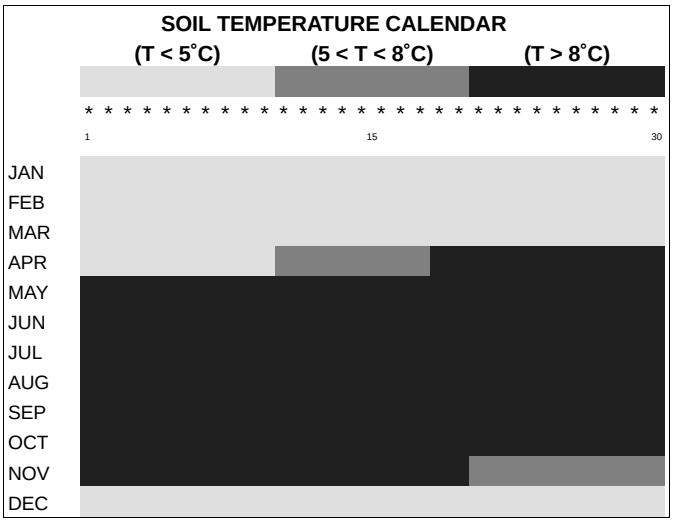
Station: Allentown WSO AP, PA
Elevation: 388 ft
Period of Record: 1961-1990
Mean Annual Precipitation: 1105 mm
Soil Temperature Regime: Mesic

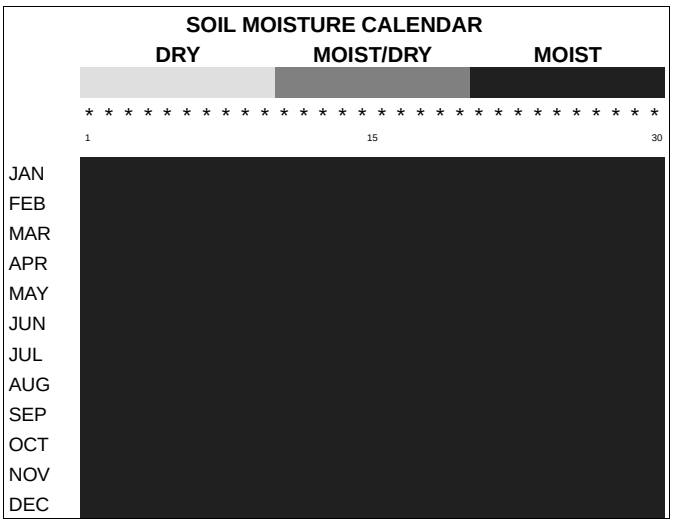
MLRA: 147 Northern Appalachian Ridges and Valleys
Country: USA

Latitude: 40 39 00N
Longitude: 75 26 00W
Waterholding Capacity: 200 mm
Soil Moisture Regime: Udic

SOIL CLIMATIC REGIME ACCORDING TO NEWHALL SIMULATION MODEL (MAST = MAAT + 1.2˚ C; amplitude reduced by 1/3)											
JAN	**FEB**	**MAR**	**APR**	**MAY**	**JUN**	**JUL**	**AUG**	**SEP**	**OCT**	**NOV**	**DEC**
Monthly Precipitation (mm)											
80.3	74.9	83.3	89.4	106.7	95.3	105.2	108.7	99.8	74.7	98.6	88.6
Monthly Air Temperatures (˚C)											
-3.0	-1.5	4.1	9.8	15.7	20.8	23.4	22.3	18.2	11.8	6.2	-0.1
Monthly Evapotranspiration (mm)											
0.0	0.0	12.9	42.3	86.1	123.9	146.4	128.3	86.8	46.1	17.4	0.0

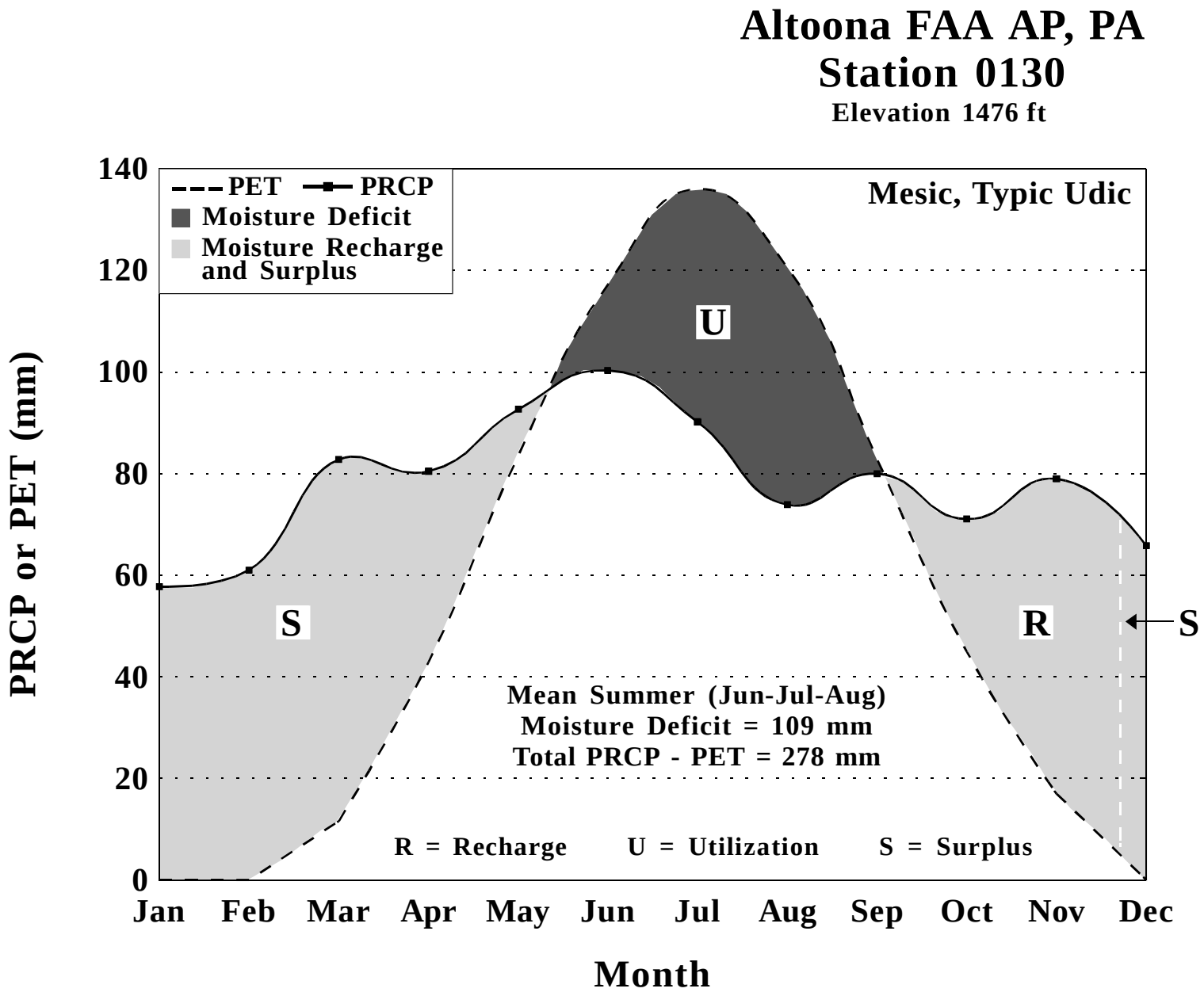
Mean Annual Potential Evapotranspiration: 690 mm
Mean Annual Moisture Surplus: 415 mm
Mean Annual Growing Season (Apr to Sept) Precipitation: 605 mm (55% of MAP)
Mean Summer (Jun-Jul-Aug) Moisture Surplus/Deficit: -89 mm





Number of Cumulative Days That the Moisture Control Section						Highest Number of Consecutive Days That the Moisture Control Section is			
During One Year is			When Soil Temperature is Above 5˚C			Moist in Some Parts		Dry After Summer Solstice	Moist After Winter Solstice
Dry	Moist/Dry	Moist	Dry	Moist/Dry	Moist	Year	T > 8˚C		
0	0	360	0	0	231	360	211	0	120

Computed by BASIC program FLEXNSM (Van Wambeke et al., 1992)
Tentative subdivision: Typic Udic



Moisture balance for Altoona FAA Airport, Pennsylvania, based upon a period of 1961-1990. PET calculated by Newhall Simulation Model (Van Wambeke et al., 1992).

Station: Altoona FAA AP, PA
Elevation: 1476 ft
Period of Record: 1961-1990
Mean Annual Precipitation: 935 mm
Soil Temperature Regime: Mesic

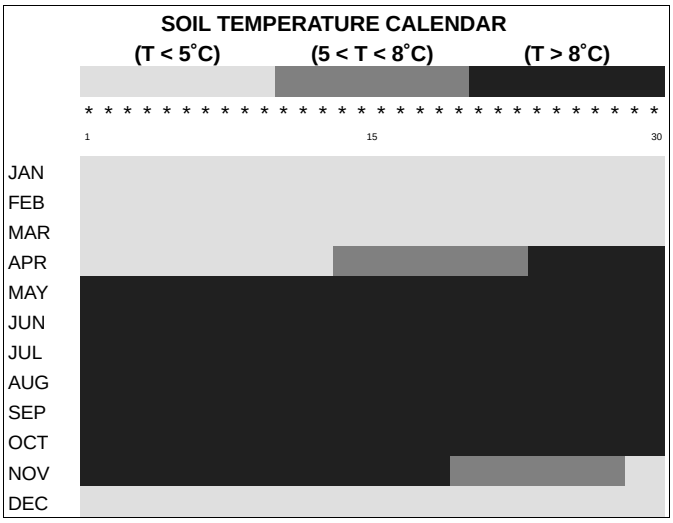
MLRA: 147 Northern Appalachian Ridges and Valleys
Country: USA

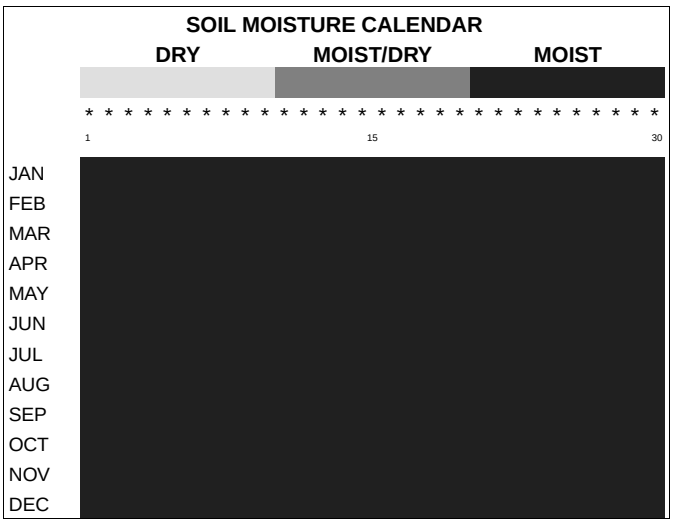
Latitude: 40 18 00N
Longitude: 78 19 00W
Waterholding Capacity: 200 mm
Soil Moisture Regime: Udic

SOIL CLIMATIC REGIME ACCORDING TO NEWHALL SIMULATION MODEL
(MAST = MAAT + 1.2˚ C; amplitude reduced by 1/3)

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Monthly Precipitation (mm)											
57.7	61.0	82.8	80.5	92.7	100.3	90.2	73.9	80.0	71.1	79.0	65.8
Monthly Air Temperatures (˚C)											
-3.3	-2.1	3.4	9.4	14.9	19.6	21.8	21.0	17.1	11.0	5.6	-0.6
Monthly Evapotranspiration (mm)											
0.0	0.0	11.6	42.9	83.6	117.2	136.0	120.6	83.0	44.9	17.0	0.0

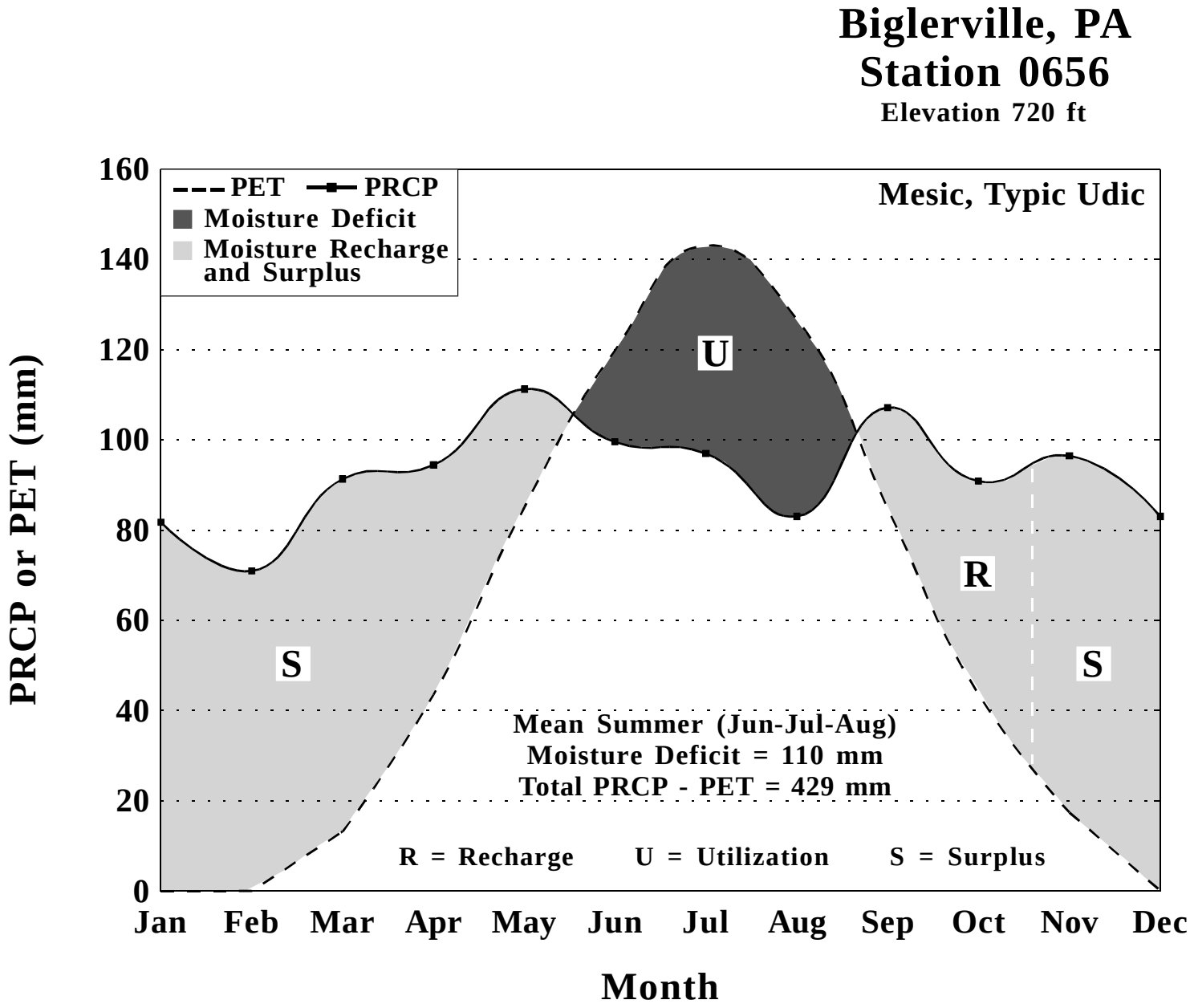
Mean Annual Potential Evapotranspiration: 657 mm
Mean Annual Moisture Surplus: 278 mm
Mean Annual Growing Season (Apr to Sept) Precipitation: 518 mm (55% of MAP)
Mean Summer (Jun-Jul-Aug) Moisture Surplus/Deficit: -109 mm





Number of Cumulative Days That the Moisture Control Section						Highest Number of Consecutive Days That the Moisture Control Section is			
During One Year is			When Soil Temperature is Above 5˚C			Moist in Some Parts		Dry After Summer Solstice	Moist After Winter Solstice
Dry	Moist/Dry	Moist	Dry	Moist/Dry	Moist	Year	T > 8˚C		
0	0	360	0	0	224	360	204	0	120

Computed by BASIC program FLEXNSM (Van Wambeke et al., 1992)
Tentative subdivision: Typic Udic



Moisture balance for Biglerville, Pennsylvania, based upon a period of 1972-1995. PET calculated by Newhall Simulation Model (Van Wambeke et al., 1992).

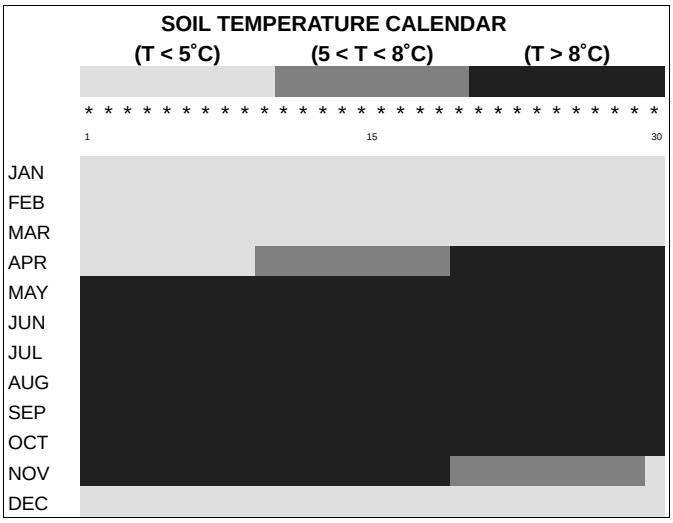
Station: Biglerville, PA
Elevation: 720 ft
Period of Record: 1972-1995
Mean Annual Precipitation: 1107 mm
Soil Temperature Regime: Mesic

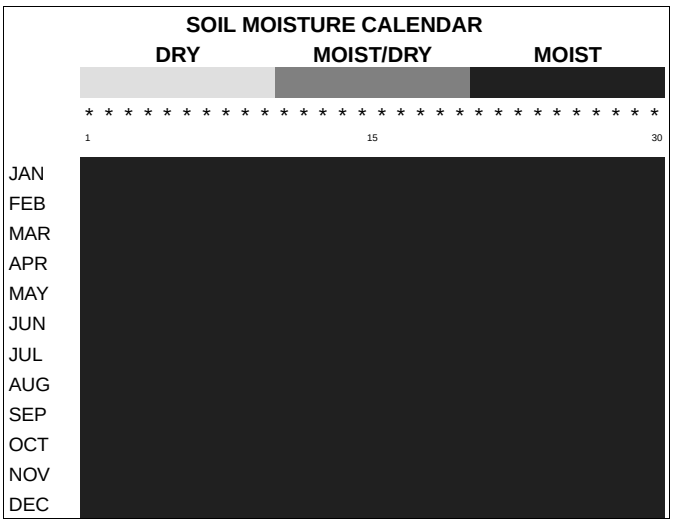
MLRA: 147 Northern Piedmont
Country: USA

Latitude: 39 56 00N
Longitude: 77 15 00W
Waterholding Capacity: 200 mm
Soil Moisture Regime: Udic

SOIL CLIMATIC REGIME ACCORDING TO NEWHALL SIMULATION MODEL (MAST = MAAT + 1.2˚ C; amplitude reduced by 1/3)											
JAN	**FEB**	**MAR**	**APR**	**MAY**	**JUN**	**JUL**	**AUG**	**SEP**	**OCT**	**NOV**	**DEC**
Monthly Precipitation (mm)											
81.8	70.9	91.4	94.5	111.3	99.6	97.0	83.1	107.2	90.9	96.5	83.1
Monthly Air Temperatures (˚C)											
-2.6	-1.2	4.1	9.9	15.6	20.3	23.1	22.1	17.7	11.1	5.9	0.1
Monthly Evapotranspiration (mm)											
0.0	0.0	13.2	43.5	85.2	119.9	143.1	126.8	84.9	43.6	17.4	0.1

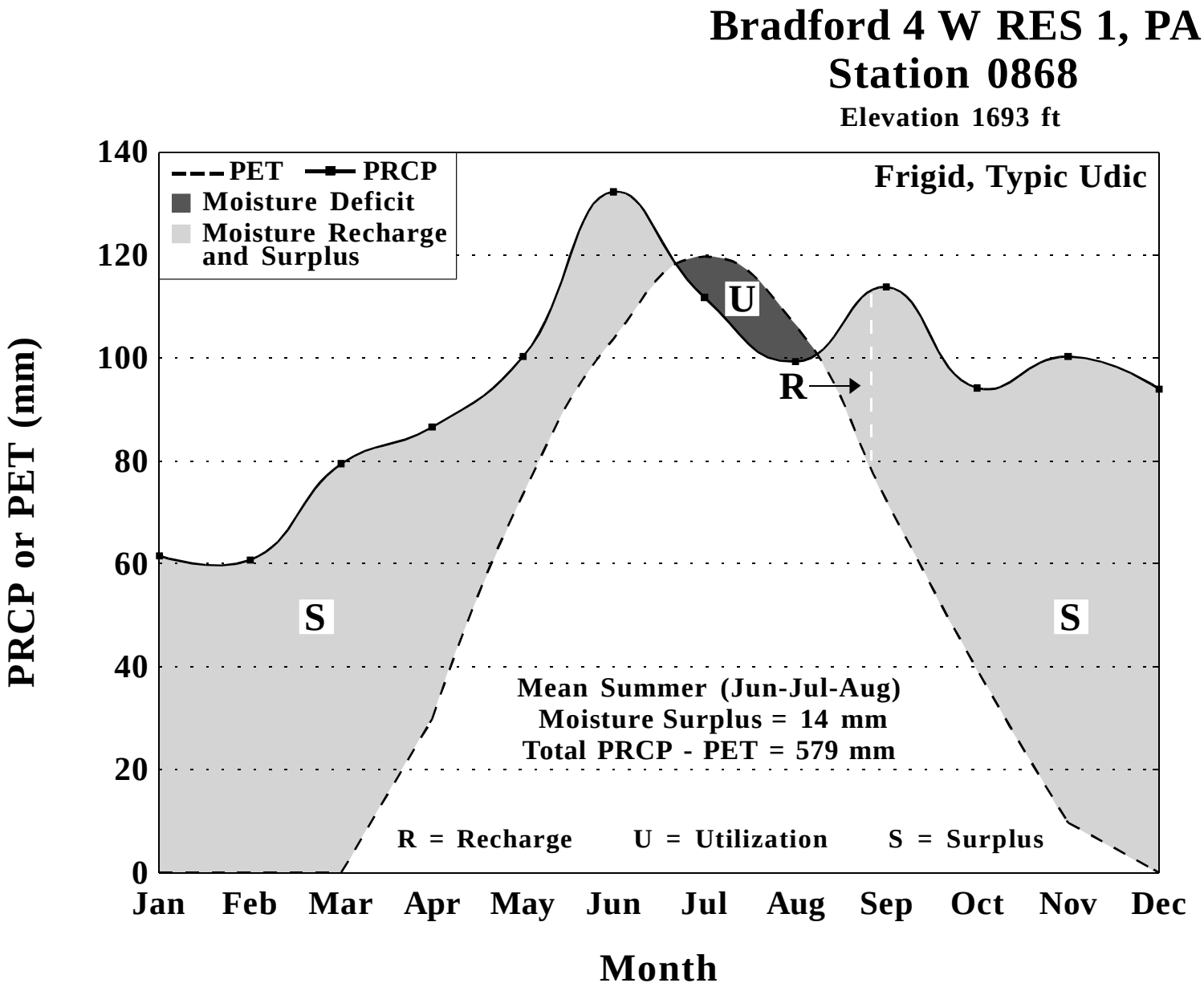
Mean Annual Potential Evapotranspiration: 678 mm
Mean Annual Moisture Surplus: 429 mm
Mean Annual Growing Season (Apr to Sept) Precipitation: 593 mm (54% of MAP)
Mean Summer (Jun-Jul-Aug) Moisture Surplus/Deficit: -110 mm





Number of Cumulative Days That the Moisture Control Section						Highest Number of Consecutive Days That the Moisture Control Section is			
During One Year is			When Soil Temperature is Above 5˚C			Moist in Some Parts		Dry After Summer Solstice	Moist After Winter Solstice
Dry	Moist/Dry	Moist	Dry	Moist/Dry	Moist	Year	T > 8˚C		
0	0	360	0	0	230	360	209	0	120

Computed by BASIC program FLEXNSM (Van Wambeke et al., 1992)
Tentative subdivision: Typic Udic



Moisture balance for Bradford 4 W RES 1, Pennsylvania, based upon a period of 1961-1990. PET calculated by Newhall Simulation Model (Van Wambeke et al., 1992).

Station: Bradford 4 W RES 1, PA
Elevation: 1693 ft
Period of Record: 1961-1990
Mean Annual Precipitation: 1134 mm
Soil Temperature Regime: Frigid

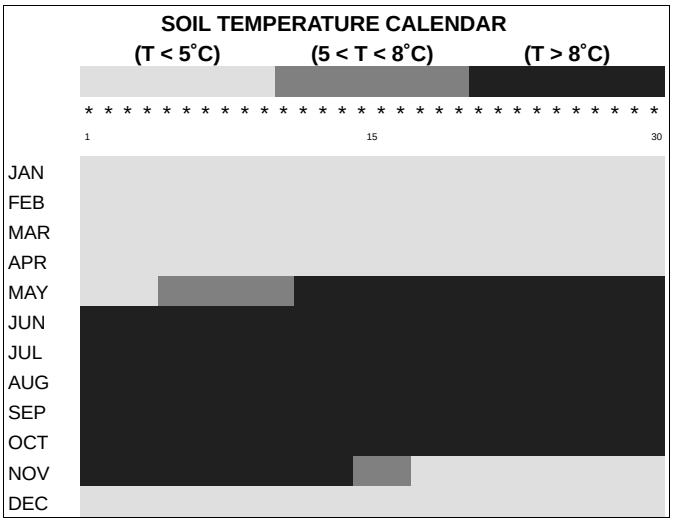
MLRA: 127 Eastern Allegheny Plateau and Mountains
Country: USA

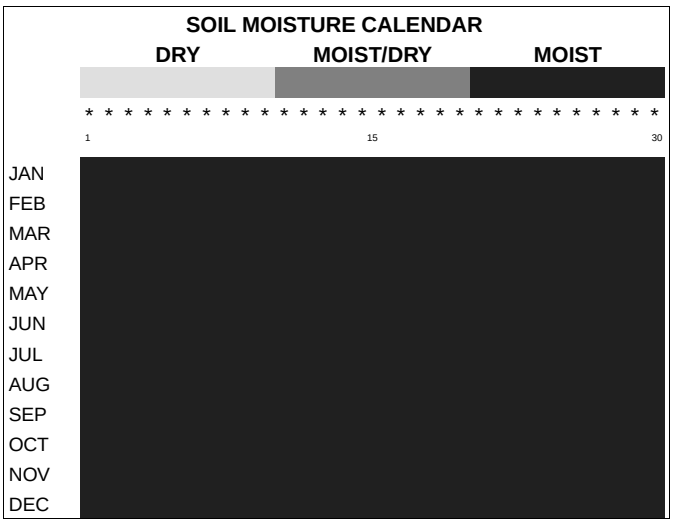
Latitude: 41 54 00N
Longitude: 78 44 00W
Waterholding Capacity: 200 mm
Soil Moisture Regime: Udic

SOIL CLIMATIC REGIME ACCORDING TO NEWHALL SIMULATION MODEL
(MAST = MAAT + 1.2˚ C; amplitude reduced by 1/3)

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Monthly Precipitation (mm)											
61.5	60.7	79.5	86.6	100.3	132.3	111.8	99.3	113.8	94.2	100.3	94.0
Monthly Air Temperatures (˚C)											
-7.4	-6.6	-0.8	5.3	11.6	16.2	18.5	17.6	13.7	8.1	2.3	-3.9
Monthly Evapotranspiration (mm)											
0.0	0.0	0.0	29.8	73.6	103.8	119.7	106.4	72.4	39.4	9.7	0.0

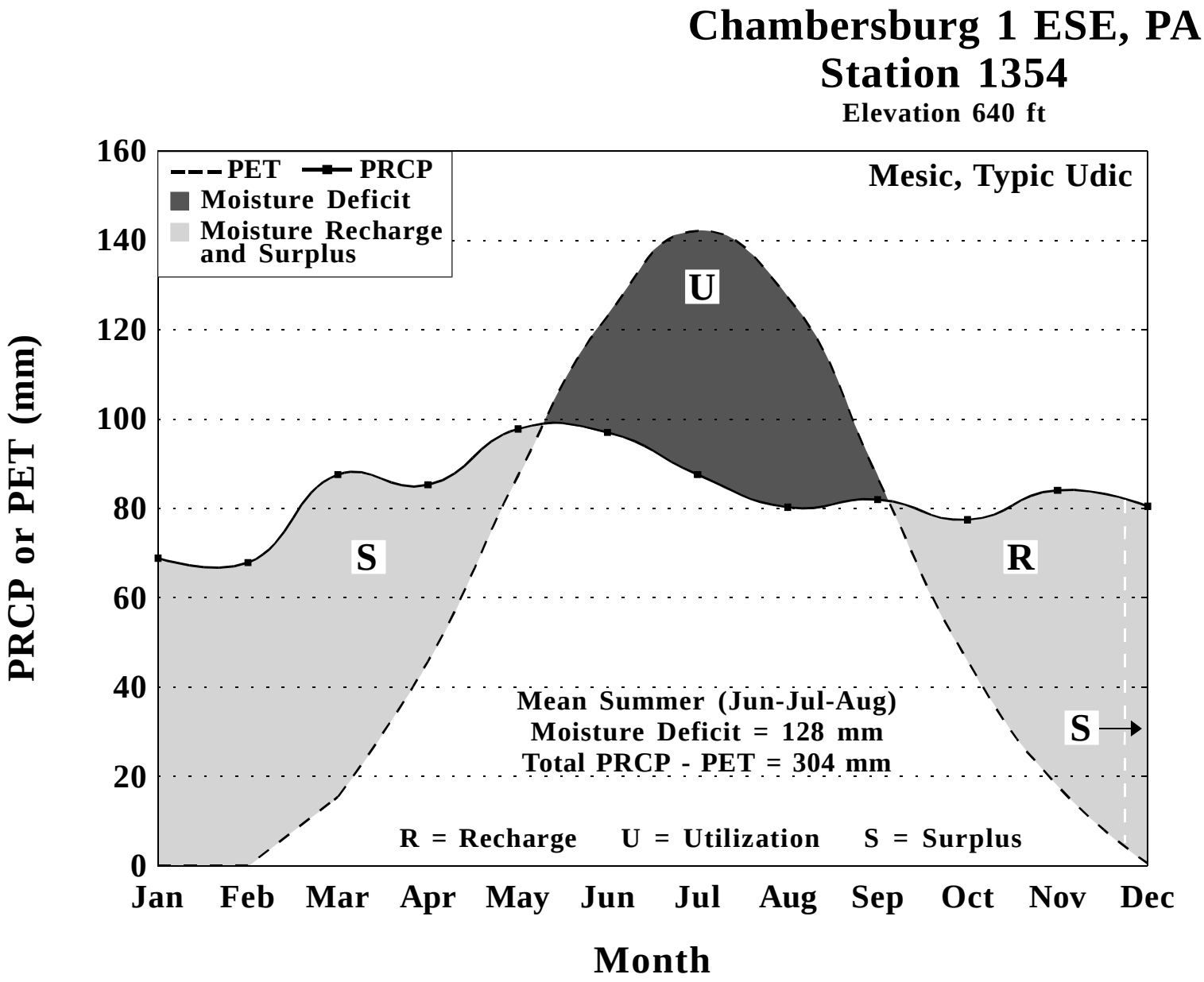
Mean Annual Potential Evapotranspiration: 555 mm
Mean Annual Moisture Surplus: 579 mm
Mean Annual Growing Season (Apr to Sept) Precipitation: 644 mm (57% of MAP)
Mean Summer (Jun-Jul-Aug) Moisture Surplus/Deficit: 14 mm





Number of Cumulative Days That the Moisture Control Section						Highest Number of Consecutive Days That the Moisture Control Section is			
During One Year is			When Soil Temperature is Above 5˚C			Moist in Some Parts		Dry After Summer Solstice	Moist After Winter Solstice
Dry	Moist/Dry	Moist	Dry	Moist/Dry	Moist	Year	T > 8˚C		
0	0	360	0	0	188	360	168	0	120

Computed by BASIC program FLEXNSM (Van Wambeke et al., 1992)
Tentative subdivision: Typic Udic



Moisture balance for Chambersburg 1 ESE, Pennsylvania, based upon a period of 1961-1990. PET calculated by Newhall Simulation Model (Van Wambeke et al., 1992).

Station: Chambersburg 1 ESE, PA
Elevation: 640 ft
Period of Record: 1961-1990
Mean Annual Precipitation: 996 mm
Soil Temperature Regime: Mesic

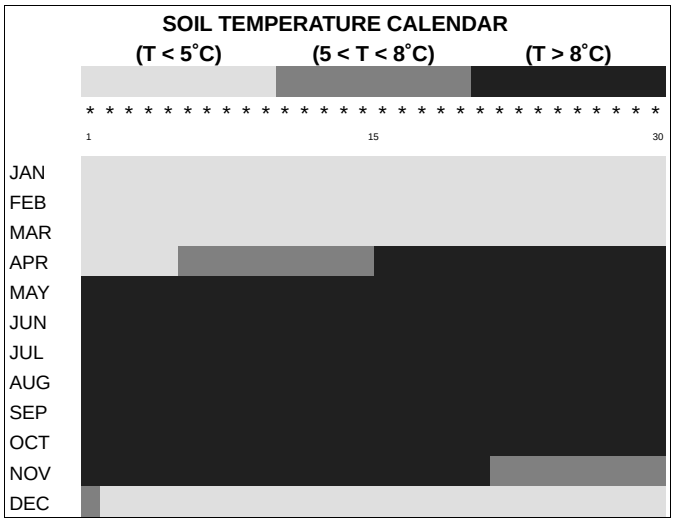
MLRA: 147 Northern Appalachian Ridges and Valleys
Country: USA

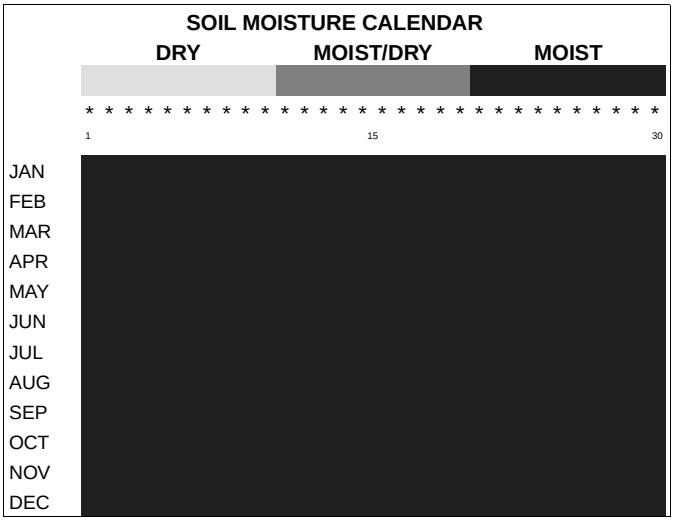
Latitude: 39 56 00N
Longitude: 77 38 00W
Waterholding Capacity: 200 mm
Soil Moisture Regime: Udic

SOIL CLIMATIC REGIME ACCORDING TO NEWHALL SIMULATION MODEL
(MAST = MAAT + 1.2˚ C; amplitude reduced by 1/3)

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Monthly Precipitation (mm)											
68.8	67.8	87.6	85.3	97.8	97.0	87.6	80.3	82.0	77.5	84.1	80.5
Monthly Air Temperatures (˚C)											
-2.3	-0.7	4.8	10.5	16.1	20.8	23.0	22.2	18.2	11.8	6.3	0.4
Monthly Evapotranspiration (mm)											
0.0	0.0	15.4	45.7	87.4	123.1	142.1	127.3	86.9	45.8	17.8	0.5

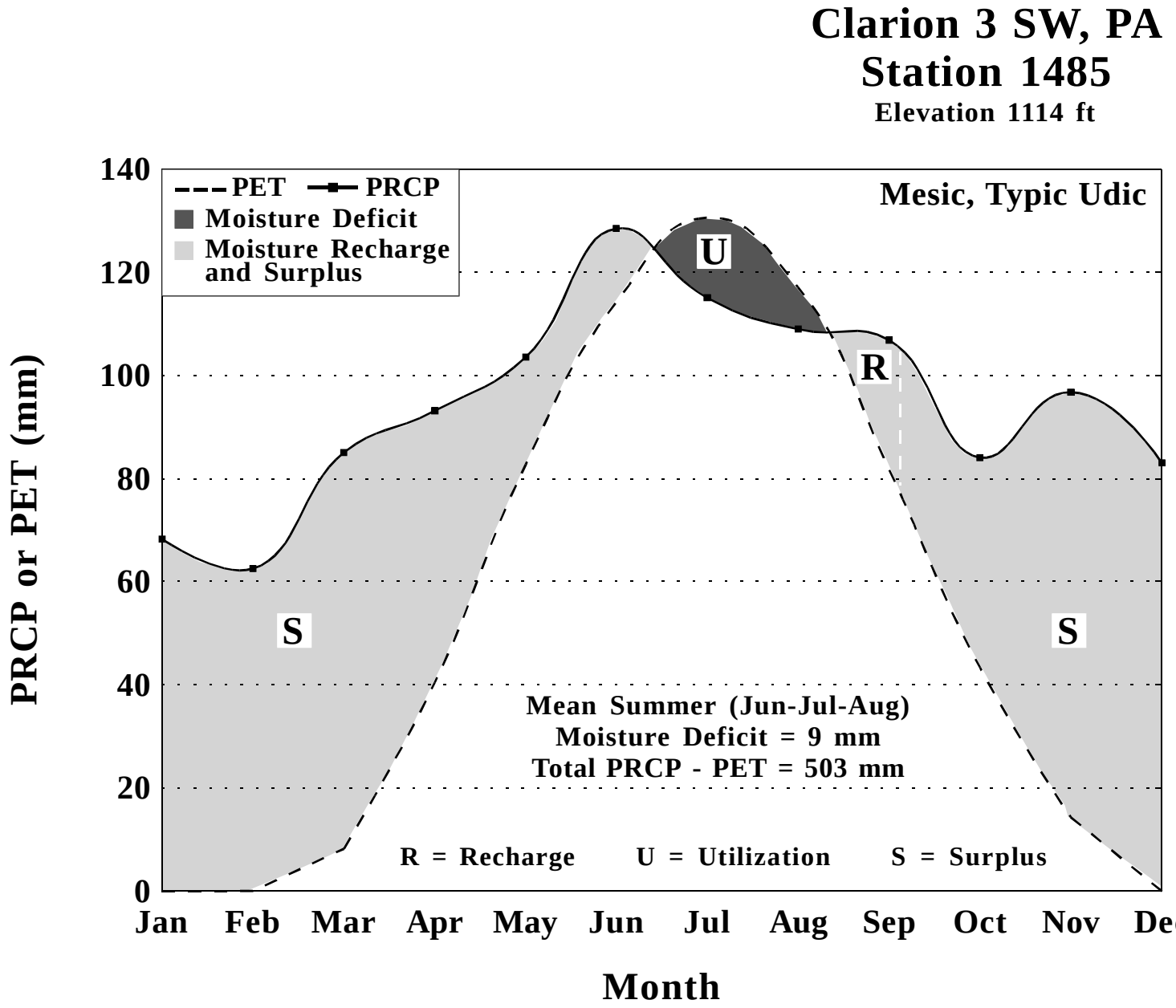
Mean Annual Potential Evapotranspiration: 692 mm
Mean Annual Moisture Surplus: 304 mm
Mean Annual Growing Season (Apr to Sept) Precipitation: 530 mm (53% of MAP)
Mean Summer (Jun-Jul-Aug) Moisture Surplus/Deficit: -128 mm





Number of Cumulative Days That the Moisture Control Section						Highest Number of Consecutive Days That the Moisture Control Section is			
During One Year is			When Soil Temperature is Above 5˚C			Moist in Some Parts		Dry After Summer Solstice	Moist After Winter Solstice
Dry	Moist/Dry	Moist	Dry	Moist/Dry	Moist	Year	T > 8˚C		
0	0	360	0	0	235	360	215	0	120

Computed by BASIC program FLEXNSM (Van Wambeke et al., 1992)
Tentative subdivision: Typic Udic



Moisture balance for Clarion 3 SW, Pennsylvania, based upon a period of 1961-1990. PET calculated by Newhall Simulation Model (Van Wambeke et al., 1992).

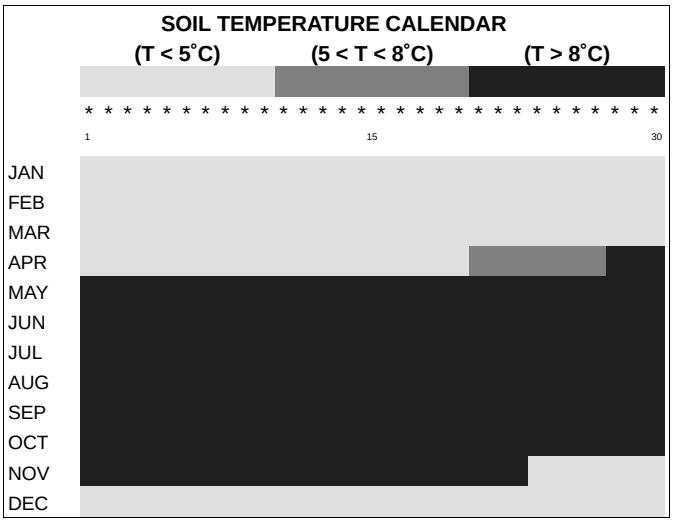
Station: Clarion 3 SW, PA
Elevation: 1114 ft
Period of Record: 1961-1990
Mean Annual Precipitation: 1136 mm
Soil Temperature Regime: Mesic

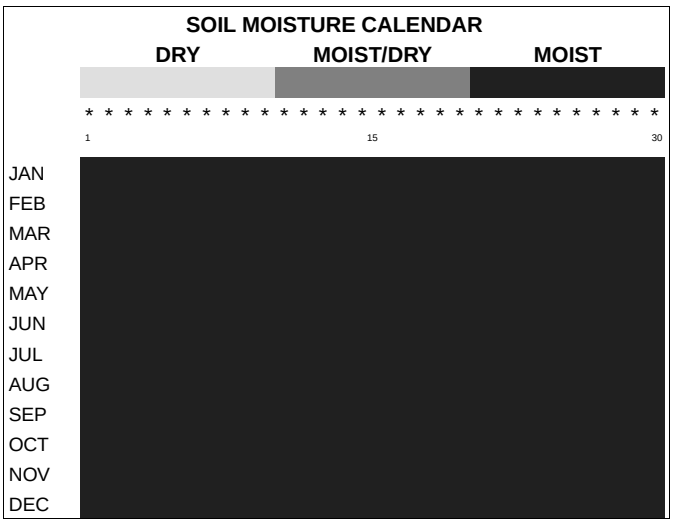
MLRA: 126 Central Allegheny Plateau
Country: USA

Latitude: 41 12 00N
Longitude: 79 26 00W
Waterholding Capacity: 200 mm
Soil Moisture Regime: Udic

SOIL CLIMATIC REGIME ACCORDING TO NEWHALL SIMULATION MODEL (MAST = MAAT + 1.2˚ C; amplitude reduced by 1/3)											
JAN	**FEB**	**MAR**	**APR**	**MAY**	**JUN**	**JUL**	**AUG**	**SEP**	**OCT**	**NOV**	**DEC**
Monthly Precipitation (mm)											
68.3	62.5	85.1	93.2	103.6	128.5	115.1	109.0	106.9	84.1	96.8	83.1
Monthly Air Temperatures (˚C)											
-4.7	-3.4	2.3	8.5	14.3	18.7	20.9	20.1	16.6	10.2	4.5	-1.7
Monthly Evapotranspiration (mm)											
0.0	0.0	8.2	40.4	82.8	114.2	130.6	117.1	81.8	43.3	14.3	0.0

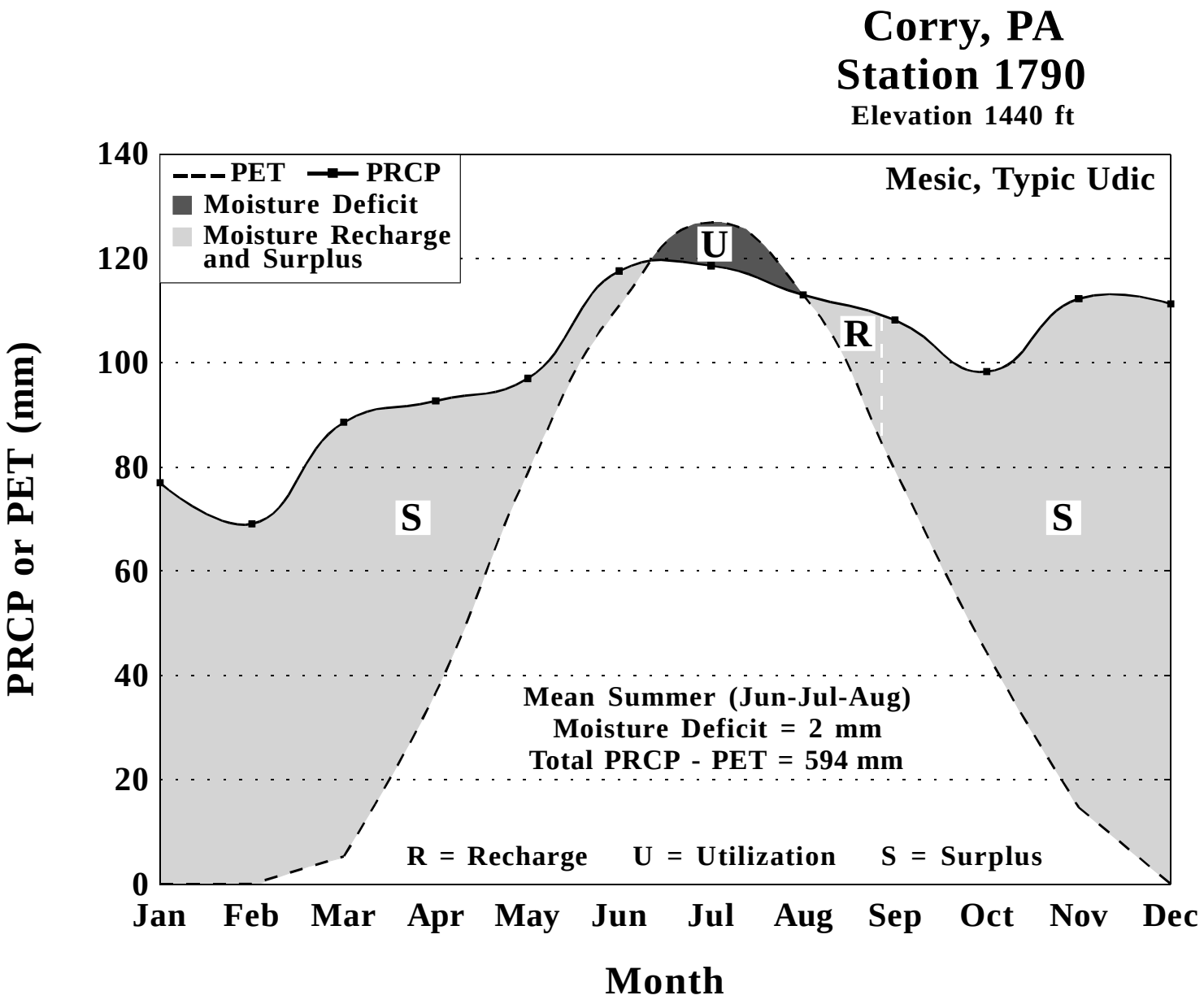
Mean Annual Potential Evapotranspiration: 633 mm
Mean Annual Moisture Surplus: 503 mm
Mean Annual Growing Season (Apr to Sept) Precipitation: 656 mm (58% of MAP)
Mean Summer (Jun-Jul-Aug) Moisture Surplus/Deficit: -9 mm





Number of Cumulative Days That the Moisture Control Section						Highest Number of Consecutive Days That the Moisture Control Section is			
During One Year is			When Soil Temperature is Above 5˚C			Moist in Some Parts		Dry After Summer Solstice	Moist After Winter Solstice
Dry	Moist/Dry	Moist	Dry	Moist/Dry	Moist	Year	T > 8˚C		
0	0	360	0	0	214	360	195	0	120

Computed by BASIC program FLEXNSM (Van Wambeke et al., 1992)
Tentative subdivision: Typic Udic



Moisture balance for Corry, Pennsylvania, based upon a period of 1961-1990. PET calculated by Newhall Simulation Model (Van Wambeke et al., 1992).

Station: Corry, PA
Elevation: 1440 ft
Period of Record: 1961-1990
Mean Annual Precipitation: 1204 mm
Soil Temperature Regime: Mesic

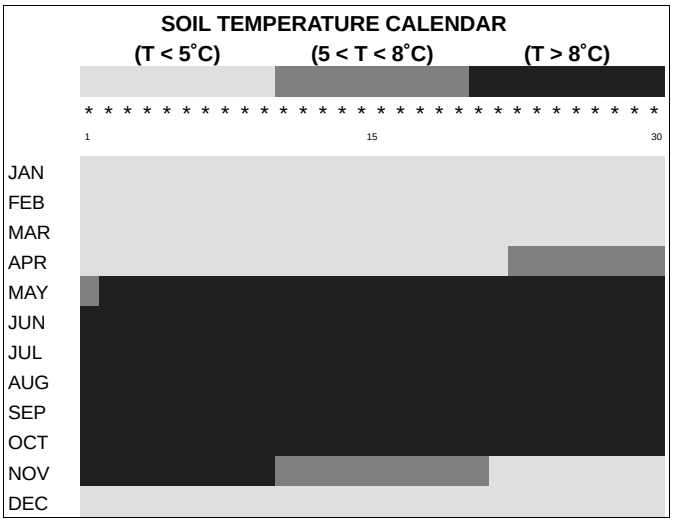
MLRA: 140 Glaciated Allegheny Plateau and Catskill Mountains
Country: USA

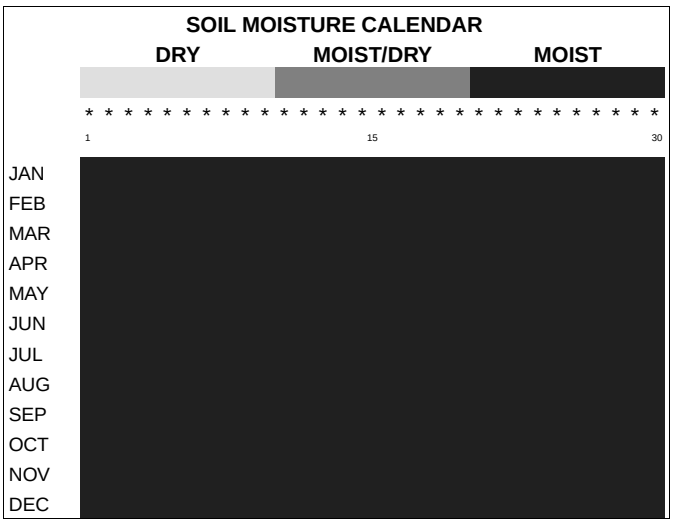
Latitude: 41 55 00N
Longitude: 79 38 00W
Waterholding Capacity: 200 mm
Soil Moisture Regime: Udic

SOIL CLIMATIC REGIME ACCORDING TO NEWHALL SIMULATION MODEL
(MAST = MAAT + 1.2˚ C; amplitude reduced by 1/3)

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Monthly Precipitation (mm)											
77.0	69.1	88.6	92.7	97.0	117.6	118.6	113.0	108.2	98.3	112.3	111.3
Monthly Air Temperatures (˚C)											
-5.2	-4.1	1.4	7.4	13.3	18.0	20.2	19.3	15.8	10.1	4.3	-2.1
Monthly Evapotranspiration (mm)											
0.0	0.0	5.3	36.7	78.9	111.0	126.9	113.1	79.4	44.3	14.7	0.0

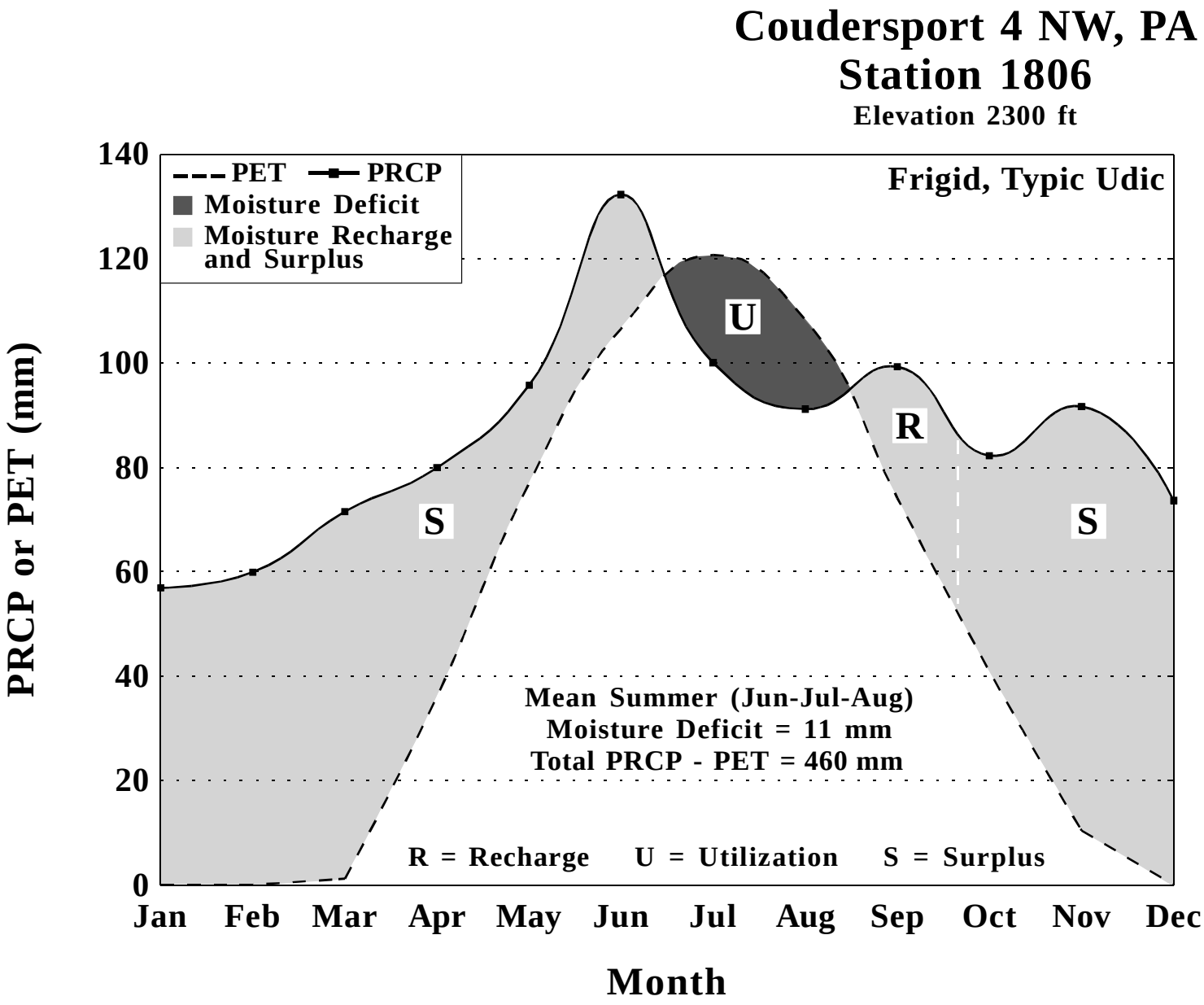
Mean Annual Potential Evapotranspiration: 610 mm
Mean Annual Moisture Surplus: 594 mm
Mean Annual Growing Season (Apr to Sept) Precipitation: 647 mm (54% of MAP)
Mean Summer (Jun-Jul-Aug) Moisture Surplus/Deficit: -2 mm





Number of Cumulative Days That the Moisture Control Section						Highest Number of Consecutive Days That the Moisture Control Section is			
During One Year is			When Soil Temperature is Above 5˚C			Moist in Some Parts		Dry After Summer Solstice	Moist After Winter Solstice
Dry	Moist/Dry	Moist	Dry	Moist/Dry	Moist	Year	T > 8˚C		
0	0	360	0	0	209	360	189	0	120

Computed by BASIC program FLEXNSM (Van Wambeke et al., 1992)
Tentative subdivision: Typic Udic



Moisture balance for Coudersport 4 NW, Pennsylvania, based upon a period of 1961-1990. PET calculated by Newhall Simulation Model (Van Wambeke et al., 1992).

Station: Coudersport 4 NW, PA
Elevation: 2300 ft
Period of Record: 1961-1990
Mean Annual Precipitation: 1035 mm
Soil Temperature Regime: Frigid

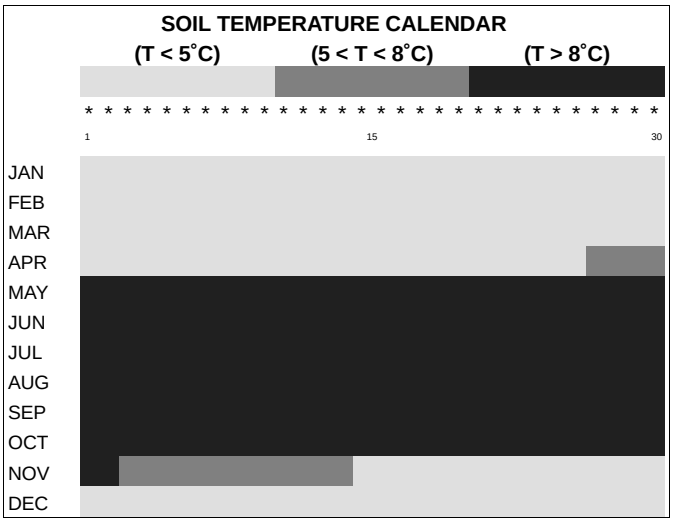
MLRA: 127 Eastern Allegheny Plateau and Mountains
Country: USA

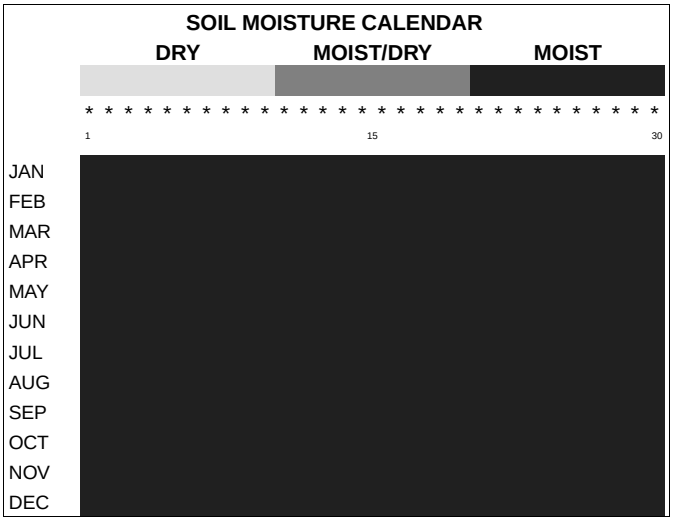
Latitude: 41 50 00N
Longitude: 78 04 00W
Waterholding Capacity: 200 mm
Soil Moisture Regime: Udic

SOIL CLIMATIC REGIME ACCORDING TO NEWHALL SIMULATION MODEL
(MAST = MAAT + 1.2˚ C; amplitude reduced by 1/3)

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Monthly Precipitation (mm)											
56.9	59.9	71.6	80.0	95.8	132.3	100.1	91.2	99.3	82.3	91.7	73.7
Monthly Air Temperatures (˚C)											
-6.3	-5.0	0.3	6.7	12.4	16.9	18.9	18.1	14.3	8.7	2.7	-3.7
Monthly Evapotranspiration (mm)											
0.0	0.0	1.2	36.1	77.0	106.6	120.7	108.3	74.2	40.9	10.4	0.0

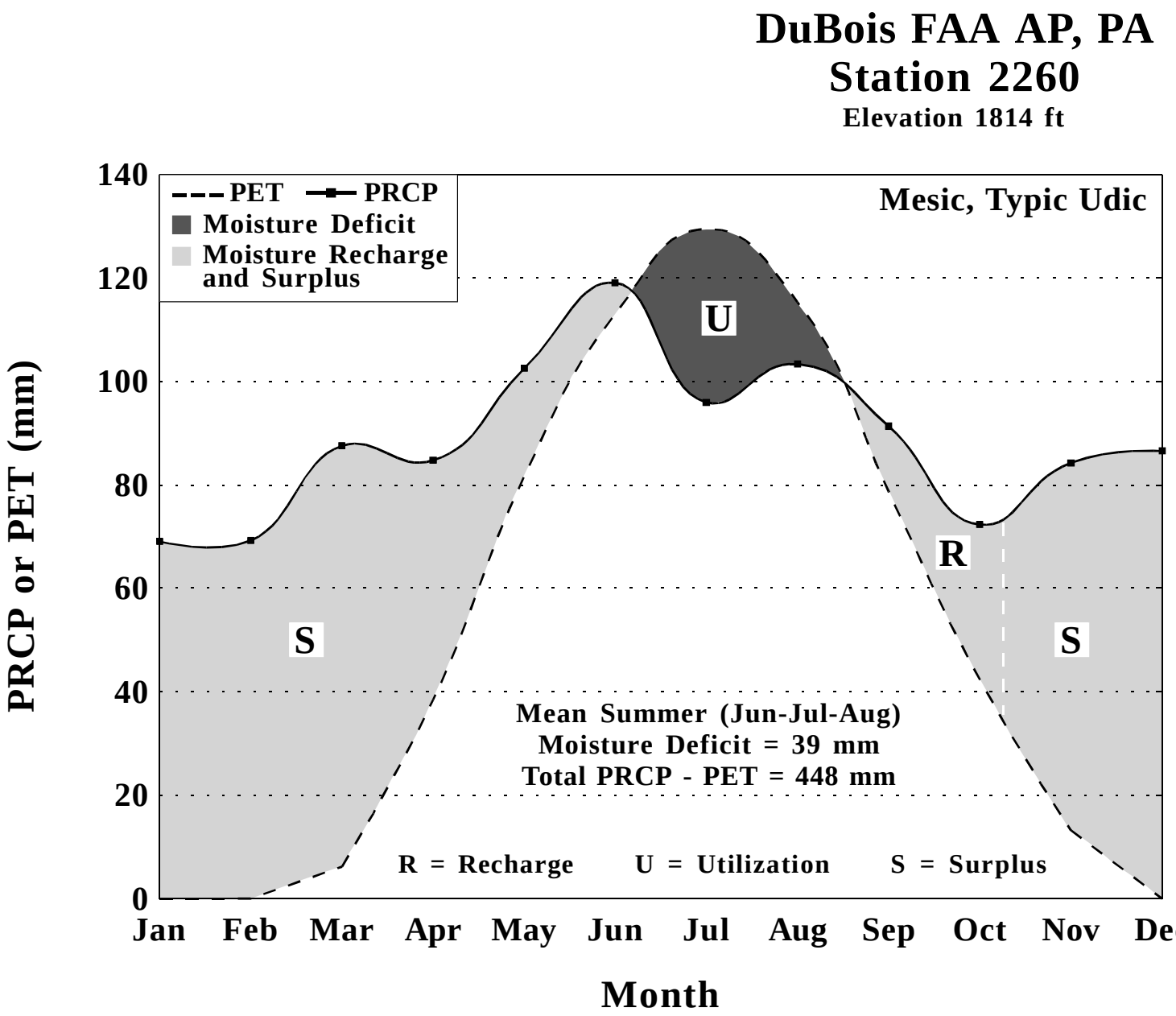
Mean Annual Potential Evapotranspiration: 575 mm
Mean Annual Moisture Surplus: 460 mm
Mean Annual Growing Season (Apr to Sept) Precipitation: 599 mm (55% of MAP)
Mean Summer (Jun-Jul-Aug) Moisture Surplus/Deficit: -11 mm





Number of Cumulative Days That the Moisture Control Section						Highest Number of Consecutive Days That the Moisture Control Section is			
During One Year is			When Soil Temperature is Above 5˚C			Moist in Some Parts		Dry After Summer Solstice	Moist After Winter Solstice
Dry	Moist/Dry	Moist	Dry	Moist/Dry	Moist	Year	T > 8˚C		
0	0	360	0	0	197	360	178	0	120

Computed by BASIC program FLEXNSM (Van Wambeke et al., 1992)
Tentative subdivision: Typic Udic



Moisture balance for DuBois FAA Airport, Pennsylvania, based upon a period of 1961-1990. PET calculated by Newhall Simulation Model (Van Wambeke et al., 1992).

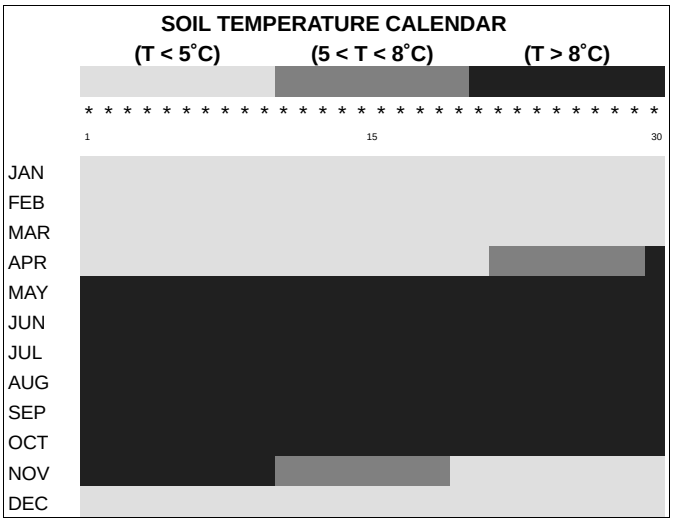
Station: DuBois FAA AP, PA
Elevation: 1814 ft
Period of Record: 1961-1990
Mean Annual Precipitation: 1067 mm
Soil Temperature Regime: Mesic

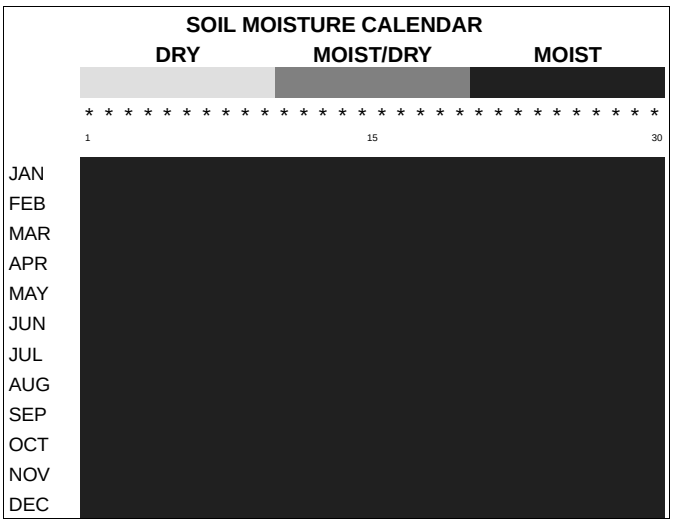
MLRA: 127 Eastern Allegheny Plateau and Moutains
Country: USA

Latitude: 41 11 00N
Longitude: 78 54 00W
Waterholding Capacity: 200 mm
Soil Moisture Regime: Udic

SOIL CLIMATIC REGIME ACCORDING TO NEWHALL SIMULATION MODEL (MAST = MAAT + 1.2˚ C; amplitude reduced by 1/3)											
JAN	**FEB**	**MAR**	**APR**	**MAY**	**JUN**	**JUL**	**AUG**	**SEP**	**OCT**	**NOV**	**DEC**
Monthly Precipitation (mm)											
69.1	69.3	87.6	84.8	102.6	119.1	96.0	103.4	91.4	72.4	84.3	86.6
Monthly Air Temperatures (˚C)											
-5.2	-3.8	1.7	7.9	13.9	18.4	20.6	19.7	15.8	9.8	4.0	-2.4
Monthly Evapotranspiration (mm)											
0.0	0.0	6.2	38.4	81.7	113.0	129.5	115.4	78.8	42.3	13.2	0.0

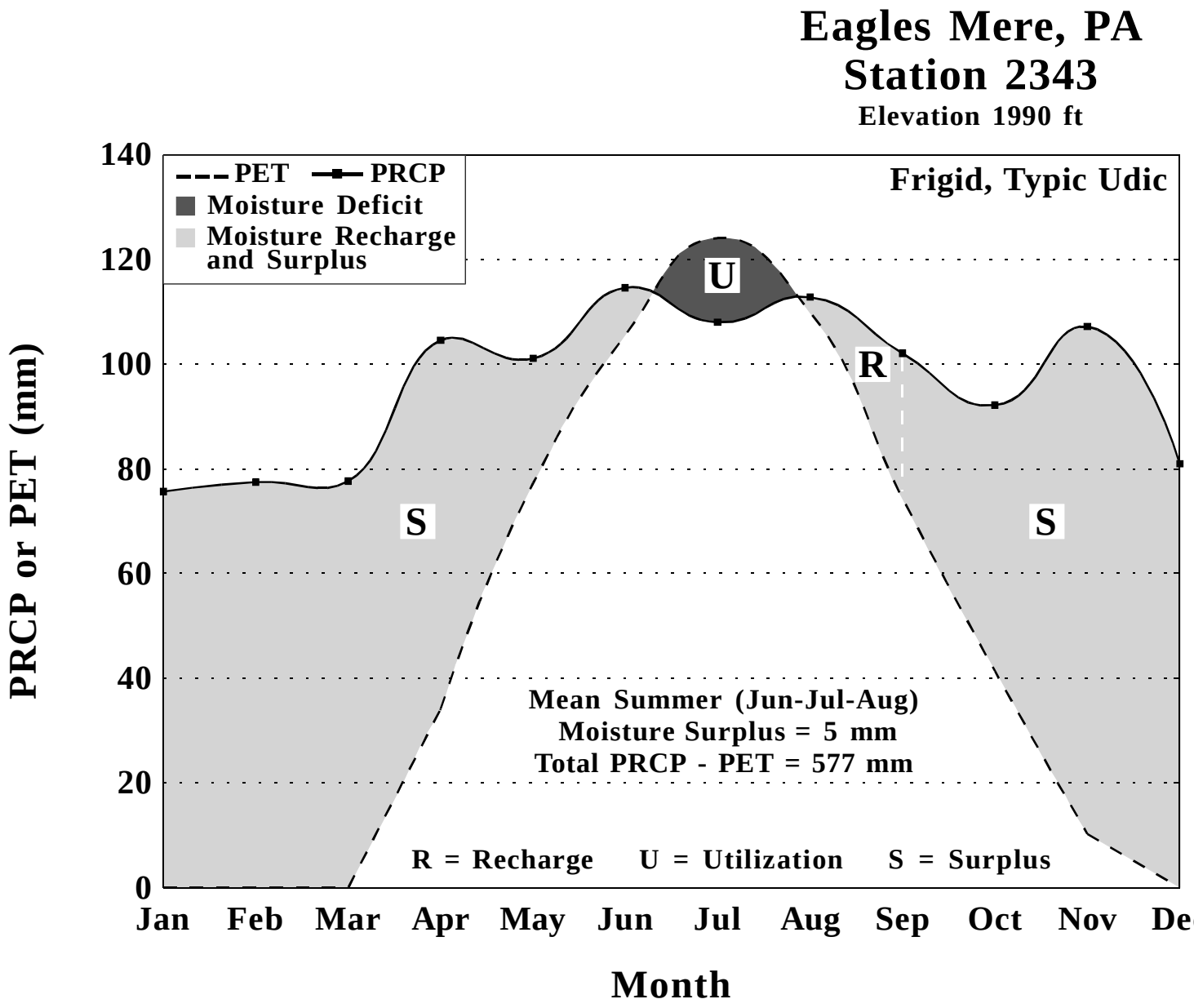
Mean Annual Potential Evapotranspiration: 619 mm
Mean Annual Moisture Surplus: 448 mm
Mean Annual Growing Season (Apr to Sept) Precipitation: 597 mm (56% of MAP)
Mean Summer (Jun-Jul-Aug) Moisture Surplus/Deficit: -39 mm





Number of Cumulative Days That the Moisture Control Section						Highest Number of Consecutive Days That the Moisture Control Section is			
During One Year is			When Soil Temperature is Above 5˚C			Moist in Some Parts		Dry After Summer Solstice	Moist After Winter Solstice
Dry	Moist/Dry	Moist	Dry	Moist/Dry	Moist	Year	T > 8˚C		
0	0	360	0	0	208	360	190	0	120

Computed by BASIC program FLEXNSM (Van Wambeke et al., 1992)
Tentative subdivision: Typic Udic



Moisture balance for Eagles Mere, Pennsylvania, based upon a period of 1949-1987. PET calculated by Newhall Simulation Model (Van Wambeke et al., 1992).

Station: Eagles Mere, PA
Elevation: 1990 ft
Period of Record: 1949-1987
Mean Annual Precipitation: 1154 mm
Soil Temperature Regime: Frigid

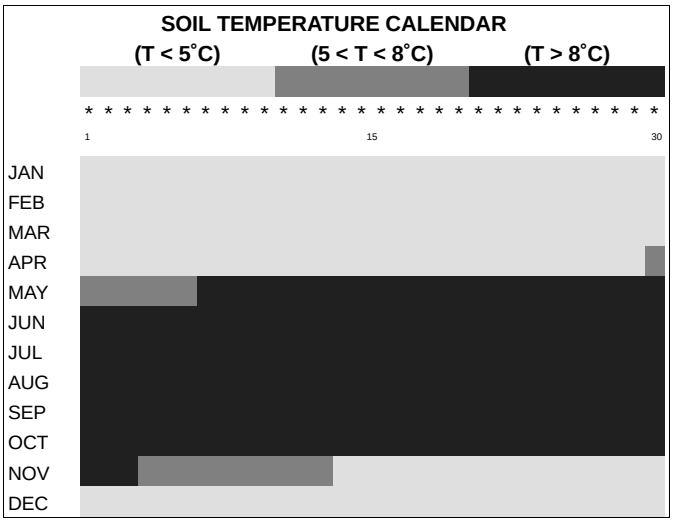
MLRA: 140 Glaciated Allegheny Plateau and Catskill Mtns.
Country: USA

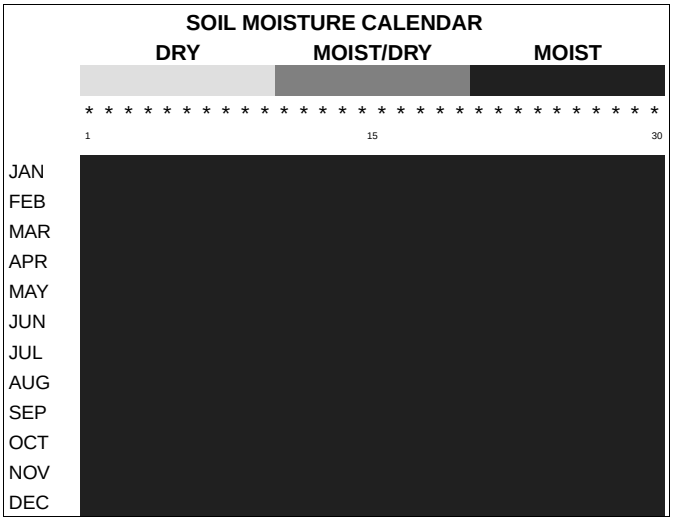
Latitude: 41 24 00N
Longitude: 76 35 00W
Waterholding Capacity: 200 mm
Soil Moisture Regime: Udic

SOIL CLIMATIC REGIME ACCORDING TO NEWHALL SIMULATION MODEL
(MAST = MAAT + 1.2˚ C; amplitude reduced by 1/3)

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Monthly Precipitation (mm)											
75.7	77.5	77.7	104.6	101.1	114.6	108.0	112.8	102.1	92.2	107.2	81.0
Monthly Air Temperatures (˚C)											
-6.2	-5.3	-0.9	6.4	12.6	16.8	19.4	18.4	14.4	8.9	2.7	-3.9
Monthly Evapotranspiration (mm)											
0.0	0.0	0.0	34.1	77.3	105.5	124.1	110.0	74.4	41.3	10.2	0.0

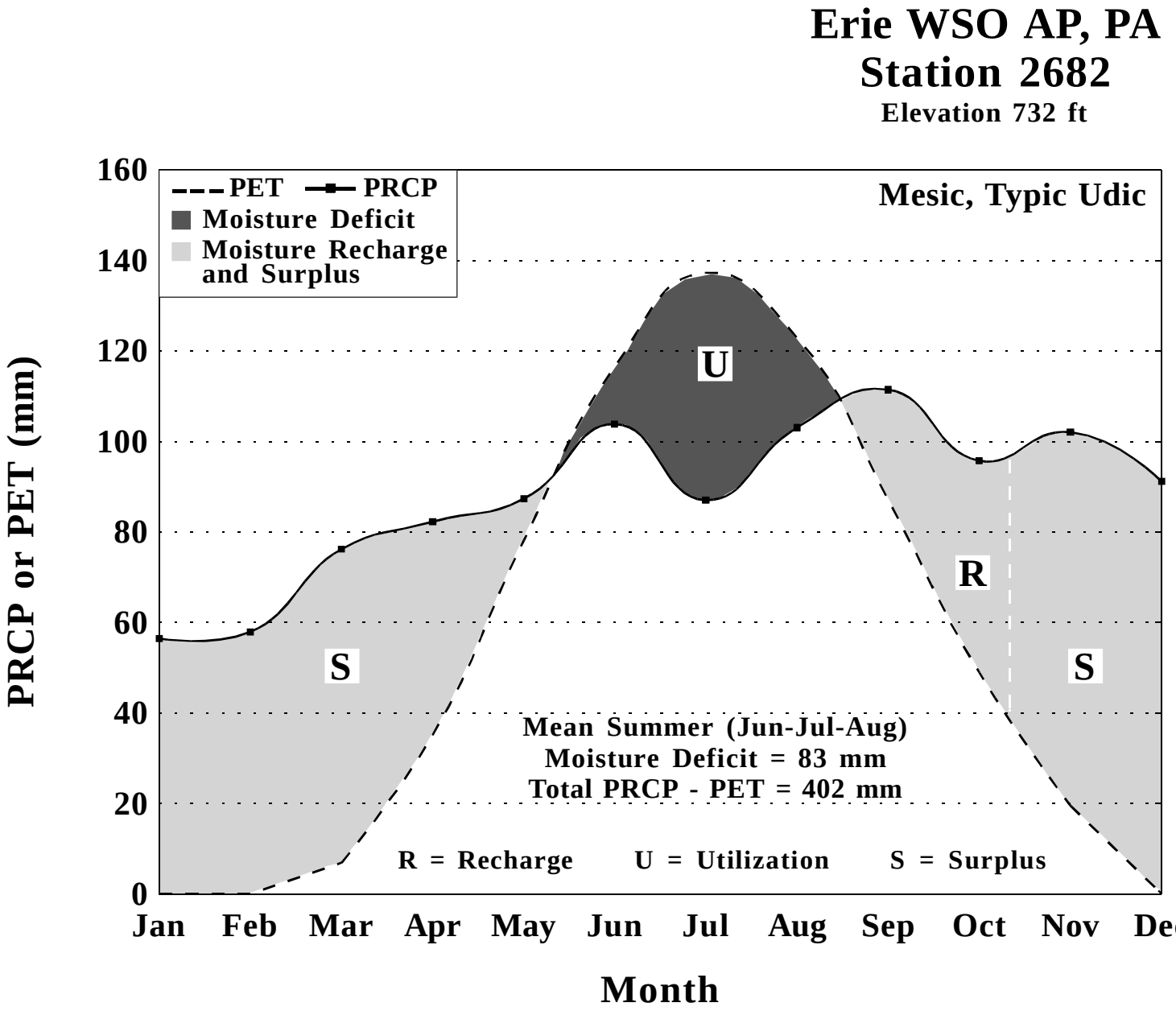
Mean Annual Potential Evapotranspiration: 577 mm
Mean Annual Moisture Surplus: 577 mm
Mean Annual Growing Season (Apr to Sept) Precipitation: 643 mm (56% of MAP)
Mean Summer (Jun-Jul-Aug) Moisture Surplus/Deficit: 5 mm





Number of Cumulative Days That the Moisture Control Section						Highest Number of Consecutive Days That the Moisture Control Section is			
During One Year is			When Soil Temperature is Above 5˚C			Moist in Some Parts		Dry After Summer Solstice	Moist After Winter Solstice
Dry	Moist/Dry	Moist	Dry	Moist/Dry	Moist	Year	T > 8˚C		
0	0	360	0	0	194	360	178	0	120

Computed by BASIC program FLEXNSM (Van Wambeke et al., 1992)
Tentative subdivision: Typic Udic



Moisture balance for Erie WSO Airport, Pennsylvania, based upon a period of 1961-1990. PET calculated by Newhall Simulation Model (Van Wambeke et al., 1992).

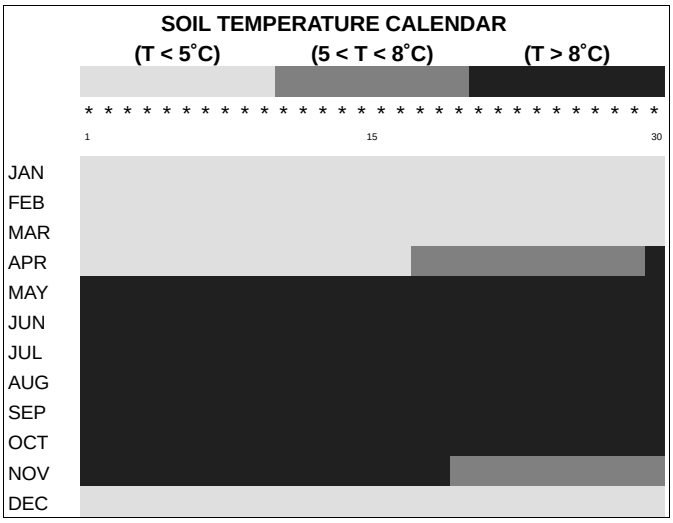
Station: Erie WSO AP, PA
Elevation: 732 ft
Period of Record: 1961-1990
Mean Annual Precipitation: 1055 mm
Soil Temperature Regime: Mesic

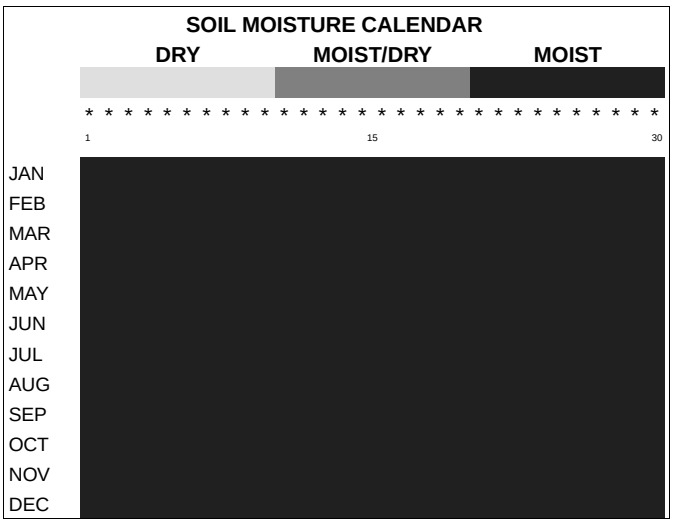
MLRA: 100 Erie Fruit and Truck Area
Country: USA

Latitude: 42 05 00N
Longitude: 80 11 00W
Waterholding Capacity: 200 mm
Soil Moisture Regime: Udic

SOIL CLIMATIC REGIME ACCORDING TO NEWHALL SIMULATION MODEL (MAST = MAAT + 1.2˚ C; amplitude reduced by 1/3)											
JAN	**FEB**	**MAR**	**APR**	**MAY**	**JUN**	**JUL**	**AUG**	**SEP**	**OCT**	**NOV**	**DEC**
Monthly Precipitation (mm)											
56.4	57.9	76.2	82.3	87.4	103.9	87.1	103.1	111.5	95.8	102.1	91.2
Monthly Air Temperatures (˚C)											
-3.7	-3.4	2.2	7.8	13.8	19.2	21.8	21.2	17.8	11.8	6.2	-0.3
Monthly Evapotranspiration (mm)											
0.0	0.0	6.9	35.1	78.2	116.5	137.3	123.0	87.2	48.9	19.5	0.0

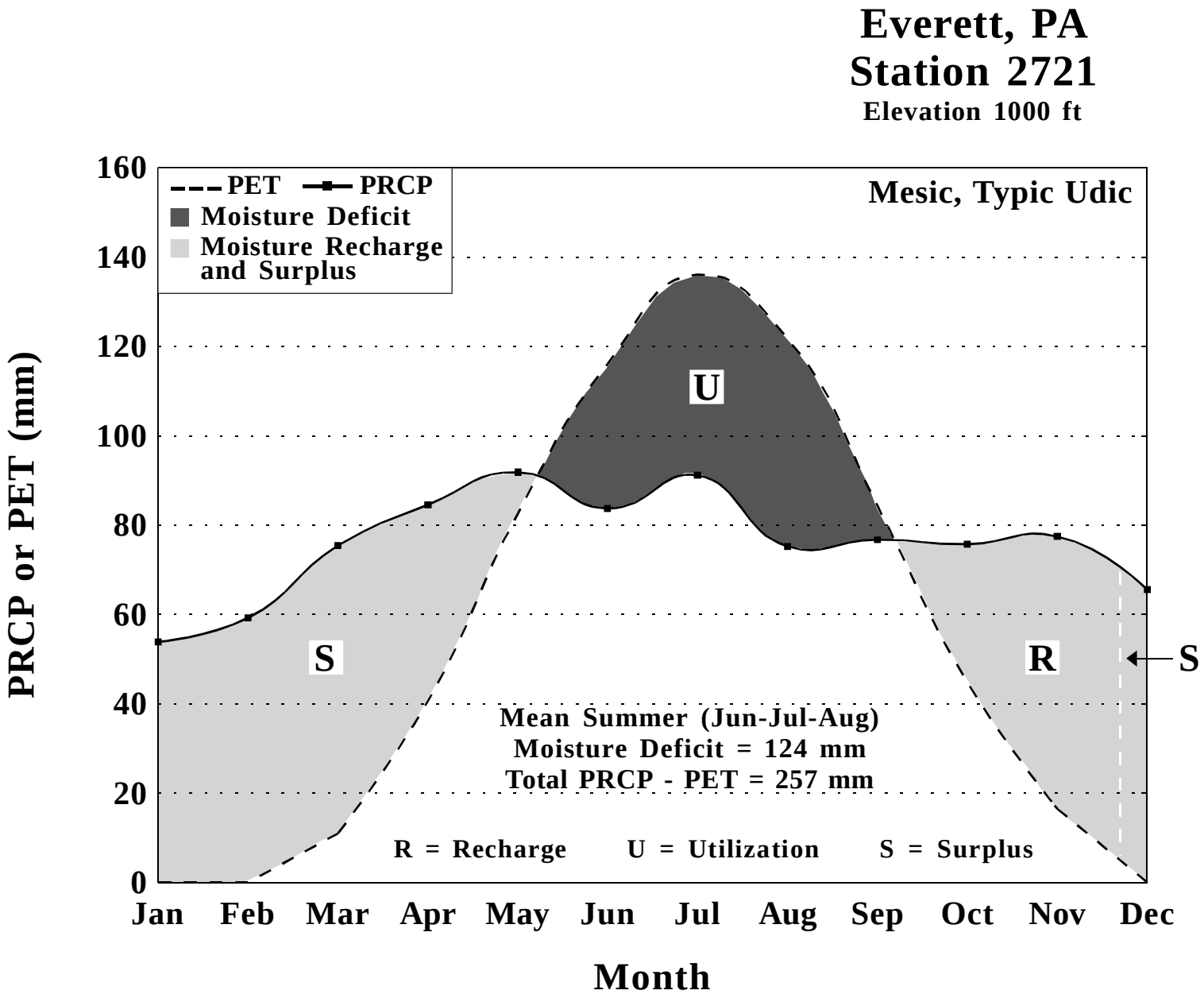
Mean Annual Potential Evapotranspiration: 653 mm
Mean Annual Moisture Surplus: 402 mm
Mean Annual Growing Season (Apr to Sept) Precipitation: 575 mm (55% of MAP)
Mean Summer (Jun-Jul-Aug) Moisture Surplus/Deficit: -83 mm





Number of Cumulative Days That the Moisture Control Section						Highest Number of Consecutive Days That the Moisture Control Section is			
During One Year is			When Soil Temperature is Above 5˚C			Moist in Some Parts		Dry After Summer Solstice	Moist After Winter Solstice
Dry	Moist/Dry	Moist	Dry	Moist/Dry	Moist	Year	T > 8˚C		
0	0	360	0	0	221	360	201	0	120

Computed by BASIC program FLEXNSM (Van Wambeke et al., 1992)
Tentative subdivision: Typic Udic



Moisture balance for Everett, Pennsylvania, based upon a period of 1961-1990. PET calculated by Newhall Simulation Model (Van Wambeke et al., 1992).

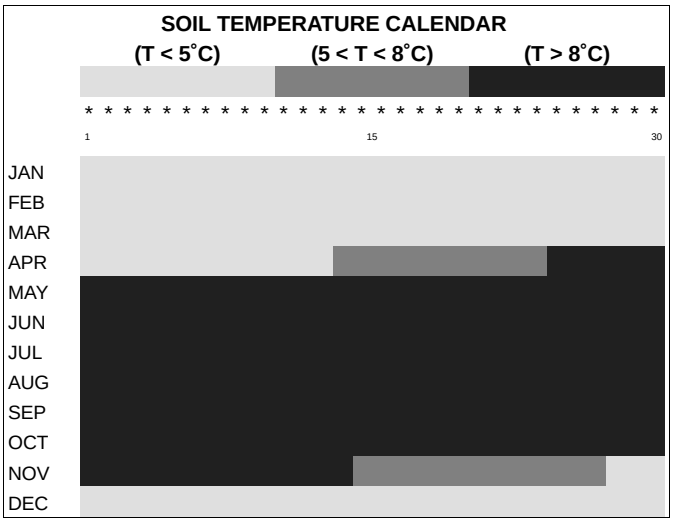
Station: Everett, PA
Elevation: 1000 ft
Period of Record: 1961-1990
Mean Annual Precipitation: 911 mm
Soil Temperature Regime: Mesic

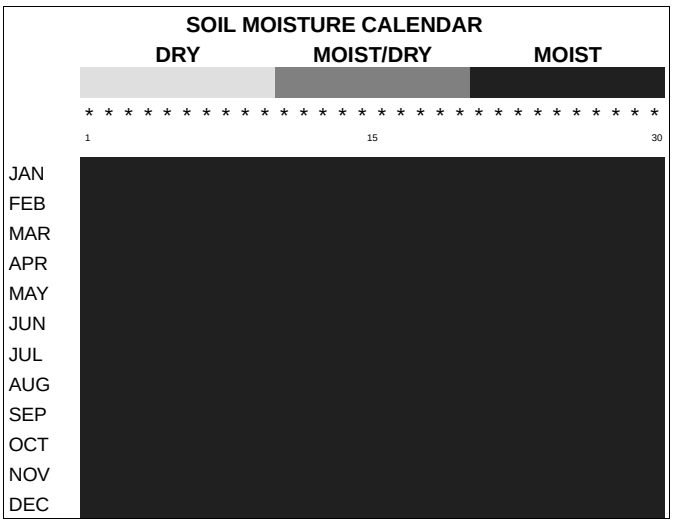
MLRA: 147 Northern Appalachian Ridges and Valleys
Country: USA

Latitude: 40 01 00N
Longitude: 78 22 00W
Waterholding Capacity: 200 mm
Soil Moisture Regime: Udic

SOIL CLIMATIC REGIME ACCORDING TO NEWHALL SIMULATION MODEL (MAST = MAAT + 1.2˚ C; amplitude reduced by 1/3)											
JAN	**FEB**	**MAR**	**APR**	**MAY**	**JUN**	**JUL**	**AUG**	**SEP**	**OCT**	**NOV**	**DEC**
Monthly Precipitation (mm)											
53.8	59.2	75.4	84.6	91.9	83.8	91.2	75.2	76.7	75.7	77.5	65.5
Monthly Air Temperatures (˚C)											
-2.8	-2.0	3.2	8.9	14.7	19.4	21.8	21.2	17.3	10.9	5.4	-0.4
Monthly Evapotranspiration (mm)											
0.0	0.0	11.0	40.6	82.7	116.1	136.1	121.8	84.4	44.8	16.5	0.0

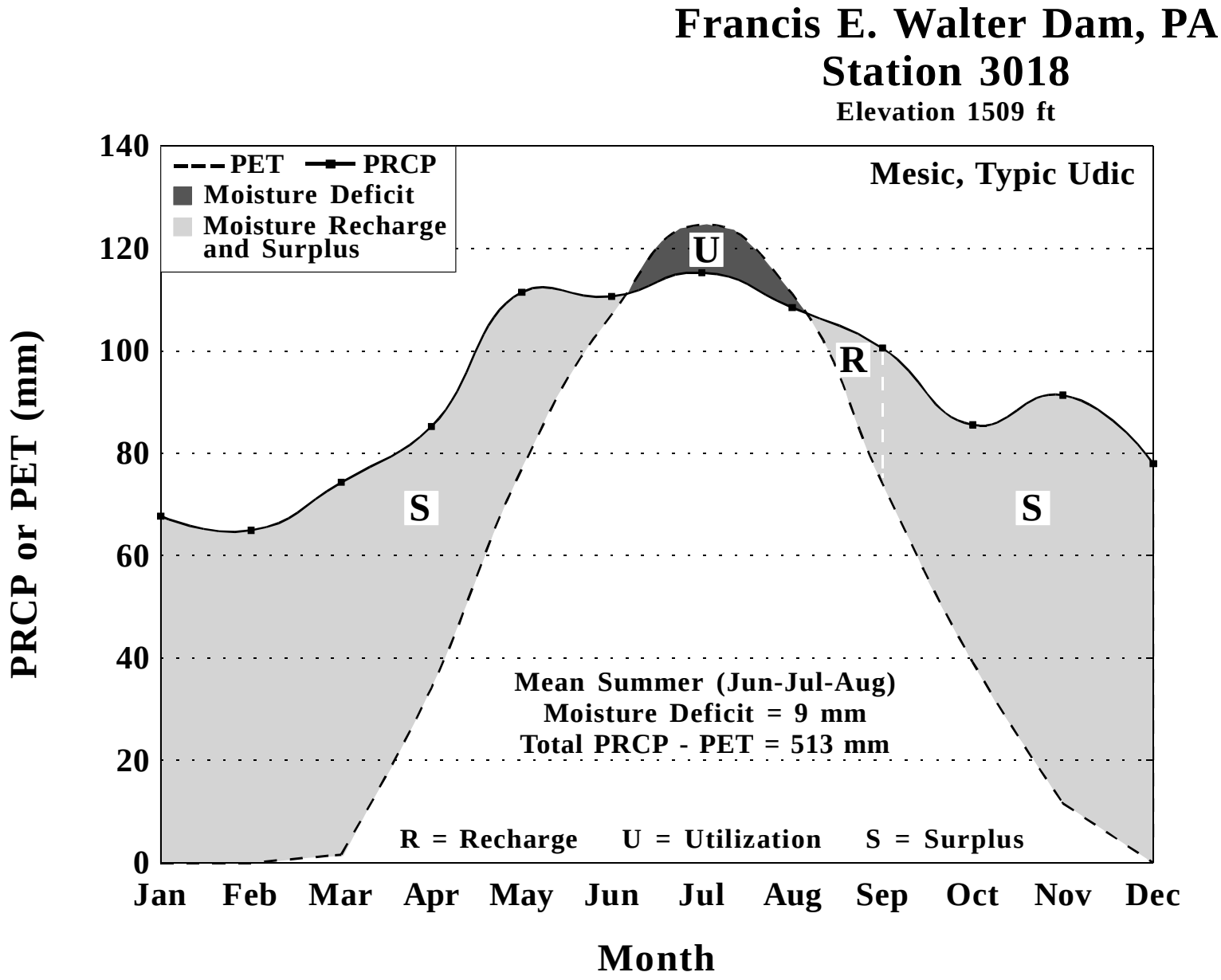
Mean Annual Potential Evapotranspiration: 654 mm
Mean Annual Moisture Surplus: 257 mm
Mean Annual Growing Season (Apr to Sept) Precipitation: 503 mm (55% of MAP)
Mean Summer (Jun-Jul-Aug) Moisture Surplus/Deficit: -124 mm





Number of Cumulative Days That the Moisture Control Section						Highest Number of Consecutive Days That the Moisture Control Section is			
During One Year is			When Soil Temperature is Above 5˚C			Moist in Some Parts		Dry After Summer Solstice	Moist After Winter Solstice
Dry	Moist/Dry	Moist	Dry	Moist/Dry	Moist	Year	T > 8˚C		
0	0	360	0	0	223	360	201	0	120

Computed by BASIC program FLEXNSM (Van Wambeke et al., 1992)
Tentative subdivision: Typic Udic



Moisture balance for Francis E. Walter Dam, Pennsylvania, based upon a period of 1961-1990. PET calculated by Newhall Simulation Model (Van Wambeke et al., 1992).

Station: Francis E. Walter Dam, PA
Elevation: 1509 ft
Period of Record: 1961-1990
Mean Annual Precipitation: 1094 mm
Soil Temperature Regime: Mesic

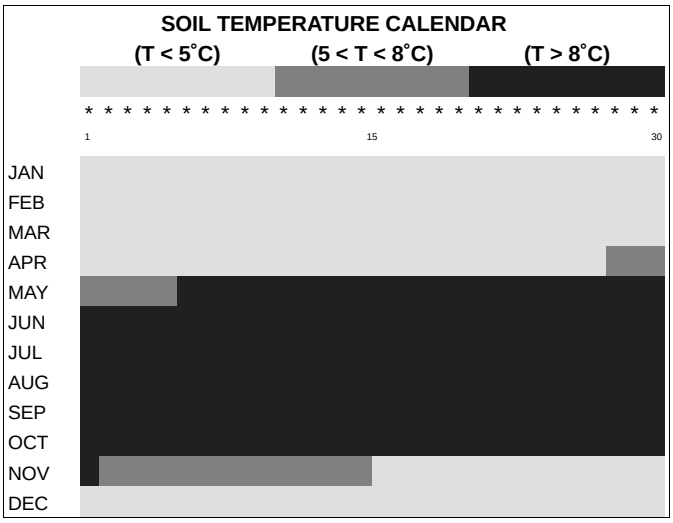
MLRA: 140 Glaciated Allegheny Plateau & Catskill Mtns.
Country: USA

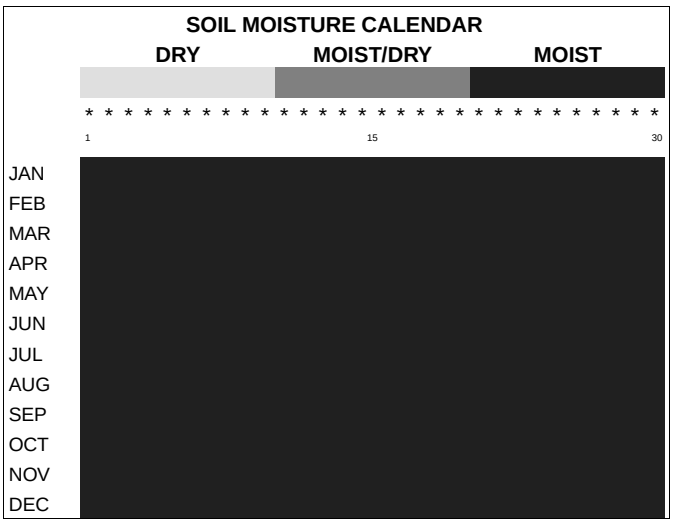
Latitude: 41 07 00N
Longitude: 75 44 00W
Waterholding Capacity: 200 mm
Soil Moisture Regime: Udic

SOIL CLIMATIC REGIME ACCORDING TO NEWHALL SIMULATION MODEL
(MAST = MAAT + 1.2˚ C; amplitude reduced by 1/3)

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Monthly Precipitation (mm)											
67.8	65.0	74.4	85.3	111.5	110.7	115.3	108.5	100.6	85.6	91.4	78.0
Monthly Air Temperatures (˚C)											
-6.5	-5.4	0.4	6.5	12.6	17.1	19.6	18.7	14.4	8.5	3.1	-3.4
Monthly Evapotranspiration (mm)											
0.0	0.0	1.6	34.2	77.0	107.1	124.7	111.2	74.2	39.2	11.6	0.0

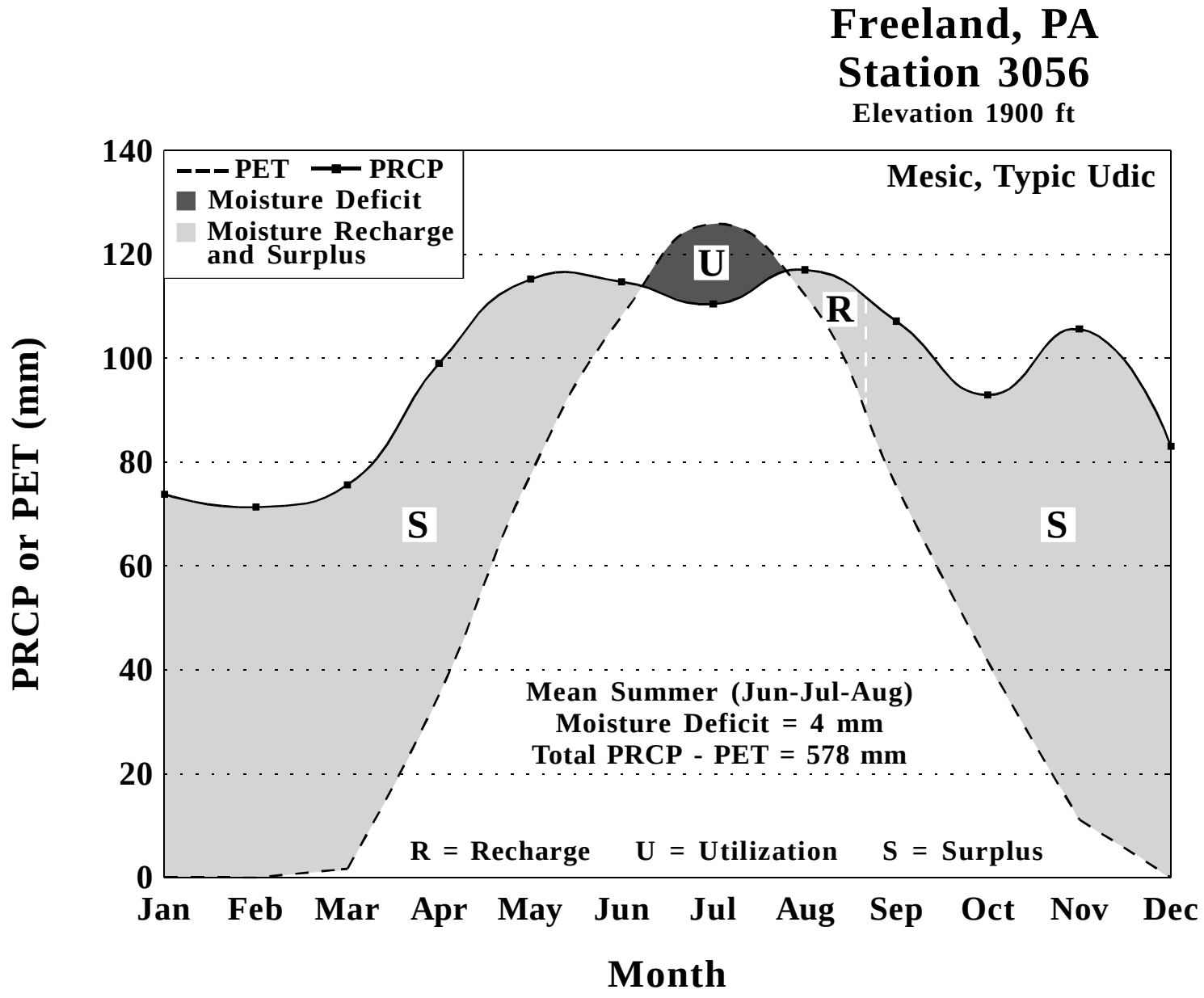
Mean Annual Potential Evapotranspiration: 581 mm
Mean Annual Moisture Surplus: 513 mm
Mean Annual Growing Season (Apr to Sept) Precipitation: 632 mm (58% of MAP)
Mean Summer (Jun-Jul-Aug) Moisture Surplus/Deficit: -9 mm





Number of Cumulative Days That the Moisture Control Section						Highest Number of Consecutive Days That the Moisture Control Section is			
During One Year is			When Soil Temperature is Above 5˚C			Moist in Some Parts		Dry After Summer Solstice	Moist After Winter Solstice
Dry	Moist/Dry	Moist	Dry	Moist/Dry	Moist	Year	T > 8˚C		
0	0	360	0	0	197	360	176	0	120

Computed by BASIC program FLEXNSM (Van Wambeke et al., 1992)
Tentative subdivision: Typic Udic



Moisture balance for Freeland, Pennsylvania, based upon a period of 1961-1990. PET calculated by Newhall Simulation Model (Van Wambeke et al., 1992).

Station: Freeland, PA
Elevation: 1900 ft
Period of Record: 1961-1990
Mean Annual Precipitation: 1167 mm
Soil Temperature Regime: Mesic

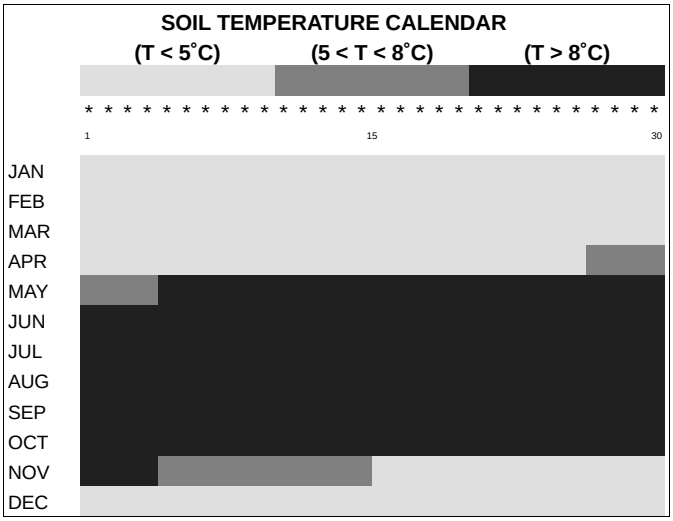
MLRA: 147 Northern Appalachian Ridges and Valleys
Country: USA

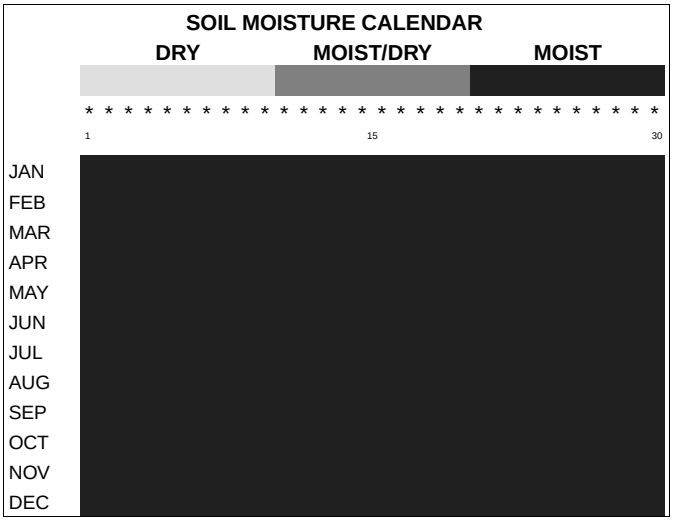
Latitude: 41 01 00N
Longitude: 75 54 00W
Waterholding Capacity: 200 mm
Soil Moisture Regime: Udic

SOIL CLIMATIC REGIME ACCORDING TO NEWHALL SIMULATION MODEL
(MAST = MAAT + 1.2˚ C; amplitude reduced by 1/3)

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Monthly Precipitation (mm)											
73.9	71.4	75.7	99.1	115.3	114.8	110.5	117.1	107.2	93.0	105.7	83.1
Monthly Air Temperatures (˚C)											
-6.0	-4.9	0.4	6.8	12.8	17.3	19.8	18.9	14.8	9.2	3.1	-3.4
Monthly Evapotranspiration (mm)											
0.0	0.0	1.7	35.2	77.7	108.1	125.9	112.3	75.5	44.6	11.2	0.0

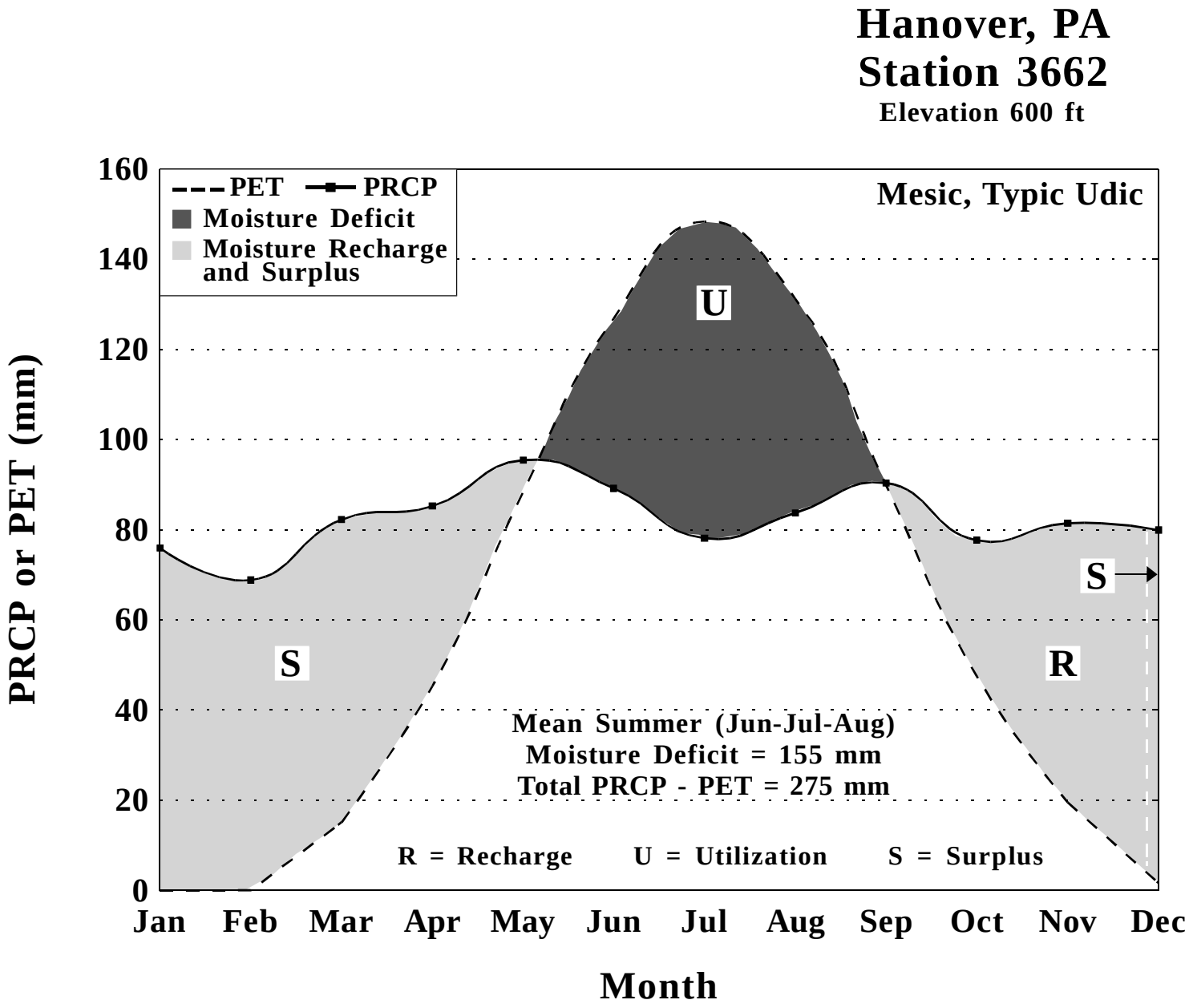
Mean Annual Potential Evapotranspiration: 589 mm
Mean Annual Moisture Surplus: 578 mm
Mean Annual Growing Season (Apr to Sept) Precipitation: 664 mm (57% of MAP)
Mean Summer (Jun-Jul-Aug) Moisture Surplus/Deficit: -4 mm





Number of Cumulative Days That the Moisture Control Section						Highest Number of Consecutive Days That the Moisture Control Section is			
During One Year is			When Soil Temperature is Above 5˚C			Moist in Some Parts		Dry After Summer Solstice	Moist After Winter Solstice
Dry	Moist/Dry	Moist	Dry	Moist/Dry	Moist	Year	T > 8˚C		
0	0	360	0	0	199	360	181	0	120

Computed by BASIC program FLEXNSM (Van Wambeke et al., 1992)
Tentative subdivision: Typic Udic



Moisture balance for Hanover, Pennsylvania, based upon a period of 1961-1990. PET calculated by Newhall Simulation Model (Van Wambeke et al., 1992).

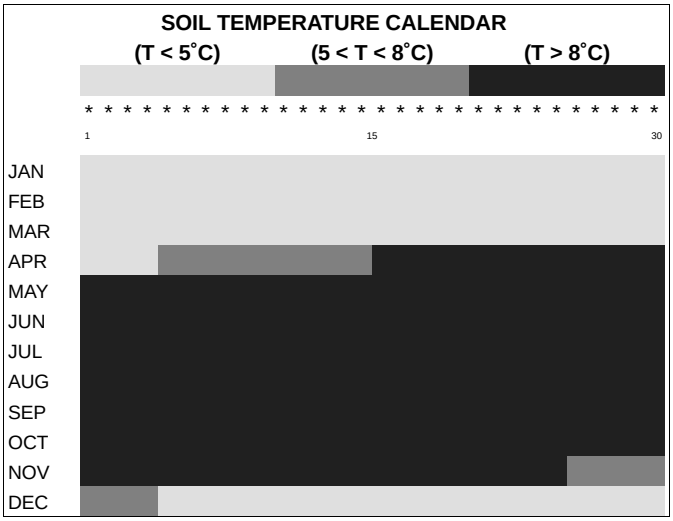
Station: Hanover, PA
Elevation: 600 ft
Period of Record: 1961-1990
Mean Annual Precipitation: 989 mm
Soil Temperature Regime: Mesic

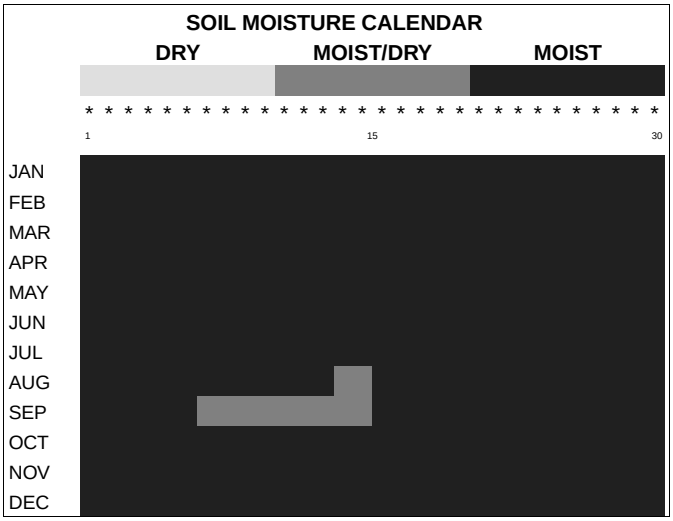
MLRA: 148 Northern Piedmont
Country: USA

Latitude: 39 48 00N
Longitude: 76 59 00W
Waterholding Capacity: 200 mm
Soil Moisture Regime: Udic

SOIL CLIMATIC REGIME ACCORDING TO NEWHALL SIMULATION MODEL (MAST = MAAT + 1.2˚ C; amplitude reduced by 1/3)											
JAN	**FEB**	**MAR**	**APR**	**MAY**	**JUN**	**JUL**	**AUG**	**SEP**	**OCT**	**NOV**	**DEC**
Monthly Precipitation (mm)											
75.9	68.8	82.3	85.3	95.5	89.2	78.2	83.8	90.4	77.7	81.5	80.0
Monthly Air Temperatures (˚C)											
-1.7	-0.4	5.0	10.8	16.5	21.5	23.9	22.9	18.9	12.4	7.1	1.1
Monthly Evapotranspiration (mm)											
0.0	0.0	15.1	45.3	88.5	126.9	148.4	131.4	89.9	47.4	19.5	1.6

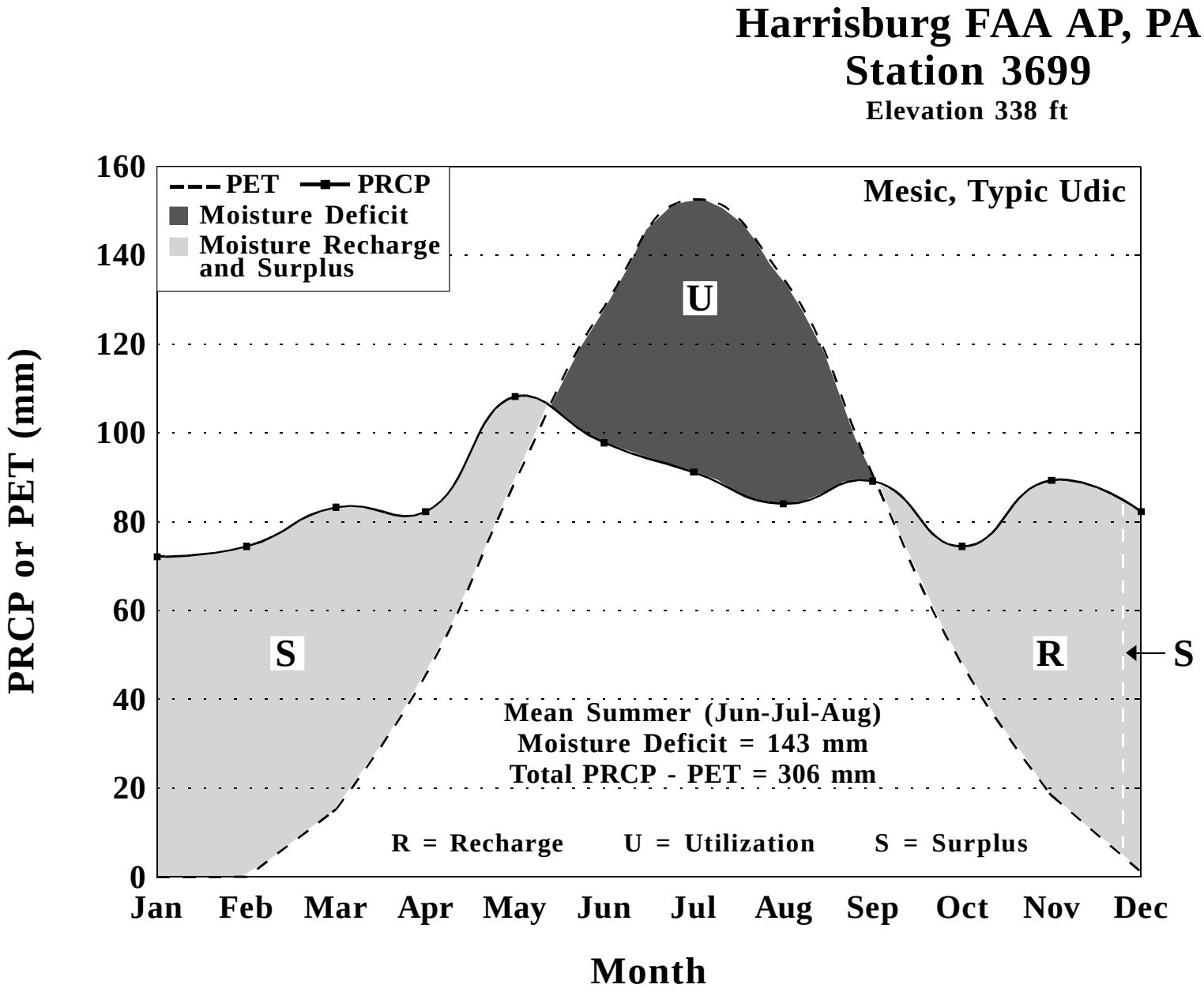
Mean Annual Potential Evapotranspiration: 714 mm
Mean Annual Moisture Surplus: 275 mm
Mean Annual Growing Season (Apr to Sept) Precipitation: 522 mm (53% of MAP)
Mean Summer (Jun-Jul-Aug) Moisture Surplus/Deficit: -155 mm





Number of Cumulative Days That the Moisture Control Section						Highest Number of Consecutive Days That the Moisture Control Section is			
During One Year is			When Soil Temperature is Above 5˚C			Moist in Some Parts		Dry After Summer Solstice	Moist After Winter Solstice
Dry	Moist/Dry	Moist	Dry	Moist/Dry	Moist	Year	T > 8˚C		
0	11	349	0	11	229	360	220	0	120

Computed by BASIC program FLEXNSM (Van Wambeke et al., 1992)
Tentative subdivision: Typic Udic



Moisture balance for Harrisburg FAA Airport, Pennsylvania, based upon a period of 1961-1990. PET calculated by Newhall Simulation Model (Van Wambeke et al., 1992).

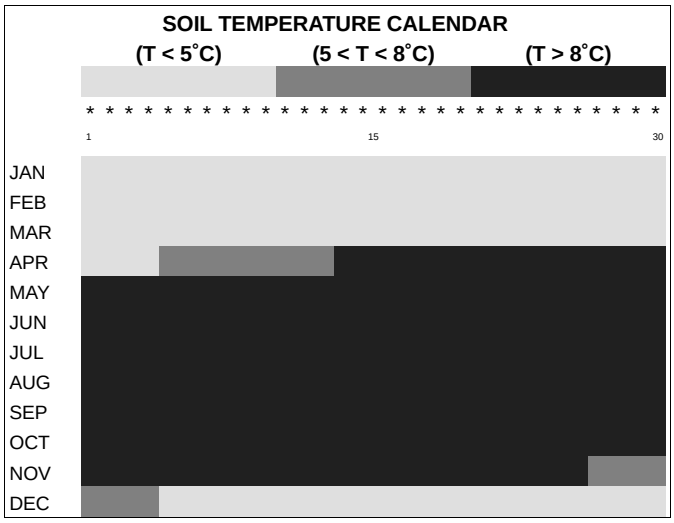
Station: Harrisburg FAA AP, PA
Elevation: 338 ft
Period of Record: 1961-1990
Mean Annual Precipitation: 1029 mm
Soil Temperature Regime: Mesic

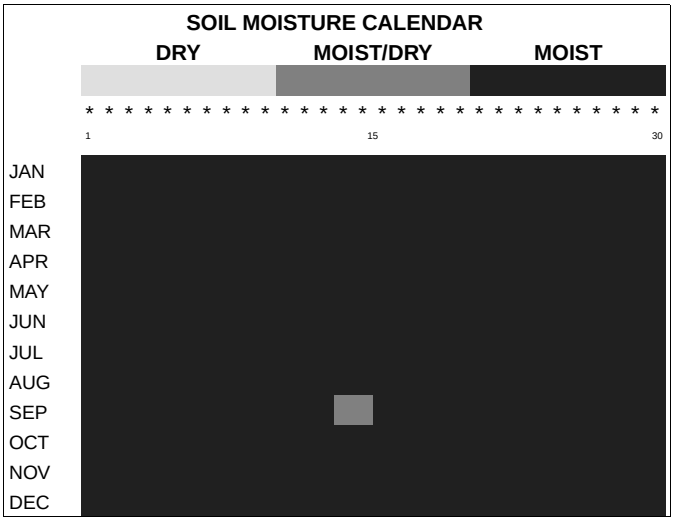
MLRA: 147 Northern Appalachian Ridges and Valleys
Country: USA

Latitude: 40 13 00N
Longitude: 76 51 00W
Waterholding Capacity: 200 mm
Soil Moisture Regime: Udic

SOIL CLIMATIC REGIME ACCORDING TO NEWHALL SIMULATION MODEL (MAST = MAAT + 1.2˚ C; amplitude reduced by 1/3)											
JAN	**FEB**	**MAR**	**APR**	**MAY**	**JUN**	**JUL**	**AUG**	**SEP**	**OCT**	**NOV**	**DEC**
Monthly Precipitation (mm)											
72.1	74.4	83.3	82.3	108.2	97.8	91.2	84.1	89.2	74.4	89.4	82.3
Monthly Air Temperatures (˚C)											
-1.9	-0.4	5.1	10.9	16.6	21.6	24.3	23.4	19.1	12.6	6.9	0.9
Monthly Evapotranspiration (mm)											
0.0	0.0	15.2	45.4	89.0	128.4	152.6	134.8	90.6	47.8	18.3	1.1

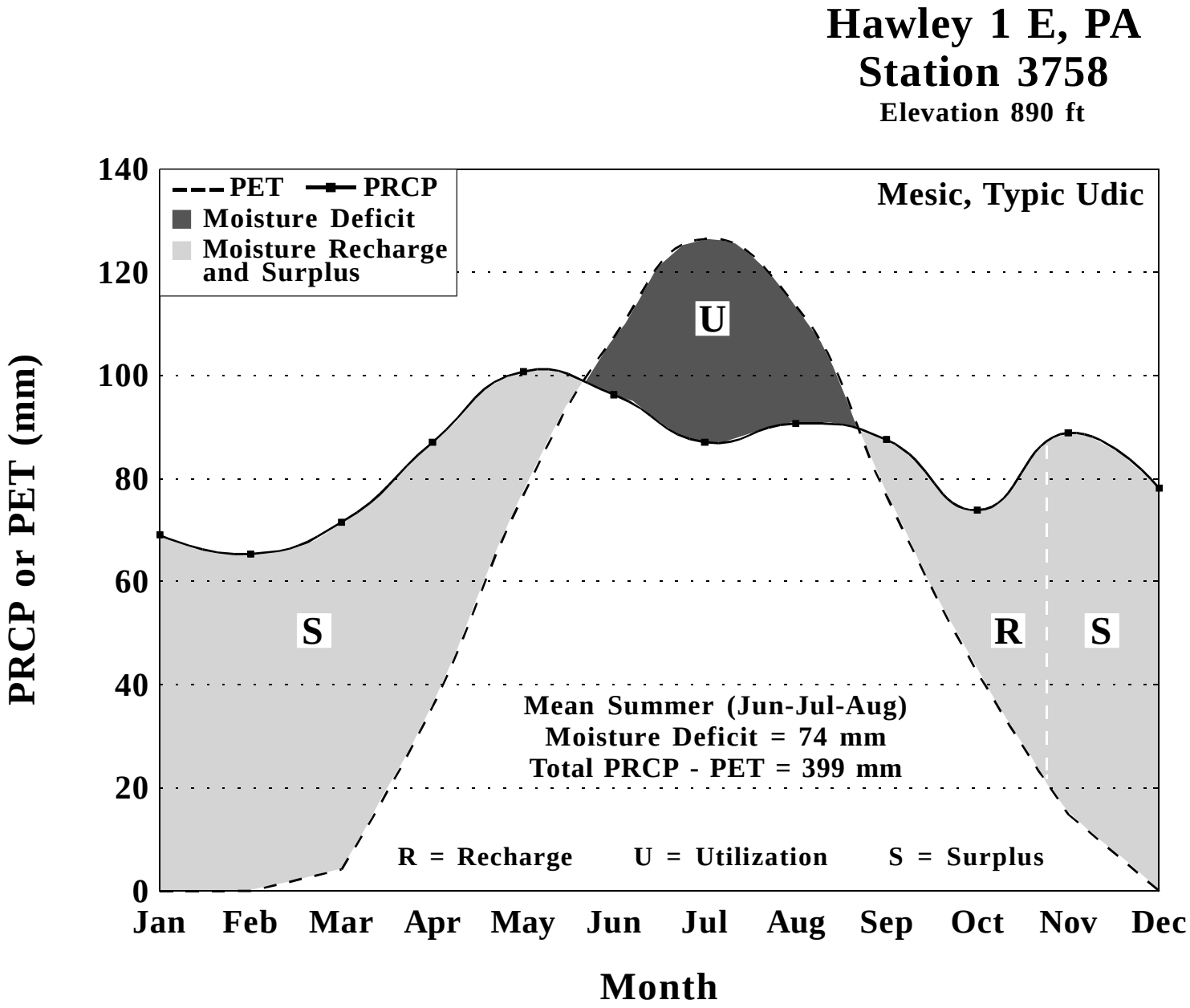
Mean Annual Potential Evapotranspiration: 723 mm
Mean Annual Moisture Surplus: 306 mm
Mean Annual Growing Season (Apr to Sept) Precipitation: 552 mm (54% of MAP)
Mean Summer (Jun-Jul-Aug) Moisture Surplus/Deficit: -143 mm





Number of Cumulative Days That the Moisture Control Section						Highest Number of Consecutive Days That the Moisture Control Section is			
During One Year is			When Soil Temperature is Above 5˚C			Moist in Some Parts		Dry After Summer Solstice	Moist After Winter Solstice
Dry	Moist/Dry	Moist	Dry	Moist/Dry	Moist	Year	T > 8˚C		
0	2	358	0	2	238	360	221	0	120

Computed by BASIC program FLEXNSM (Van Wambeke et al., 1992)
Tentative subdivision: Typic Udic



Moisture balance for Hawley 1 E, Pennsylvania, based upon a period of 1961-1990. PET calculated by Newhall Simulation Model (Van Wambeke et al., 1992).

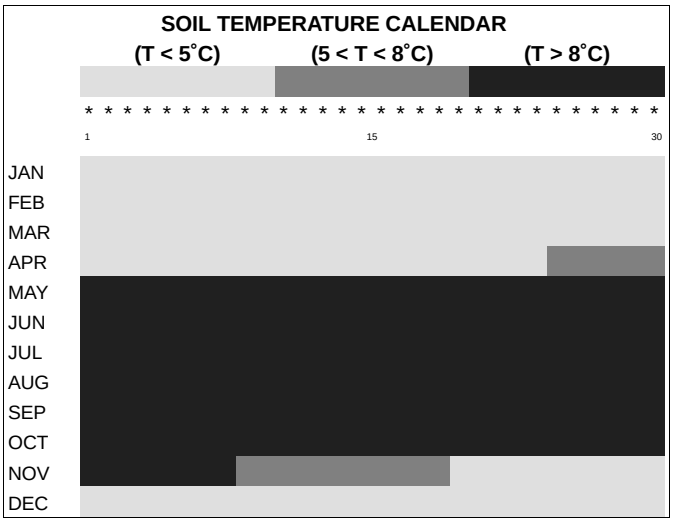
Station: Hawley 1 E, PA
Elevation: 890 ft
Period of Record: 1961-1990
Mean Annual Precipitation: 997 mm
Soil Temperature Regime: Mesic

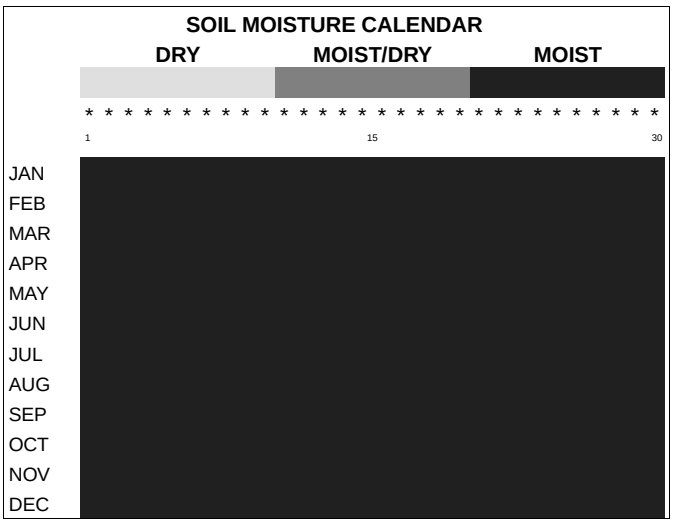
MLRA: 140 Glaciated Allegheny Plateau and Catskill Mtns.
Country: USA

Latitude: 41 29 00N
Longitude: 75 10 00W
Waterholding Capacity: 200 mm
Soil Moisture Regime: Udic

SOIL CLIMATIC REGIME ACCORDING TO NEWHALL SIMULATION MODEL (MAST = MAAT + 1.2˚ C; amplitude reduced by 1/3)											
JAN	**FEB**	**MAR**	**APR**	**MAY**	**JUN**	**JUL**	**AUG**	**SEP**	**OCT**	**NOV**	**DEC**
Monthly Precipitation (mm)											
69.1	65.3	71.6	87.1	100.8	96.3	87.1	90.7	87.6	73.8	88.9	78.2
Monthly Air Temperatures (˚C)											
-5.5	-4.4	1.1	7.1	12.8	17.3	20.0	19.2	15.2	9.4	4.2	-2.3
Monthly Evapotranspiration (mm)											
0.0	0.0	4.2	35.7	76.9	107.5	126.5	113.6	76.7	42.4	14.9	0.0

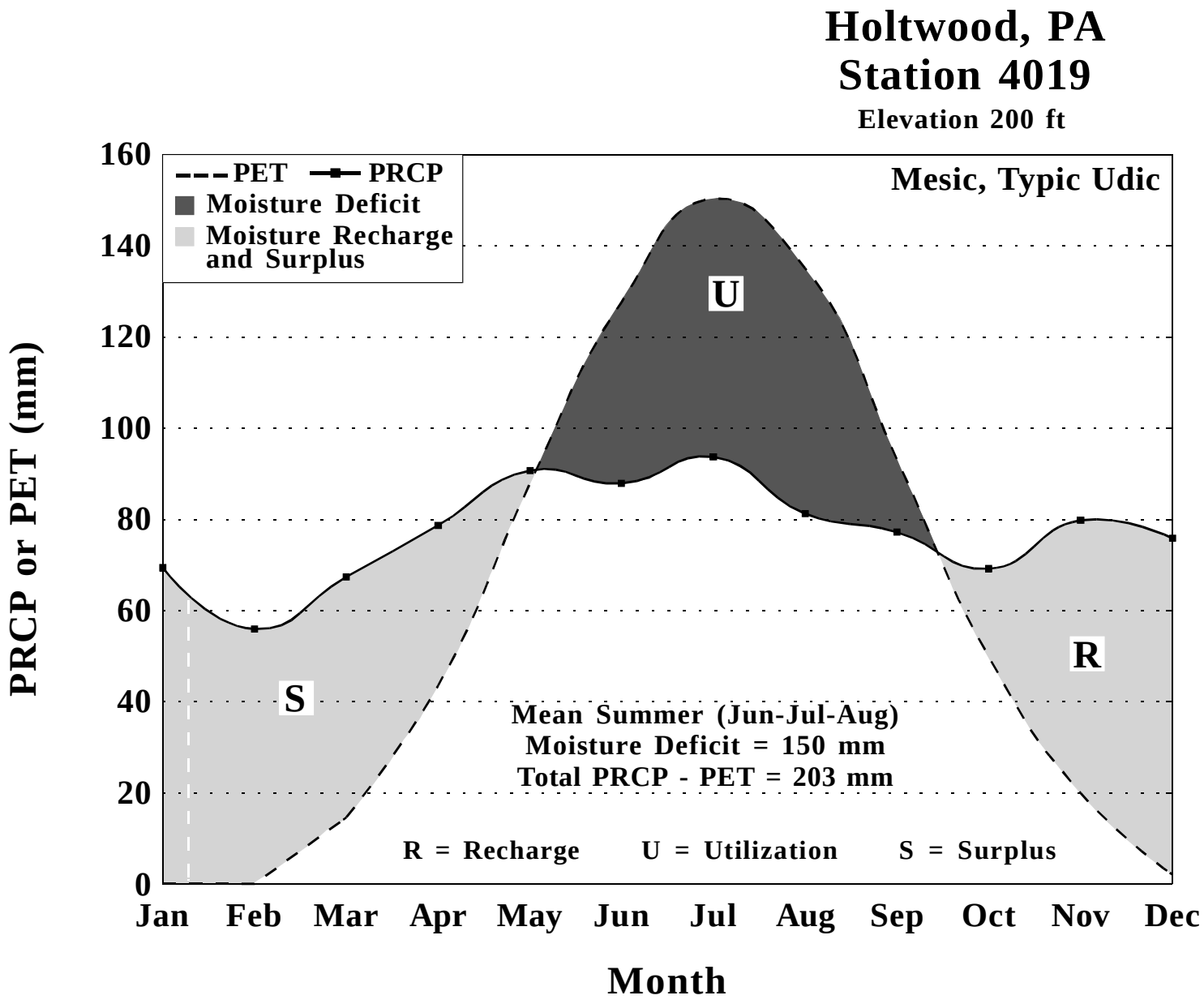
Mean Annual Potential Evapotranspiration: 598 mm
Mean Annual Moisture Surplus: 399 mm
Mean Annual Growing Season (Apr to Sept) Precipitation: 550 mm (55% of MAP)
Mean Summer (Jun-Jul-Aug) Moisture Surplus/Deficit: -74 mm





Number of Cumulative Days That the Moisture Control Section						Highest Number of Consecutive Days That the Moisture Control Section is			
During One Year is			When Soil Temperature is Above 5˚C			Moist in Some Parts		Dry After Summer Solstice	Moist After Winter Solstice
Dry	Moist/Dry	Moist	Dry	Moist/Dry	Moist	Year	T > 8˚C		
0	0	360	0	0	206	360	185	0	120

Computed by BASIC program FLEXNSM (Van Wambeke et al., 1992)
Tentative subdivision: Typic Udic



Moisture balance for Holtwood, Pennsylvania, based upon a period of 1961-1990. PET calculated by Newhall Simulation Model (Van Wambeke et al., 1992).

Station: Holtwood, PA
Elevation: 200 ft
Period of Record: 1961-1990
Mean Annual Precipitation: 927 mm
Soil Temperature Regime: Mesic

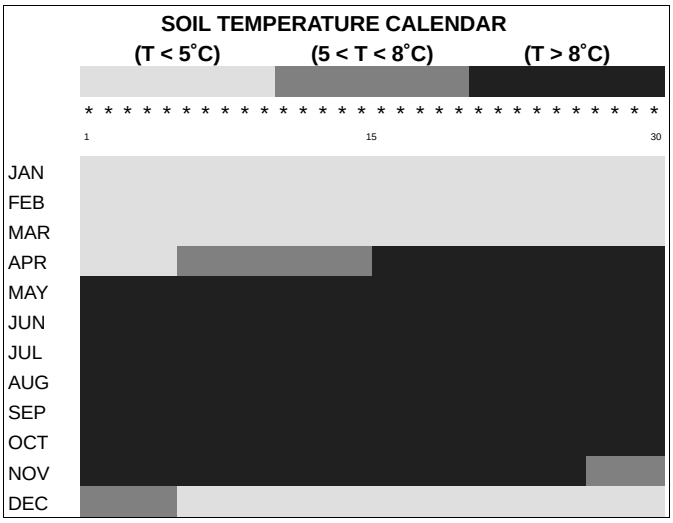
MLRA: 148 Northern Piedmont
Country: USA

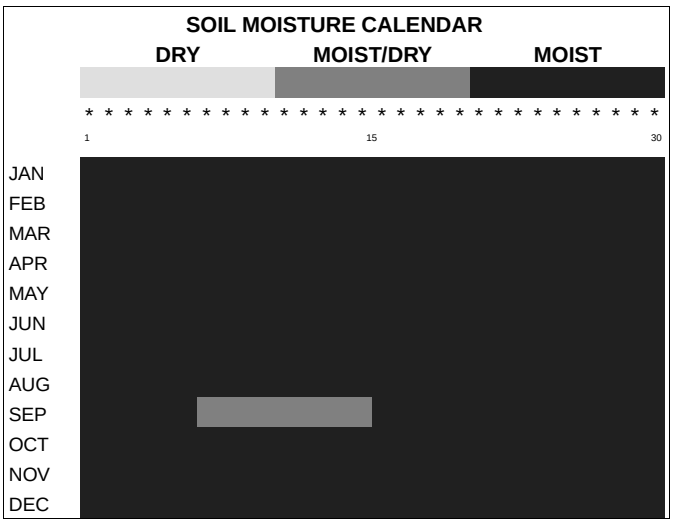
Latitude: 39 50 00N
Longitude: 76 20 00W
Waterholding Capacity: 200 mm
Soil Moisture Regime: Udic

SOIL CLIMATIC REGIME ACCORDING TO NEWHALL SIMULATION MODEL
(MAST = MAAT + 1.2˚ C; amplitude reduced by 1/3)

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Monthly Precipitation (mm)											
69.3	55.9	67.3	78.7	90.7	87.9	93.7	81.3	77.2	69.1	79.8	75.9
Monthly Air Temperatures (˚C)											
-1.5	-0.2	5.0	10.6	16.6	21.7	24.2	23.4	19.6	13.1	7.3	1.4
Monthly Evapotranspiration (mm)											
0.0	0.0	14.6	43.5	87.9	127.6	150.3	135.1	93.2	49.8	19.9	2.0

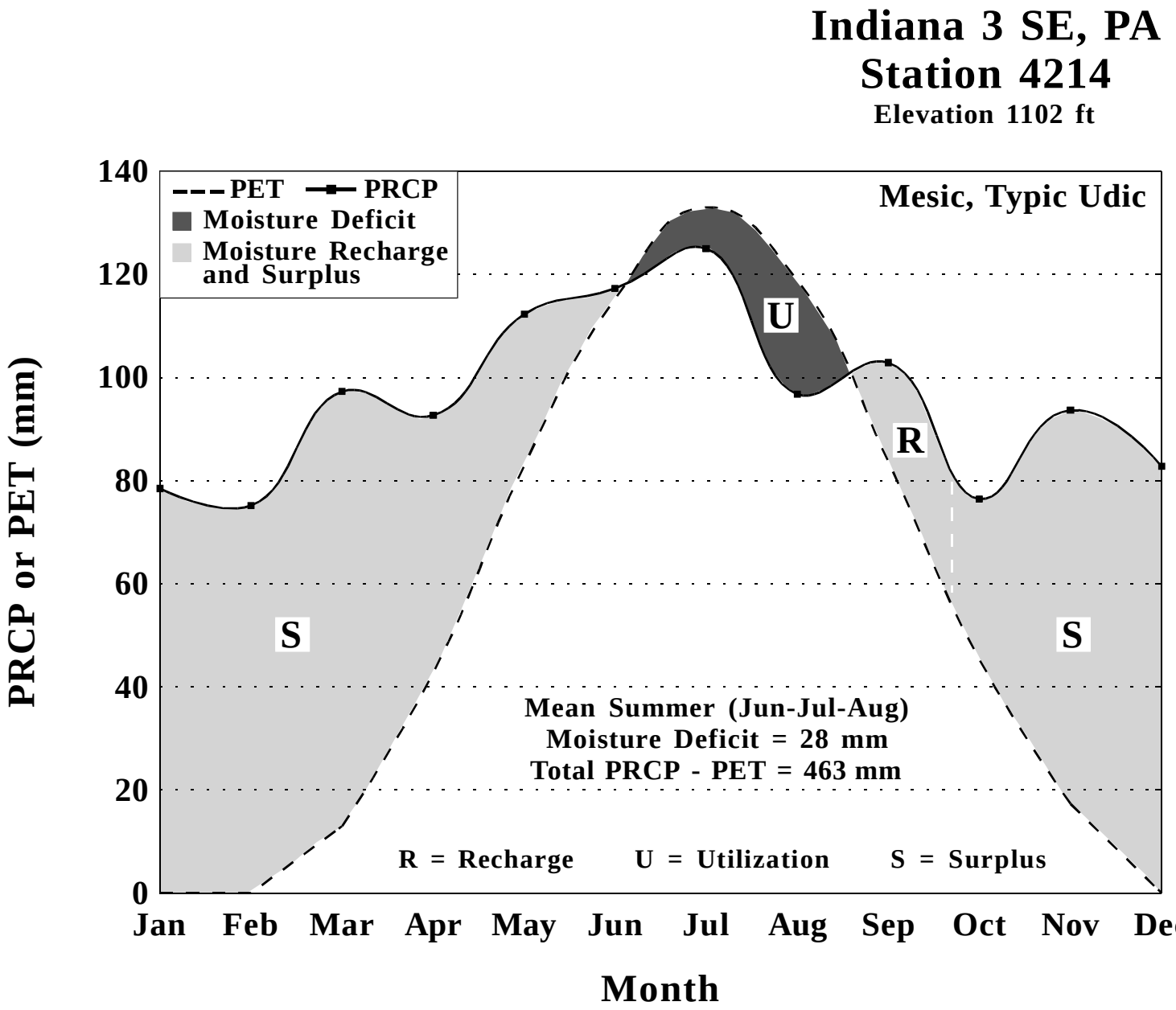
Mean Annual Potential Evapotranspiration: 724 mm
Mean Annual Moisture Surplus: 203 mm
Mean Annual Growing Season (Apr to Sept) Precipitation: 625 mm (55% of MAP)
Mean Summer (Jun-Jul-Aug) Moisture Surplus/Deficit: -150 mm





Number of Cumulative Days That the Moisture Control Section						Highest Number of Consecutive Days That the Moisture Control Section is			
During One Year is			When Soil Temperature is Above 5˚C			Moist in Some Parts		Dry After Summer Solstice	Moist After Winter Solstice
Dry	Moist/Dry	Moist	Dry	Moist/Dry	Moist	Year	T > 8˚C		
0	10	350	0	10	231	360	221	0	120

Computed by BASIC program FLEXNSM (Van Wambeke et al., 1992)
Tentative subdivision: Typic Udic



Moisture balance for Indiana 3 SE, Pennsylvania, based upon a period of 1961-1990. PET calculated by Newhall Simulation Model (Van Wambeke et al., 1992).

Station: Indiana 3 SE, PA
Elevation: 1102 ft
Period of Record: 1961-1990
Mean Annual Precipitation: 1115 mm
Soil Temperature Regime: Mesic

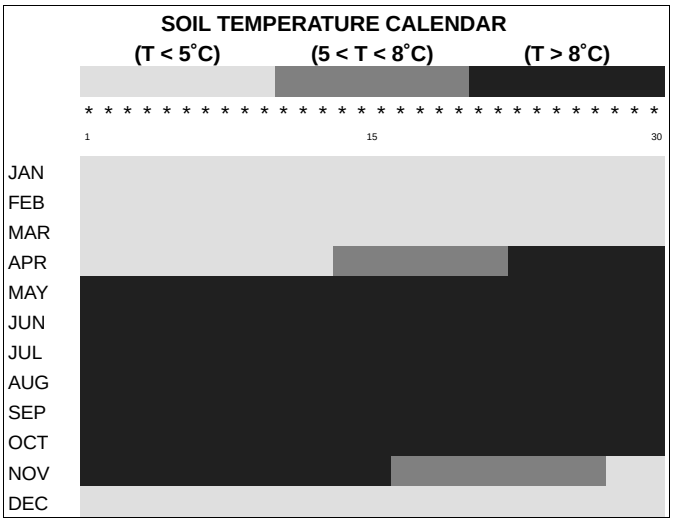
MLRA: 126 Central Allegheny Plateau
Country: USA

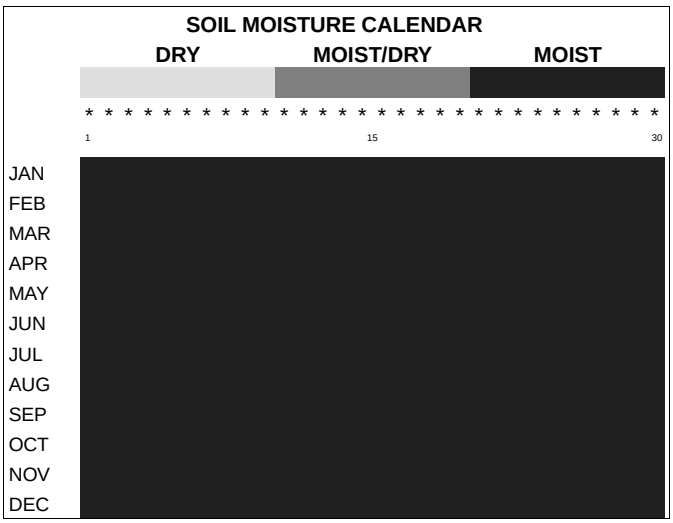
Latitude: 40 36 00N
Longitude: 79 07 00W
Waterholding Capacity: 200 mm
Soil Moisture Regime: Udic

SOIL CLIMATIC REGIME ACCORDING TO NEWHALL SIMULATION MODEL
(MAST = MAAT + 1.2˚ C; amplitude reduced by 1/3)

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Monthly Precipitation (mm)											
78.5	75.2	97.3	92.7	112.3	117.3	125.0	96.8	102.9	76.5	93.7	82.8
Monthly Air Temperatures (˚C)											
-3.4	-2.1	3.7	9.3	14.7	19.2	21.4	20.7	17.2	11.0	5.6	-0.4
Monthly Evapotranspiration (mm)											
0.0	0.0	13.0	42.7	83.0	115.2	133.0	118.9	83.7	45.3	17.3	0.0

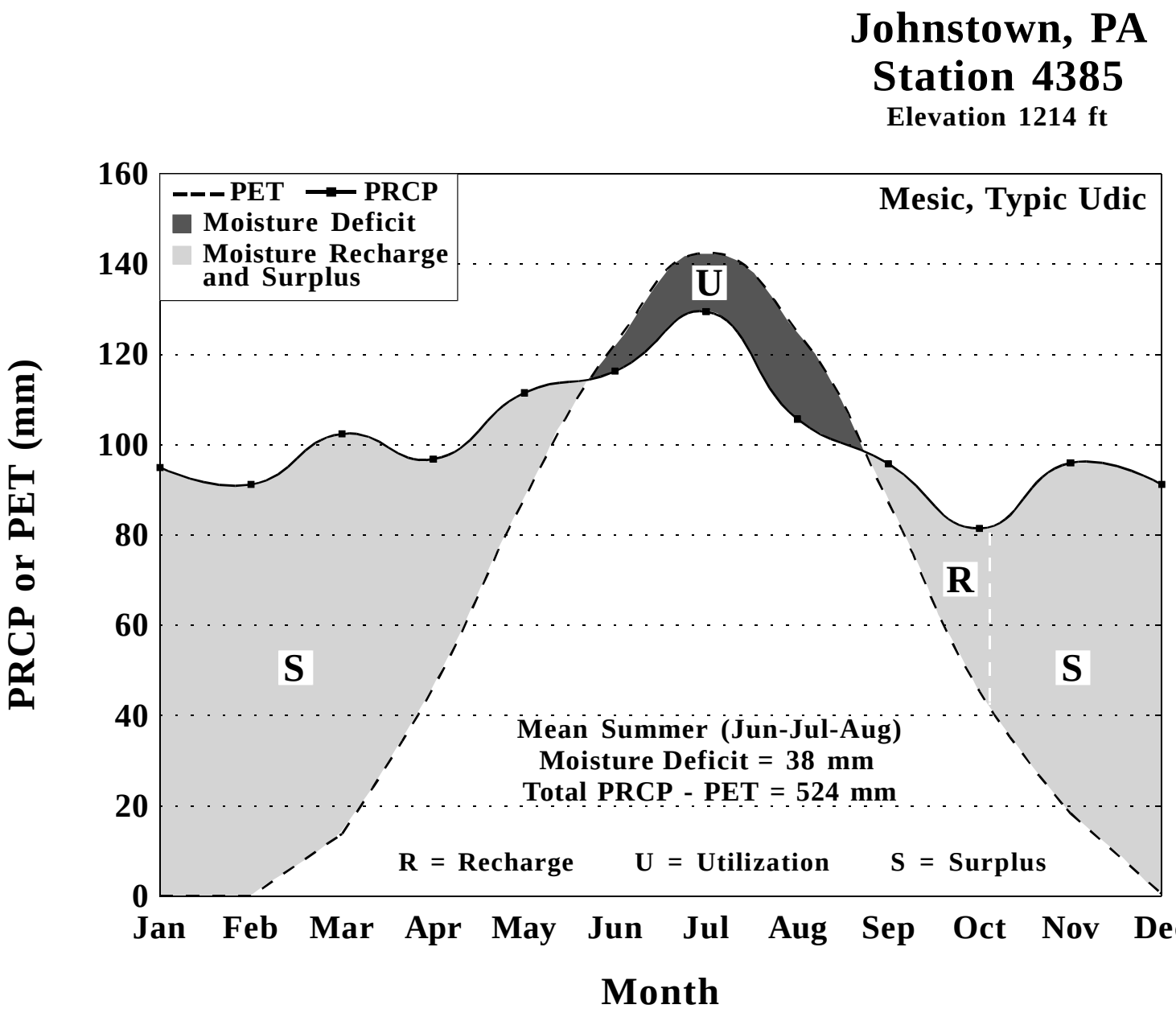
Mean Annual Potential Evapotranspiration: 652 mm
Mean Annual Moisture Surplus: 463 mm
Mean Annual Growing Season (Apr to Sept) Precipitation: 647 mm (56% of MAP)
Mean Summer (Jun-Jul-Aug) Moisture Surplus/Deficit: -28 mm





Number of Cumulative Days That the Moisture Control Section						Highest Number of Consecutive Days That the Moisture Control Section is			
During One Year is			When Soil Temperature is Above 5˚C			Moist in Some Parts		Dry After Summer Solstice	Moist After Winter Solstice
Dry	Moist/Dry	Moist	Dry	Moist/Dry	Moist	Year	T > 8˚C		
0	0	360	0	0	225	360	204	0	120

Computed by BASIC program FLEXNSM (Van Wambeke et al., 1992)
Tentative subdivision: Typic Udic



Moisture balance for Johnstown, Pennsylvania, based upon a period of 1961-1990. PET calculated by Newhall Simulation Model (Van Wambeke et al., 1992).

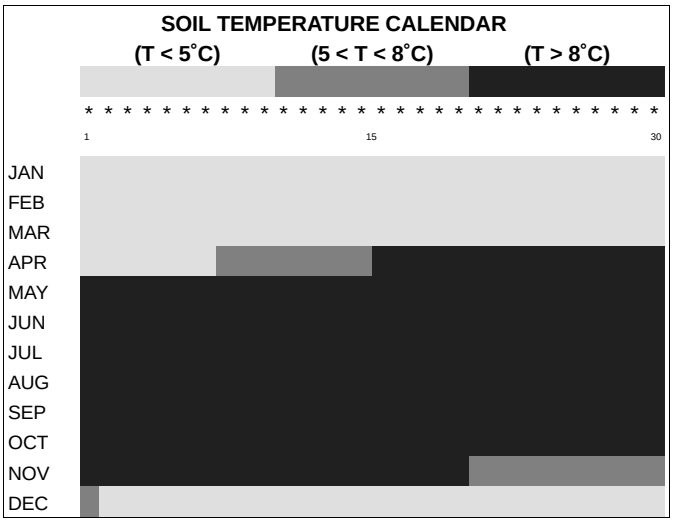
Station: Johnstown, PA
Elevation: 1214 ft
Period of Record: 1961-1990
Mean Annual Precipitation: 1213 mm
Soil Temperature Regime: Mesic

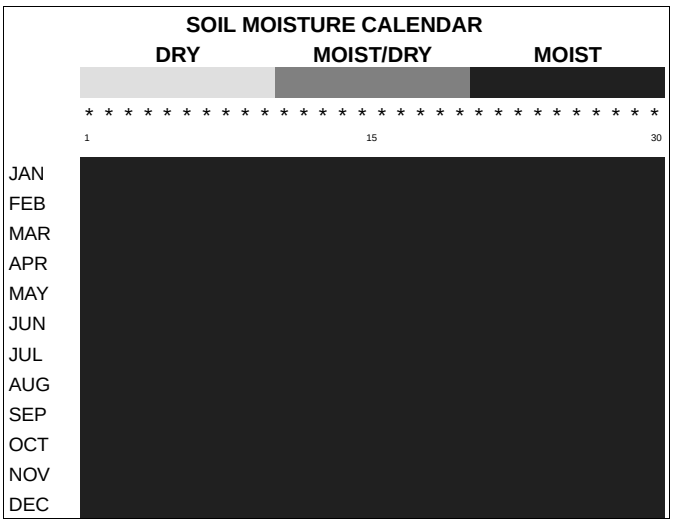
MLRA: 127 Eastern Allegheny Pleateau and Mountains
Country: USA

Latitude: 40 20 00N
Longitude: 78 55 00W
Waterholding Capacity: 200 mm
Soil Moisture Regime: Udic

SOIL CLIMATIC REGIME ACCORDING TO NEWHALL SIMULATION MODEL (MAST = MAAT + 1.2˚ C; amplitude reduced by 1/3)											
JAN	**FEB**	**MAR**	**APR**	**MAY**	**JUN**	**JUL**	**AUG**	**SEP**	**OCT**	**NOV**	**DEC**
Monthly Precipitation (mm)											
95.0	91.2	102.4	96.8	111.5	116.3	129.5	105.7	95.8	81.5	96.0	91.2
Monthly Air Temperatures (˚C)											
-2.2	-1.0	4.3	10.5	16.0	20.6	22.9	21.9	18.2	11.6	6.4	0.4
Monthly Evapotranspiration (mm)											
0.0	0.0	13.8	46.1	88.1	122.3	142.5	125.1	87.3	45.3	18.3	0.0

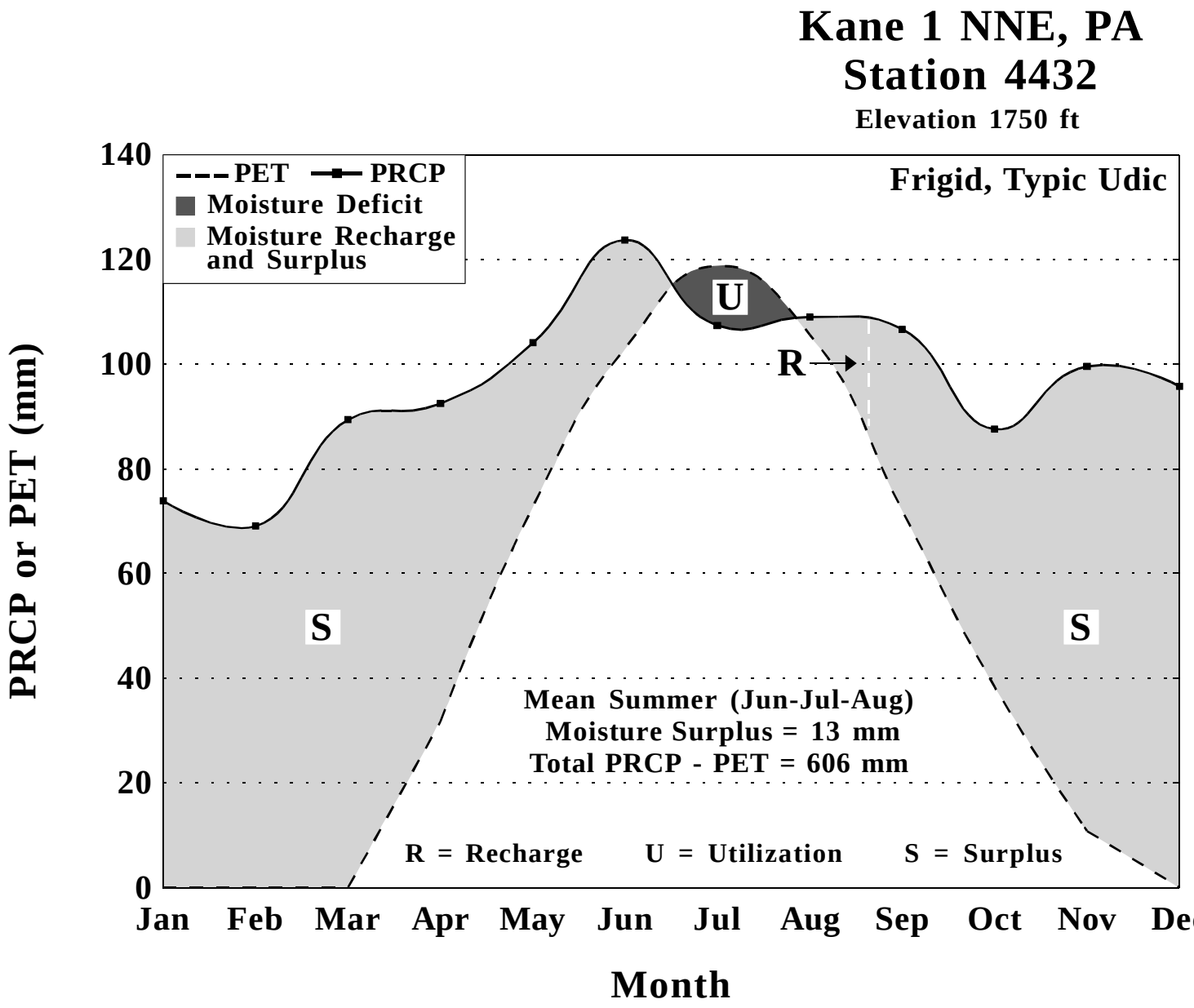
Mean Annual Potential Evapotranspiration: 689 mm
Mean Annual Moisture Surplus: 524 mm
Mean Annual Growing Season (Apr to Sept) Precipitation: 656 mm (54% of MAP)
Mean Summer (Jun-Jul-Aug) Moisture Surplus/Deficit: -38 mm





Number of Cumulative Days That the Moisture Control Section						Highest Number of Consecutive Days That the Moisture Control Section is			
During One Year is			When Soil Temperature is Above 5˚C			Moist in Some Parts		Dry After Summer Solstice	Moist After Winter Solstice
Dry	Moist/Dry	Moist	Dry	Moist/Dry	Moist	Year	T > 8˚C		
0	0	360	0	0	233	360	214	0	120

Computed by BASIC program FLEXNSM (Van Wambeke et al., 1992)
Tentative subdivision: Typic Udic



Moisture balance for Kane 1 NNE, Pennsylvania, based upon a period of 1961-1990. PET calculated by Newhall Simulation Model (Van Wambeke et al., 1992).

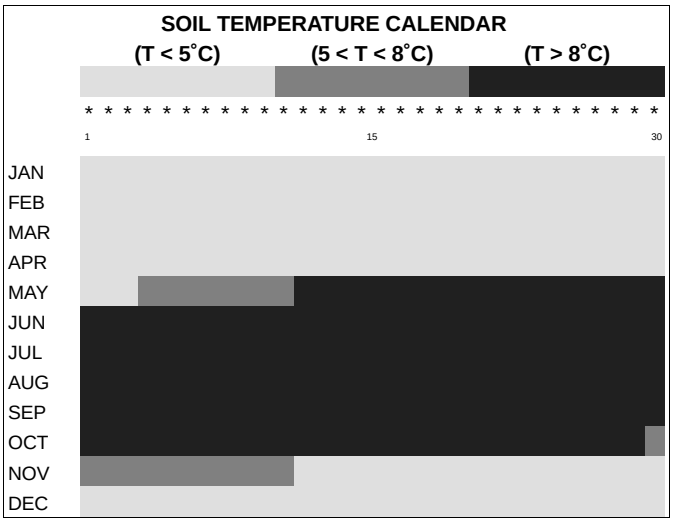
Station: Kane 1 NNE, PA
Elevation: 1750 ft
Period of Record: 1961-1990
Mean Annual Precipitation: 1159 mm
Soil Temperature Regime: Frigid

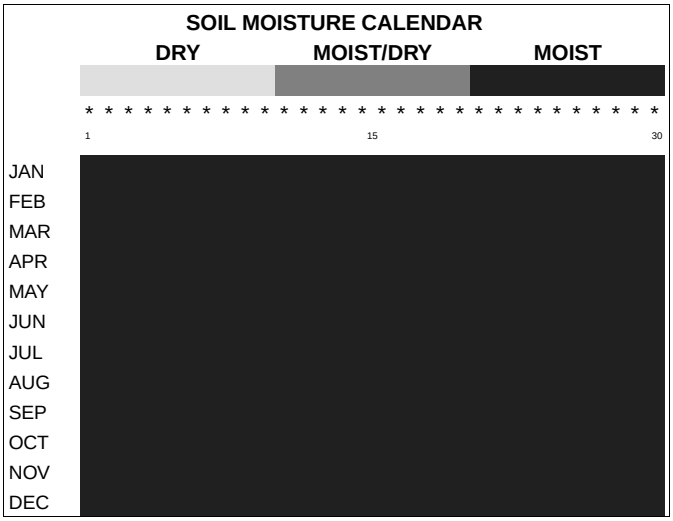
MLRA: 127 Eastern Allegheny Plateau and Mountains
Country: USA

Latitude: 41 41 00N
Longitude: 78 48 00W
Waterholding Capacity: 200 mm
Soil Moisture Regime: Udic

SOIL CLIMATIC REGIME ACCORDING TO NEWHALL SIMULATION MODEL (MAST = MAAT + 1.2˚ C; amplitude reduced by 1/3)											
JAN	**FEB**	**MAR**	**APR**	**MAY**	**JUN**	**JUL**	**AUG**	**SEP**	**OCT**	**NOV**	**DEC**
Monthly Precipitation (mm)											
73.9	69.1	89.4	92.5	104.1	123.7	107.4	109.0	106.7	87.6	99.6	95.8
Monthly Air Temperatures (˚C)											
-6.8	-6.2	-0.6	5.6	11.4	16.0	18.3	17.4	13.6	7.8	2.6	-3.5
Monthly Evapotranspiration (mm)											
0.0	0.0	0.0	31.7	72.8	103.0	105.7	72.1	38.3	10.8	0.0	

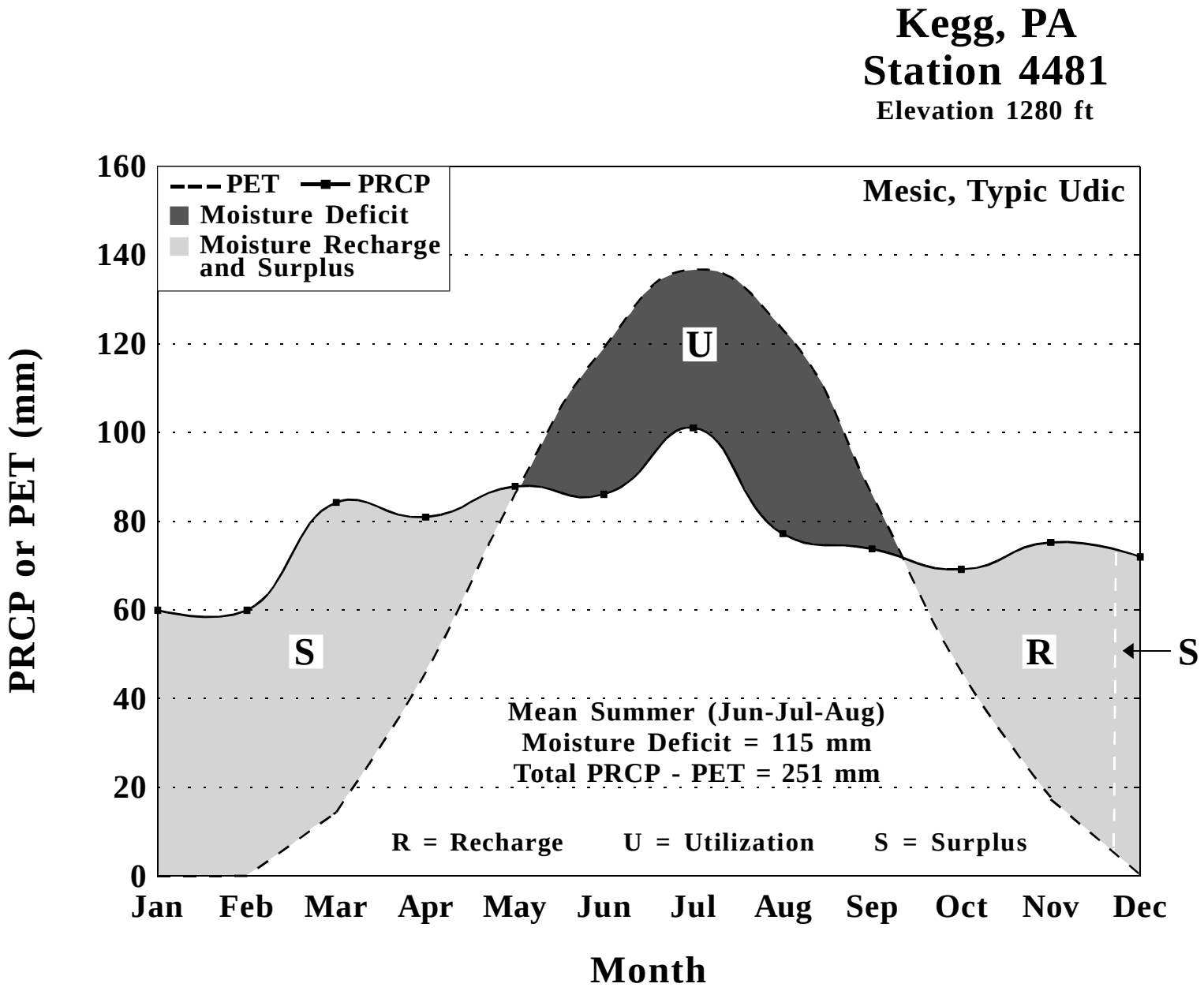
Mean Annual Potential Evapotranspiration: 553 mm
Mean Annual Moisture Surplus: 606 mm
Mean Annual Growing Season (Apr to Sept) Precipitation: 603 mm (52% of MAP)
Mean Summer (Jun-Jul-Aug) Moisture Surplus/Deficit: 13 mm





Number of Cumulative Days That the Moisture Control Section						Highest Number of Consecutive Days That the Moisture Control Section is			
During One Year is			When Soil Temperature is Above 5˚C			Moist in Some Parts		Dry After Summer Solstice	Moist After Winter Solstice
Dry	Moist/Dry	Moist	Dry	Moist/Dry	Moist	Year	T > 8˚C		
0	0	360	0	0	188	360	167	0	120

Computed by BASIC program FLEXNSM (Van Wambeke et al., 1992)
Tentative subdivision: Typic Udic



Moisture balance for Kegg, Pennsylvania, based upon a period of 1961-1990. PET calculated by Newhall Simulation Model (Van Wambeke et al., 1992).

Station: Kegg, PA
Elevation: 1280 ft
Period of Record: 1961-1990
Mean Annual Precipitation: 927 mm
Soil Temperature Regime: Mesic

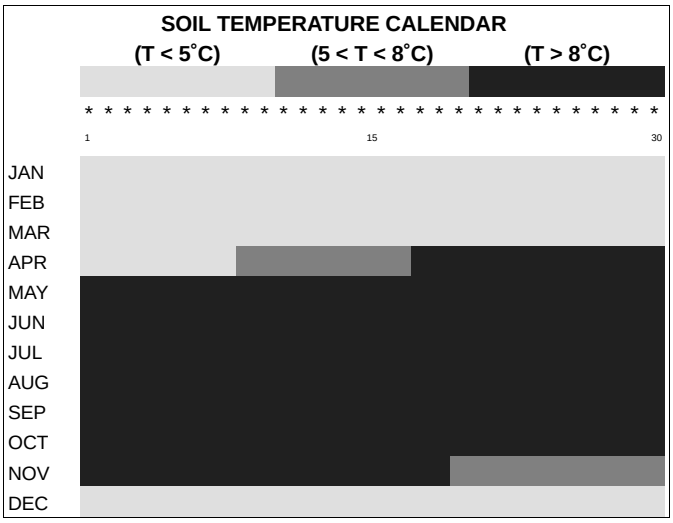
MLRA: 127 Eastern Allegheny Plateau
Country: USA

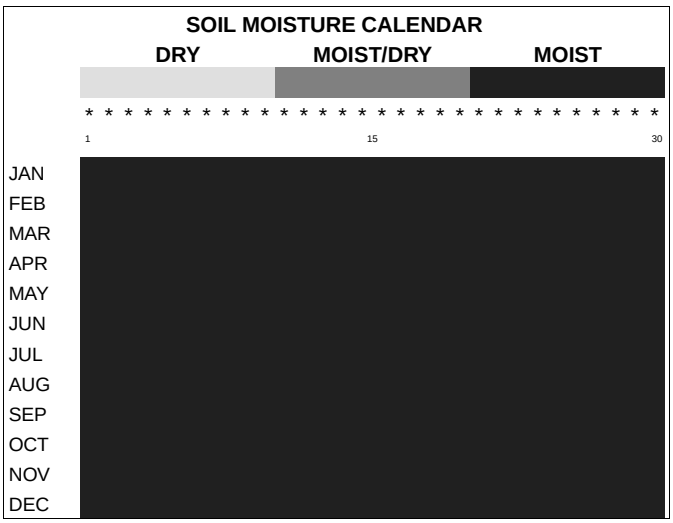
Latitude: 39 59 00N
Longitude: 78 43 00W
Waterholding Capacity: 200 mm
Soil Moisture Regime: Udic

SOIL CLIMATIC REGIME ACCORDING TO NEWHALL SIMULATION MODEL
(MAST = MAAT + 1.2˚ C; amplitude reduced by 1/3)

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Monthly Precipitation (mm)											
59.9	59.9	84.3	81.0	87.9	86.1	101.1	77.2	73.7	69.1	75.2	71.9
Monthly Air Temperatures (˚C)											
-2.2	-0.8	4.3	10.3	15.7	20.2	22.2	21.6	17.9	11.6	6.0	0.2
Monthly Evapotranspiration (mm)											
0.0	0.0	14.4	45.9	86.2	119.2	136.8	123.3	86.0	46.0	17.7	0.3

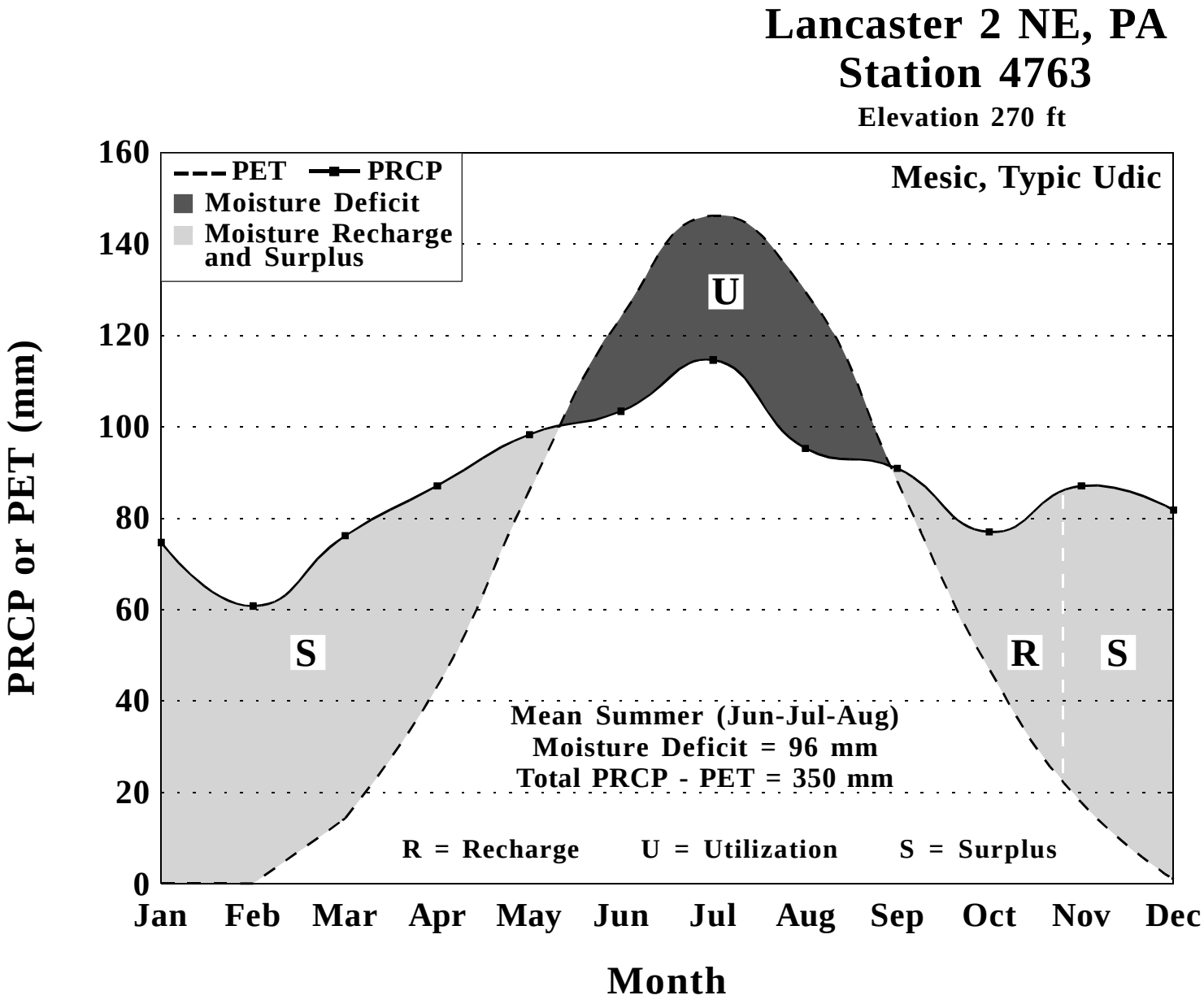
Mean Annual Potential Evapotranspiration: 676 mm
Mean Annual Moisture Surplus: 251 mm
Mean Annual Growing Season (Apr to Sept) Precipitation: 507 mm (55% of MAP)
Mean Summer (Jun-Jul-Aug) Moisture Surplus/Deficit: -115 mm





Number of Cumulative Days That the Moisture Control Section						Highest Number of Consecutive Days That the Moisture Control Section is			
During One Year is			When Soil Temperature is Above 5˚C			Moist in Some Parts		Dry After Summer Solstice	Moist After Winter Solstice
Dry	Moist/Dry	Moist	Dry	Moist/Dry	Moist	Year	T > 8˚C		
0	0	360	0	0	232	360	212	0	120

Computed by BASIC program FLEXNSM (Van Wambeke et al., 1992)
Tentative subdivision: Typic Udic



Moisture balance for Lancaster 2 NE, Pennsylvania, based upon a period of 1961-1990. PET calculated by Newhall Simulation Model (Van Wambeke et al., 1992).

Station: Lancaster 2 NE, PA
Elevation: 270 ft
Period of Record: 1961-1990
Mean Annual Precipitation: 1047 mm
Soil Temperature Regime: Mesic

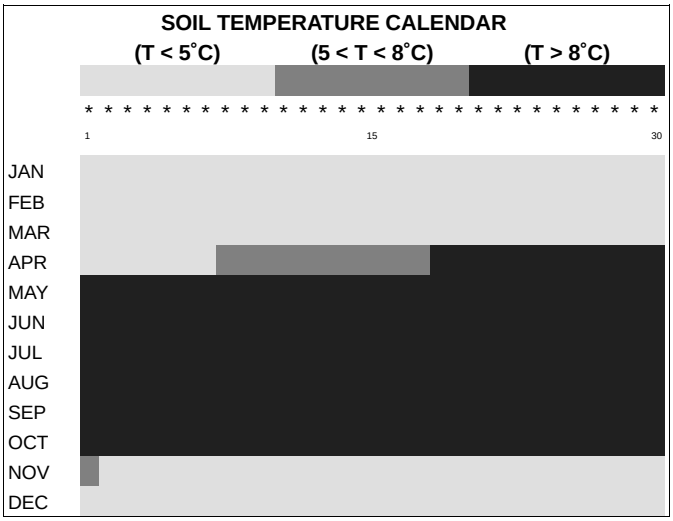
MLRA: 148 Northern Piedmont
Country: USA

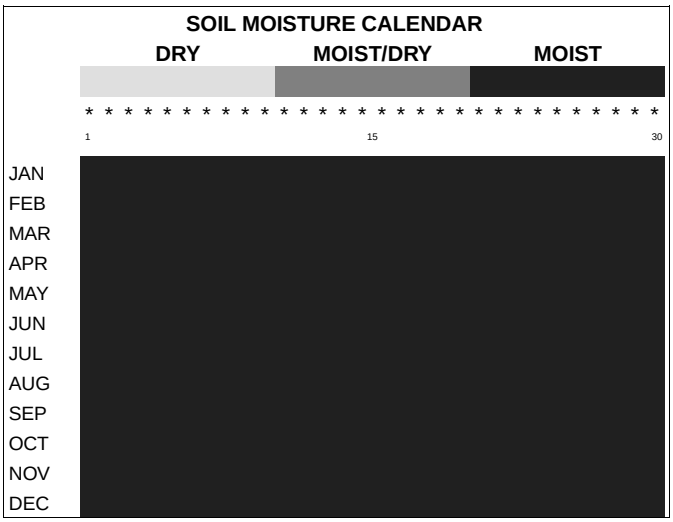
Latitude: 40 03 00N
Longitude: 76 17 00W
Waterholding Capacity: 200 mm
Soil Moisture Regime: Udic

SOIL CLIMATIC REGIME ACCORDING TO NEWHALL SIMULATION MODEL
(MAST = MAAT + 1.2˚ C; amplitude reduced by 1/3)

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Monthly Precipitation (mm)											
74.7	60.7	76.2	87.1	98.3	103.4	114.6	95.3	90.9	77.0	87.1	81.8
Monthly Air Temperatures (˚C)											
-2.3	-1.1	4.6	10.1	15.8	20.8	23.4	22.6	18.4	12.1	6.3	0.7
Monthly Evapotranspiration (mm)											
0.0	0.0	14.3	43.2	86.2	123.9	146.2	129.6	88.1	46.9	17.7	0.9

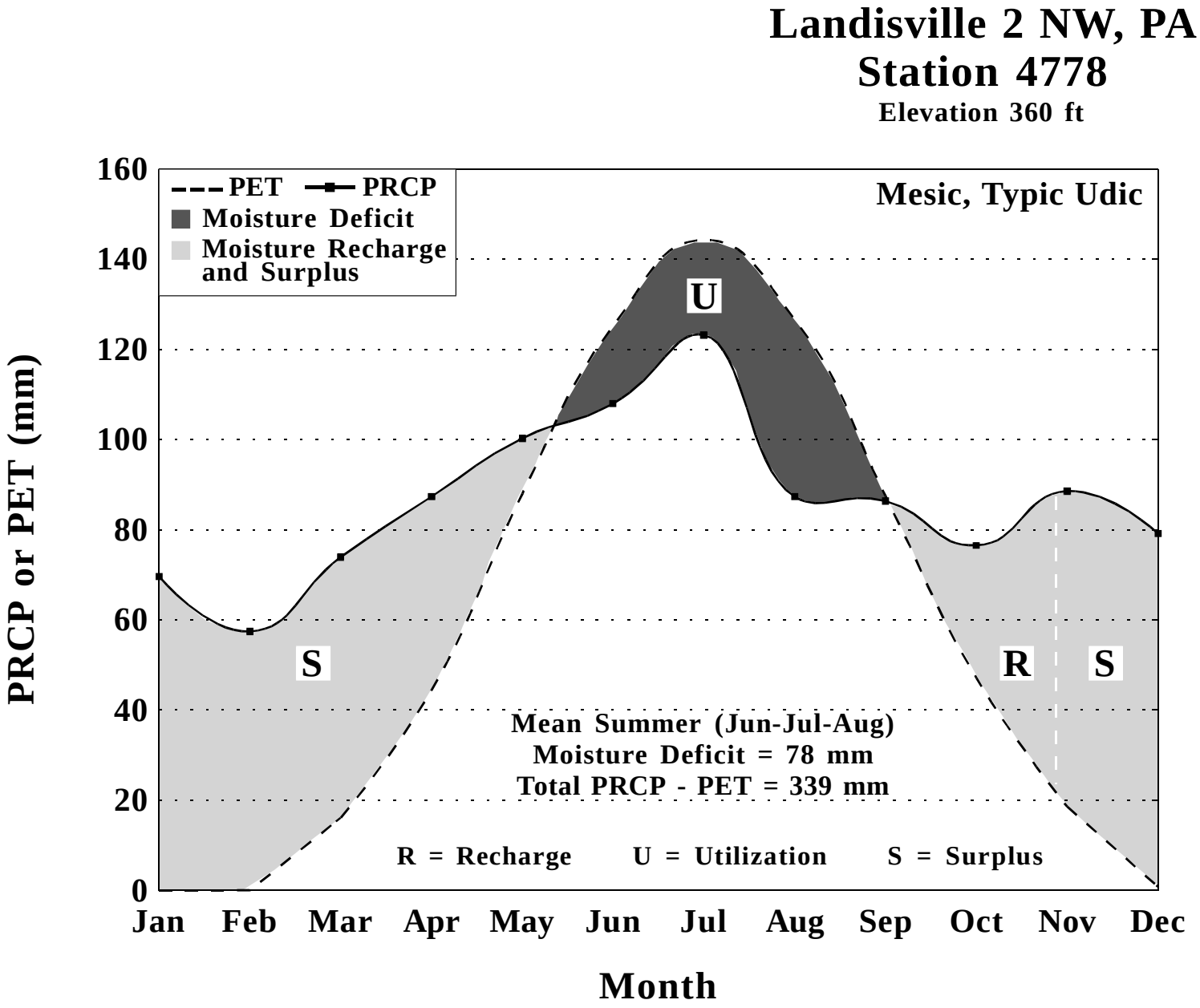
Mean Annual Potential Evapotranspiration: 697 mm
Mean Annual Moisture Surplus: 350 mm
Mean Annual Growing Season (Apr to Sept) Precipitation: 590 mm (56% of MAP)
Mean Summer (Jun-Jul-Aug) Moisture Surplus/Deficit: -96 mm





Number of Cumulative Days That the Moisture Control Section						Highest Number of Consecutive Days That the Moisture Control Section is			
During One Year is			When Soil Temperature is Above 5˚C			Moist in Some Parts		Dry After Summer Solstice	Moist After Winter Solstice
Dry	Moist/Dry	Moist	Dry	Moist/Dry	Moist	Year	T > 8˚C		
0	0	360	0	0	235	360	214	0	120

Computed by BASIC program FLEXNSM (Van Wambeke et al., 1992)
Tentative subdivision: Typic Udic



Moisture balance for Landisville 2 NW, Pennsylvania, based upon a period of 1961-1990. PET calculated by Newhall Simulation Model (Van Wambeke et al., 1992).

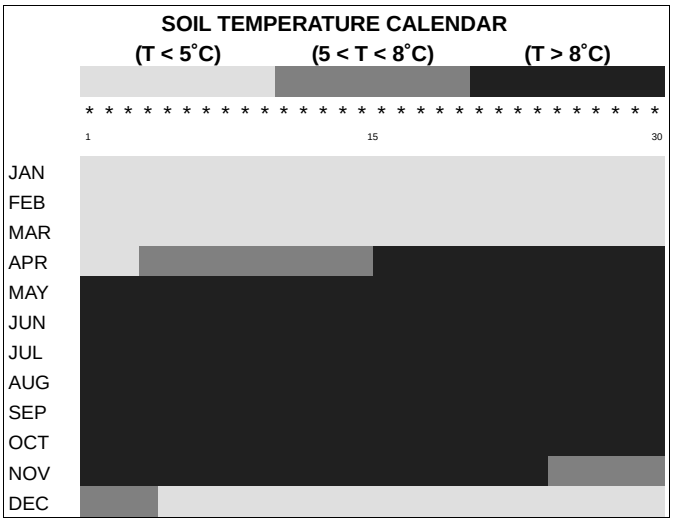
Station: Landisville 2 NW, PA
Elevation: 360 ft
Period of Record: 1961-1990
Mean Annual Precipitation: 1038 mm
Soil Temperature Regime: Mesic

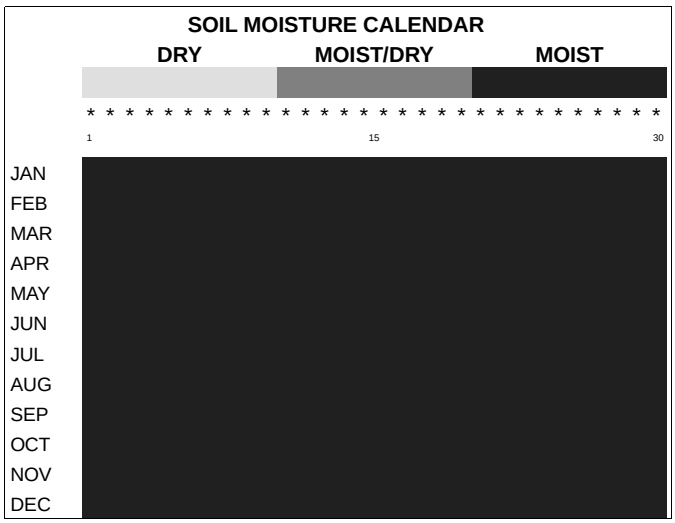
MLRA: 148 Northern Piedmont
Country: USA

Latitude: 40 07 00N
Longitude: 76 26 00W
Waterholding Capacity: 200 mm
Soil Moisture Regime: Udic

SOIL CLIMATIC REGIME ACCORDING TO NEWHALL SIMULATION MODEL (MAST = MAAT + 1.2˚ C; amplitude reduced by 1/3)											
JAN	**FEB**	**MAR**	**APR**	**MAY**	**JUN**	**JUL**	**AUG**	**SEP**	**OCT**	**NOV**	**DEC**
Monthly Precipitation (mm)											
69.6	57.4	73.9	87.4	100.3	108.0	123.2	87.4	86.4	76.5	88.6	79.2
Monthly Air Temperatures (˚C)											
-2.4	-0.8	5.0	10.3	16.1	21.0	23.2	22.2	18.4	12.1	6.6	0.6
Monthly Evapotranspiration (mm)											
0.0	0.0	16.1	44.4	88.1	125.1	144.3	126.7	87.6	47.1	18.6	0.8

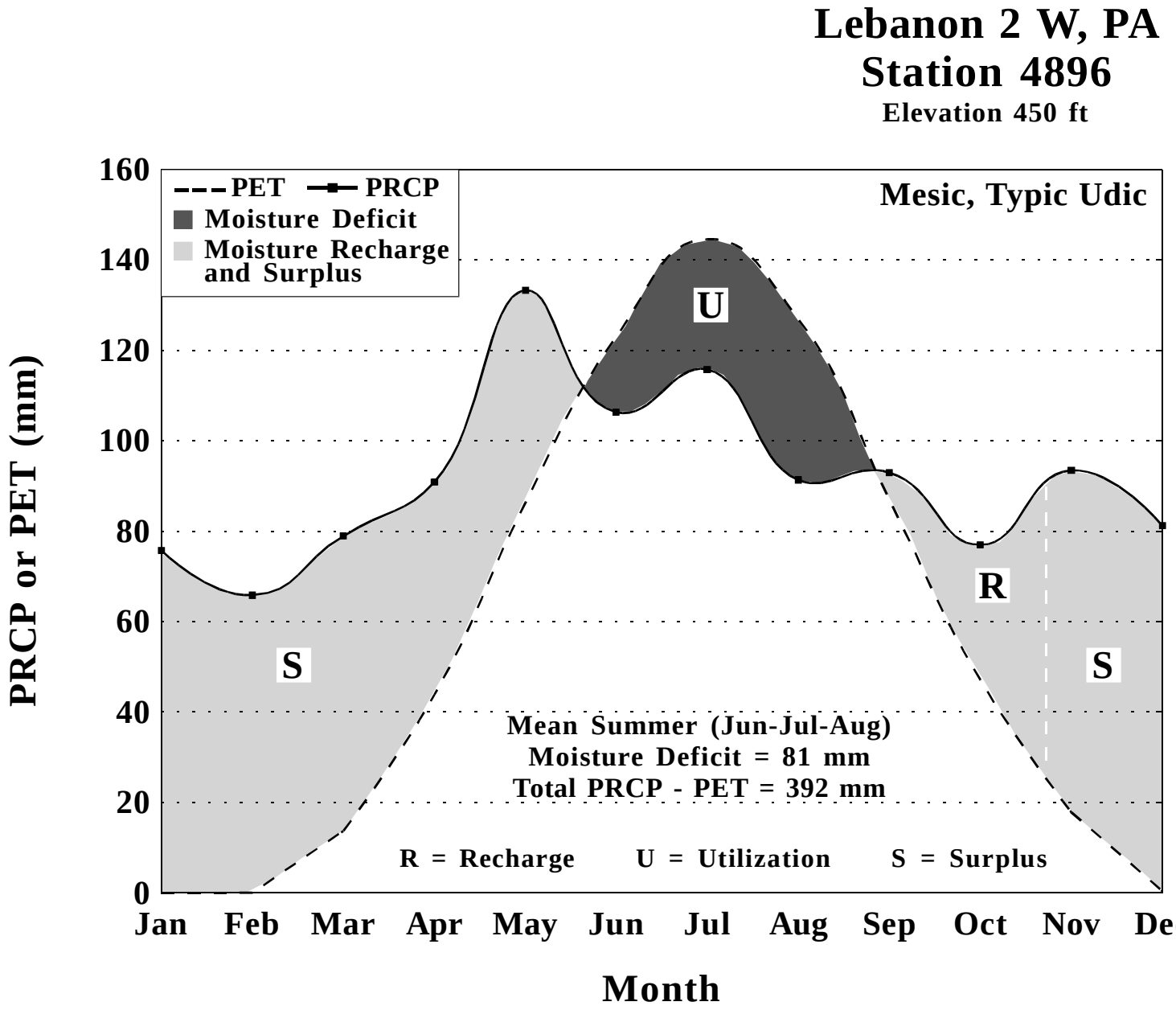
Mean Annual Potential Evapotranspiration: 699 mm
Mean Annual Moisture Surplus: 339 mm
Mean Annual Growing Season (Apr to Sept) Precipitation: 593 mm (57% of MAP)
Mean Summer (Jun-Jul-Aug) Moisture Surplus/Deficit: -78 mm





Number of Cumulative Days That the Moisture Control Section						Highest Number of Consecutive Days That the Moisture Control Section is			
During One Year is			When Soil Temperature is Above 5˚C			Moist in Some Parts		Dry After Summer Solstice	Moist After Winter Solstice
Dry	Moist/Dry	Moist	Dry	Moist/Dry	Moist	Year	T > 8˚C		
0	0	360	0	0	238	360	217	0	120

Computed by BASIC program FLEXNSM (Van Wambeke et al., 1992)
Tentative subdivision: Typic Udic



Moisture balance for Lebanon 2 W, Pennsylvania, based upon a period of 1961-1990. PET calculated by Newhall Simulation Model (Van Wambeke et al., 1992).

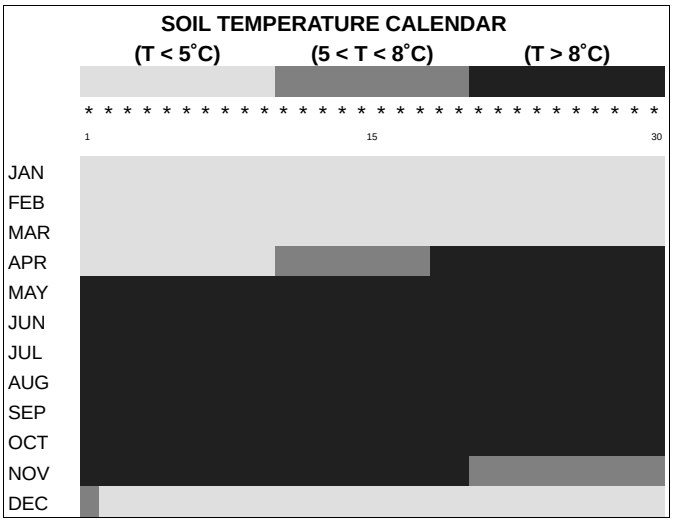
Station: Lebanon 2 W, PA
Elevation: 450 ft
Period of Record: 1961-1990
Mean Annual Precipitation: 1083 mm
Soil Temperature Regime: Mesic

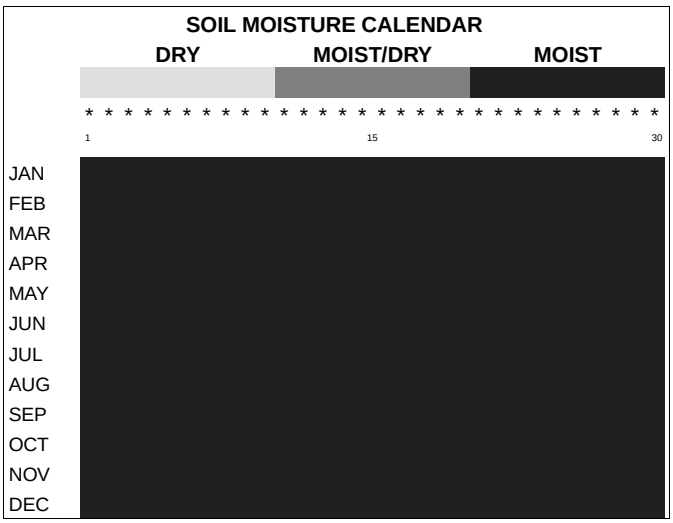
MLRA: 147 Northern Appalachian Ridges and Valleys
Country: USA

Latitude: 40 35 00N
Longitude: 77 35 00W
Waterholding Capacity: 200 mm
Soil Moisture Regime: Udic

SOIL CLIMATIC REGIME ACCORDING TO NEWHALL SIMULATION MODEL (MAST = MAAT + 1.2˚ C; amplitude reduced by 1/3)											
JAN	**FEB**	**MAR**	**APR**	**MAY**	**JUN**	**JUL**	**AUG**	**SEP**	**OCT**	**NOV**	**DEC**
Monthly Precipitation (mm)											
75.7	65.8	79.0	90.9	113.3	106.4	115.8	91.4	93.0	77.0	93.5	81.3
Monthly Air Temperatures (˚C)											
-2.6	-1.3	4.3	10.1	15.8	20.7	23.2	22.2	18.2	12.0	6.3	0.3
Monthly Evapotranspiration (mm)											
0.0	0.0	13.7	43.8	86.4	123.0	144.6	127.0	87.1	47.1	17.8	0.4

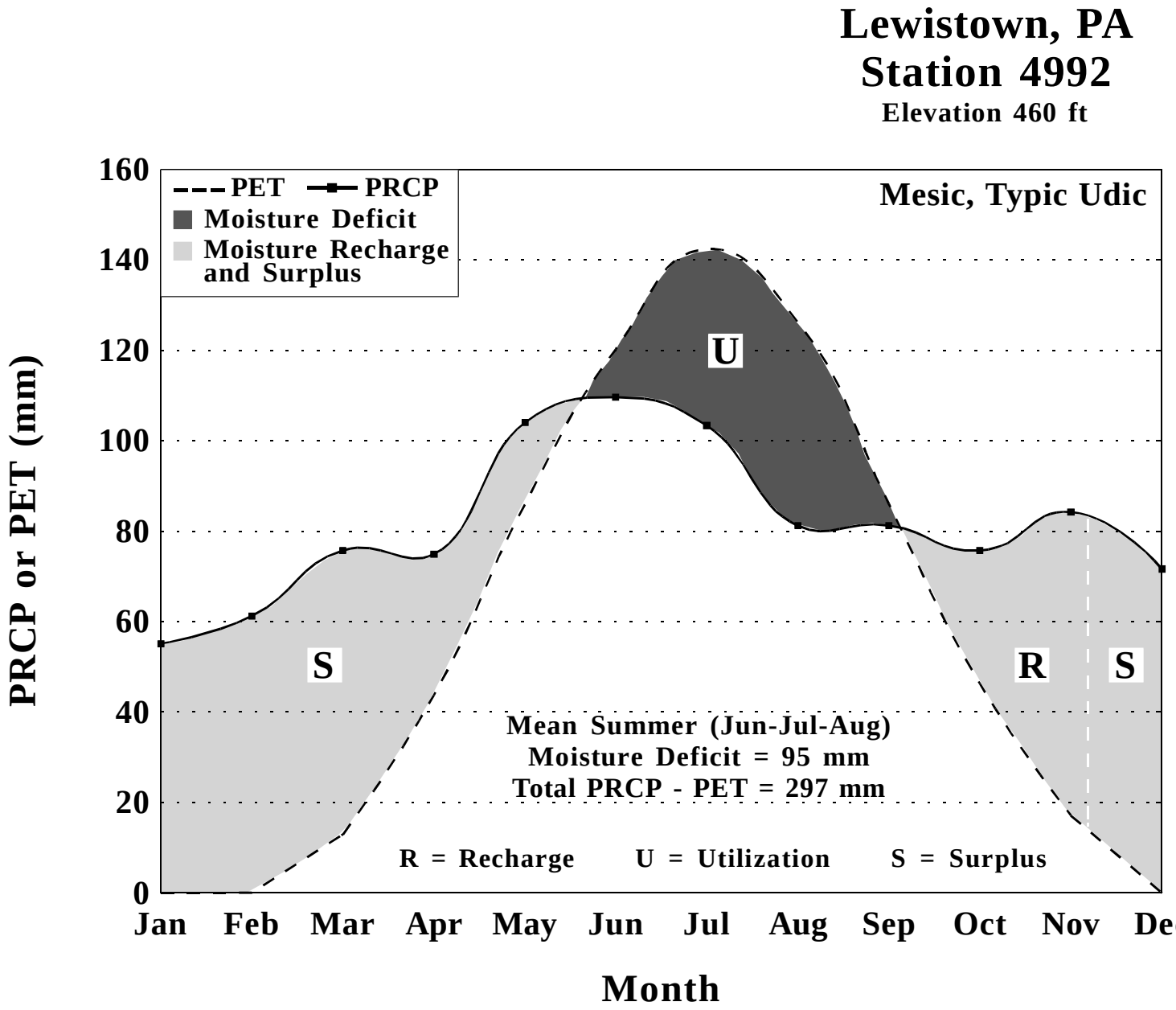
Mean Annual Potential Evapotranspiration: 691 mm
Mean Annual Moisture Surplus: 392 mm
Mean Annual Growing Season (Apr to Sept) Precipitation: 611 mm (56% of MAP)
Mean Summer (Jun-Jul-Aug) Moisture Surplus/Deficit: -81 mm





Number of Cumulative Days That the Moisture Control Section						Highest Number of Consecutive Days That the Moisture Control Section is			
During One Year is			When Soil Temperature is Above 5˚C			Moist in Some Parts		Dry After Summer Solstice	Moist After Winter Solstice
Dry	Moist/Dry	Moist	Dry	Moist/Dry	Moist	Year	T > 8˚C		
0	0	360	0	0	233	360	212	0	120

Computed by BASIC program FLEXNSM (Van Wambeke et al., 1992)
Tentative subdivision: Typic Udic



Moisture balance for Lewistown, Pennsylvania, based upon a period of 1961-1990. PET calculated by Newhall Simulation Model (Van Wambeke et al., 1992).

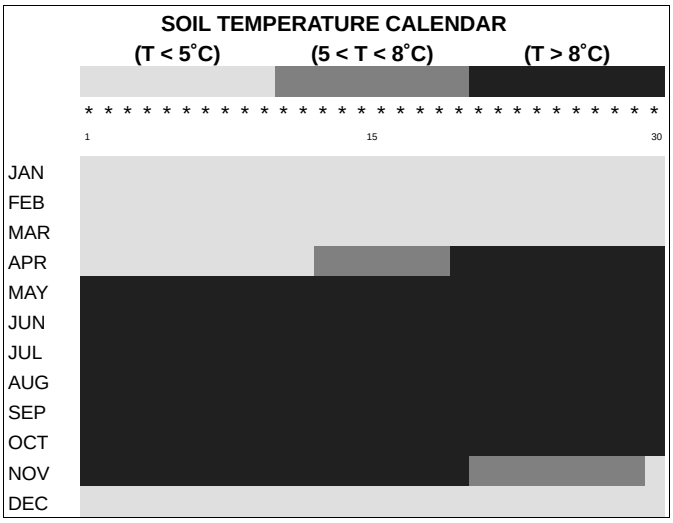
Station: Lewistown, PA
Elevation: 460 ft
Period of Record: 1961-1990
Mean Annual Precipitation: 978 mm
Soil Temperature Regime: Mesic

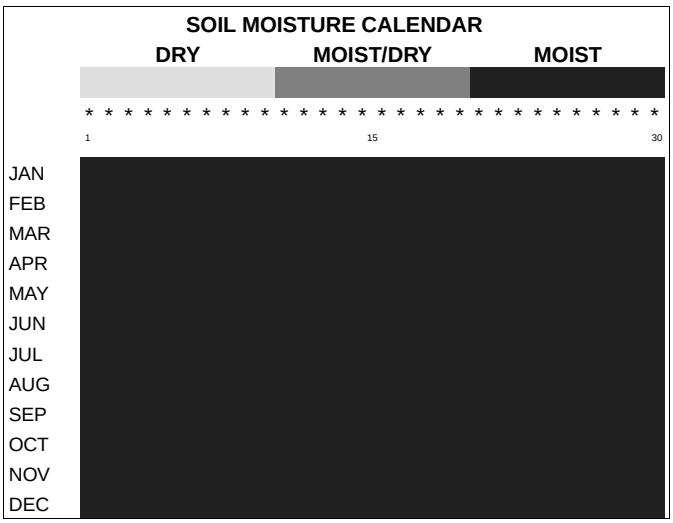
MLRA: 147 Northern Appalachian Ridges and Valleys
Country: USA

Latitude: 40 35 00N
Longitude: 77 35 00W
Waterholding Capacity: 200 mm
Soil Moisture Regime: Udic

SOIL CLIMATIC REGIME ACCORDING TO NEWHALL SIMULATION MODEL (MAST = MAAT + 1.2˚ C; amplitude reduced by 1/3)											
JAN	**FEB**	**MAR**	**APR**	**MAY**	**JUN**	**JUL**	**AUG**	**SEP**	**OCT**	**NOV**	**DEC**
Monthly Precipitation (mm)											
55.1	61.2	75.7	74.9	104.1	109.7	103.4	81.3	81.3	75.7	84.3	71.6
Monthly Air Temperatures (˚C)											
-3.0	-1.6	4.0	9.9	15.6	20.2	22.8	22.0	17.9	11.7	5.9	-0.1
Monthly Evapotranspiration (mm)											
0.0	0.0	12.9	43.7	86.1	120.3	142.4	126.3	86.1	46.2	17.1	0.0

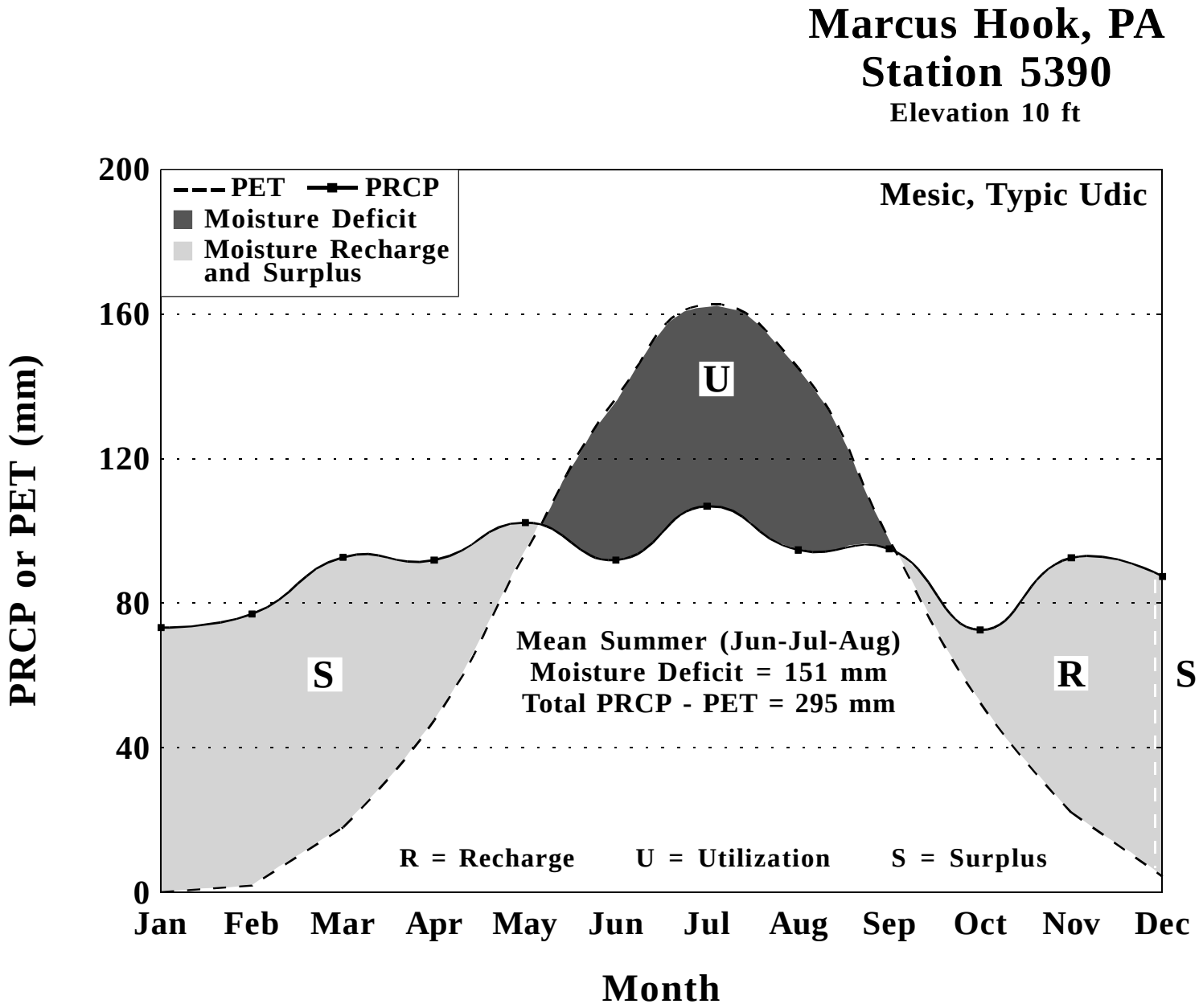
Mean Annual Potential Evapotranspiration: 681 mm
Mean Annual Moisture Surplus: 297 mm
Mean Annual Growing Season (Apr to Sept) Precipitation: 555 mm (57% of MAP)
Mean Summer (Jun-Jul-Aug) Moisture Surplus/Deficit: -95 mm





Number of Cumulative Days That the Moisture Control Section						Highest Number of Consecutive Days That the Moisture Control Section is			
During One Year is			When Soil Temperature is Above 5˚C			Moist in Some Parts		Dry After Summer Solstice	Moist After Winter Solstice
Dry	Moist/Dry	Moist	Dry	Moist/Dry	Moist	Year	T > 8˚C		
0	0	360	0	0	229	360	210	0	120

Computed by BASIC program FLEXNSM (Van Wambeke et al., 1992)
Tentative subdivision: Typic Udic



Moisture balance for Marcus Hook, Pennsylvania, based upon a period of 1961-1990. PET calculated by Newhall Simulation Model (Van Wambeke et al., 1992).

Station: Marcus Hook, PA
Elevation: 10 ft
Period of Record: 1961-1990
Mean Annual Precipitation: 1078 mm
Soil Temperature Regime: Mesic

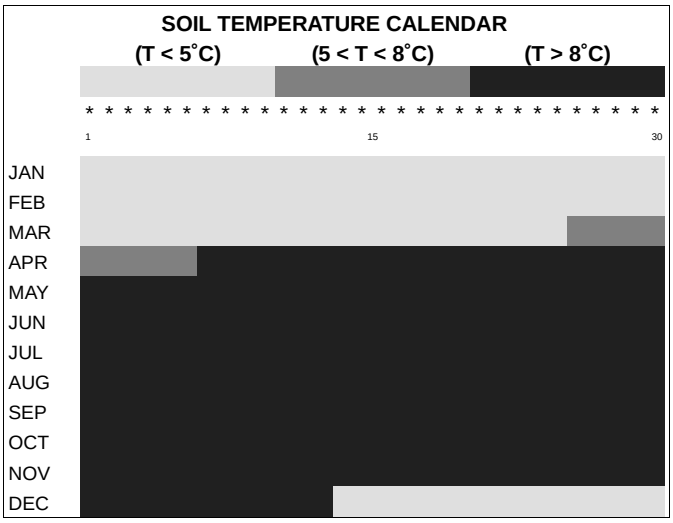
MLRA: 149A Northern Coastal Plain
Country: USA

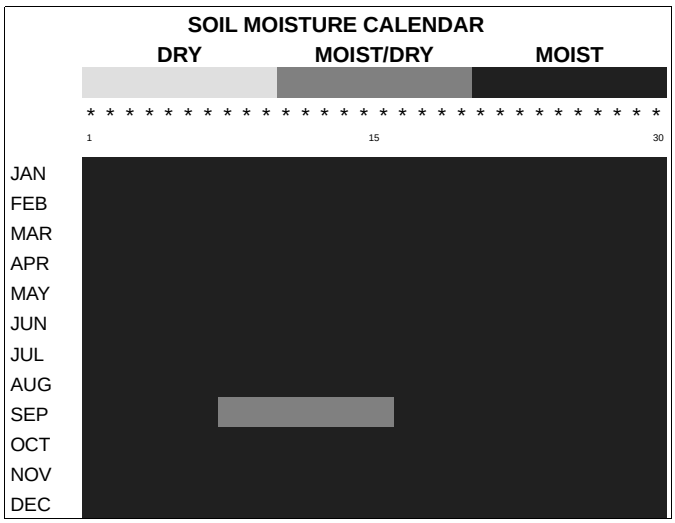
Latitude: 39 49 00N
Longitude: 75 25 00W
Waterholding Capacity: 200 mm
Soil Moisture Regime: Udic

SOIL CLIMATIC REGIME ACCORDING TO NEWHALL SIMULATION MODEL
(MAST = MAAT + 1.2˚ C; amplitude reduced by 1/3)

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Monthly Precipitation (mm)											
73.2	77.0	92.7	91.9	102.4	91.9	106.9	94.7	95.0	72.6	92.5	87.4
Monthly Air Temperatures (˚C)											
0.2	1.7	6.6	12.2	18.0	23.1	25.7	24.9	20.7	14.3	8.7	2.9
Monthly Evapotranspiration (mm)											
0.0	0.0	4.4	41.5	88.9	127.8	145.6	122.8	79.8	40.8	6.6	0.0

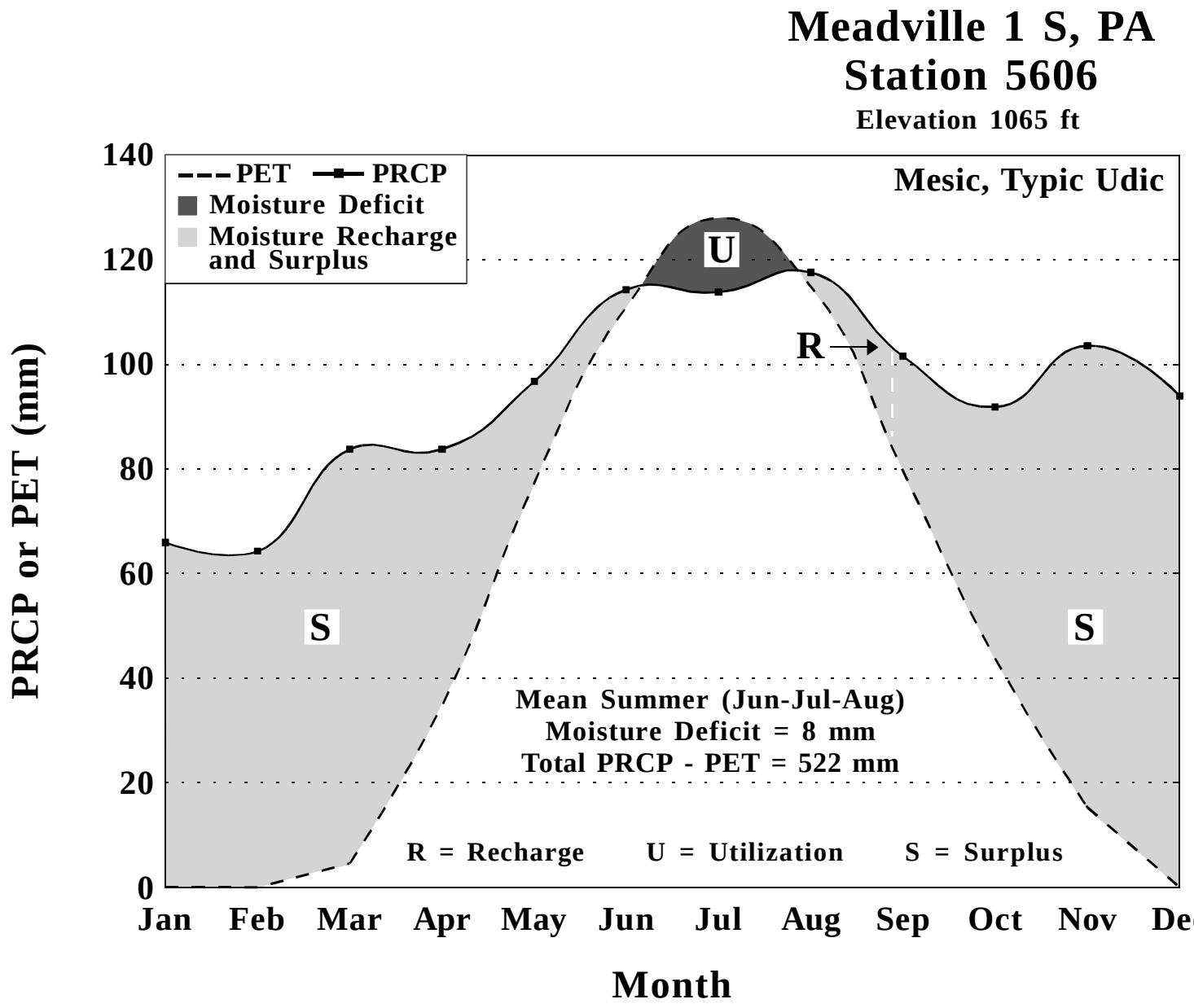
Mean Annual Potential Evapotranspiration: 783 mm
Mean Annual Moisture Surplus: 295 mm
Mean Annual Growing Season (Apr to Sept) Precipitation: 583 mm (54% of MAP)
Mean Summer (Jun-Jul-Aug) Moisture Surplus/Deficit: -151 mm





Number of Cumulative Days That the Moisture Control Section						Highest Number of Consecutive Days That the Moisture Control Section is			
During One Year is			When Soil Temperature is Above 5˚C			Moist in Some Parts		Dry After Summer Solstice	Moist After Winter Solstice
Dry	Moist/Dry	Moist	Dry	Moist/Dry	Moist	Year	T > 8˚C		
0	7	353	0	7	252	360	237	0	120

Computed by BASIC program FLEXNSM (Van Wambeke et al., 1992)
Tentative subdivision: Typic Udic



Moisture balance for Meadville 1 S, Pennsylvania, based upon a period of 1961-1990. PET calculated by Newhall Simulation Model (Van Wambeke et al., 1992).

Station: Meadville 1 S, PA
Elevation: 1065 ft
Period of Record: 1961-1990
Mean Annual Precipitation: 1131 mm
Soil Temperature Regime: Mesic

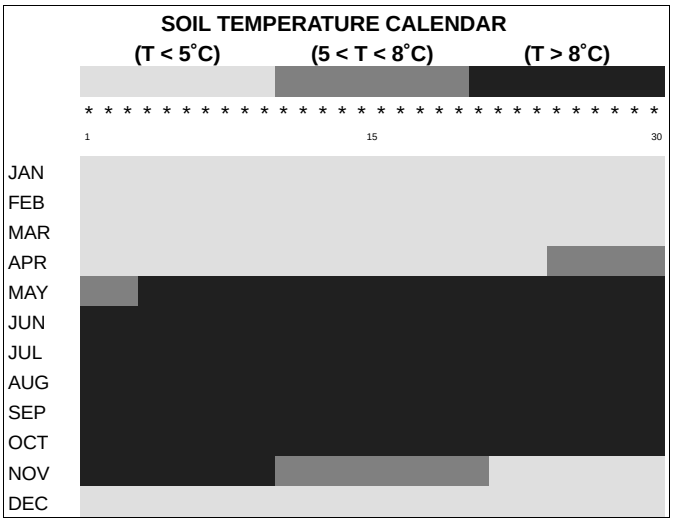
MLRA: 140 Glaciated Allegheny Plateau and Catskill Mtns.
Country: USA

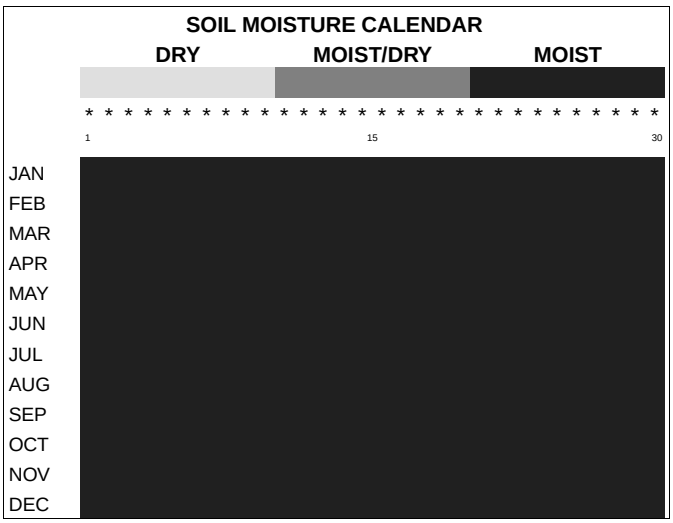
Latitude: 41 38 00N
Longitude: 80 10 00W
Waterholding Capacity: 200 mm
Soil Moisture Regime: Udic

SOIL CLIMATIC REGIME ACCORDING TO NEWHALL SIMULATION MODEL
(MAST = MAAT + 1.2˚ C; amplitude reduced by 1/3)

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Monthly Precipitation (mm)											
66.0	64.3	83.3	83.8	96.8	114.3	113.8	117.6	101.6	91.9	103.6	94.0
Monthly Air Temperatures (˚C)											
-5.1	-4.4	1.2	7.1	13.1	18.0	20.3	19.6	15.9	9.9	4.4	-1.7
Monthly Evapotranspiration (mm)											
0.0	0.0	4.6	34.8	77.4	110.9	128.0	114.9	79.7	43.7	15.3	0.0

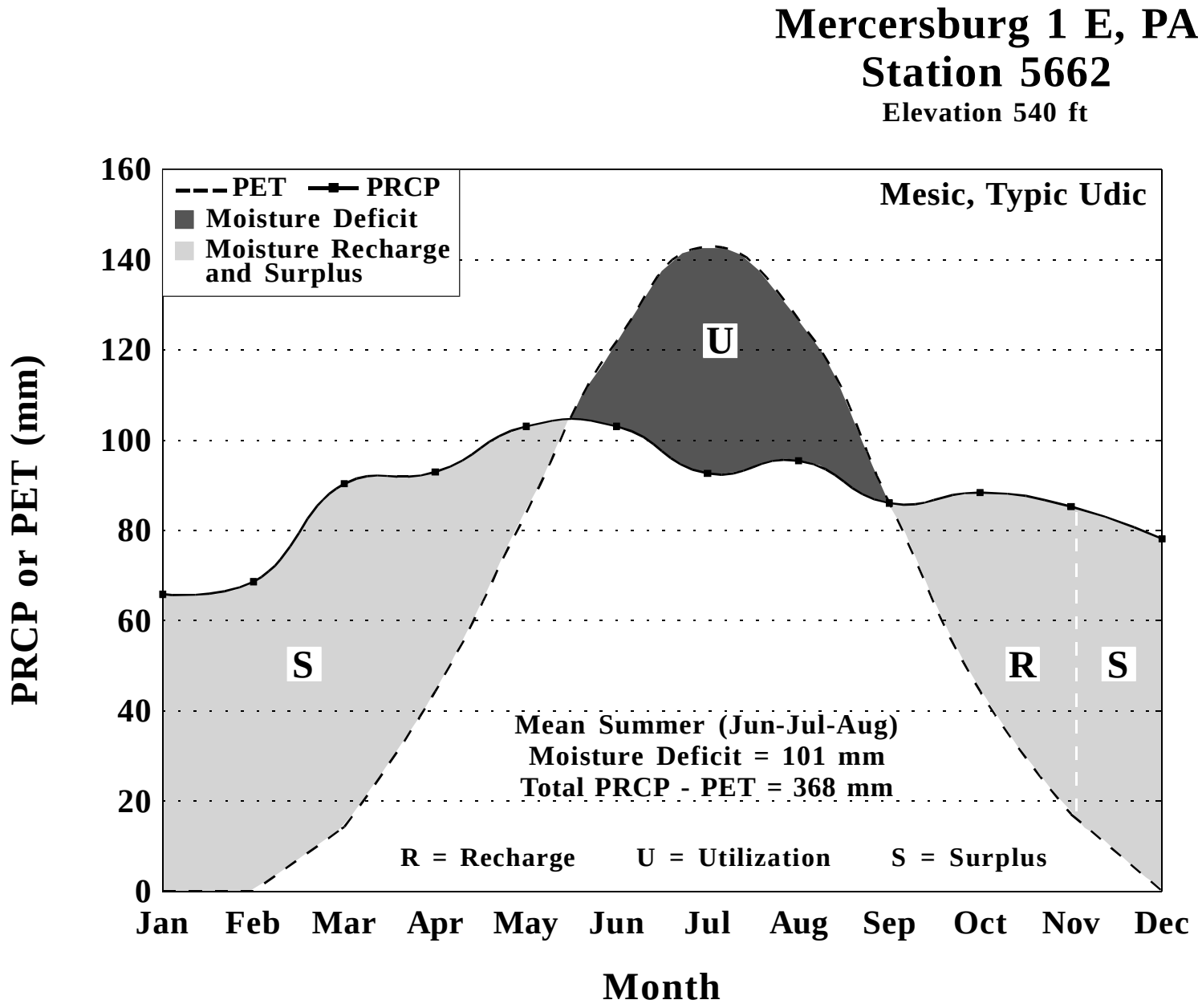
Mean Annual Potential Evapotranspiration: 609 mm
Mean Annual Moisture Surplus: 522 mm
Mean Annual Growing Season (Apr to Sept) Precipitation: 627 mm (56% of MAP)
Mean Summer (Jun-Jul-Aug) Moisture Surplus/Deficit: -8 mm





Number of Cumulative Days That the Moisture Control Section						Highest Number of Consecutive Days That the Moisture Control Section is			
During One Year is			When Soil Temperature is Above 5˚C			Moist in Some Parts		Dry After Summer Solstice	Moist After Winter Solstice
Dry	Moist/Dry	Moist	Dry	Moist/Dry	Moist	Year	T > 8˚C		
0	0	360	0	0	207	360	187	0	120

Computed by BASIC program FLEXNSM (Van Wambeke et al., 1992)
Tentative subdivision: Typic Udic



Moisture balance for Mercersburg 1 E, Pennsylvania, based upon a period of 1961-1990. PET calculated by Newhall Simulation Model (Van Wambeke et al., 1992).

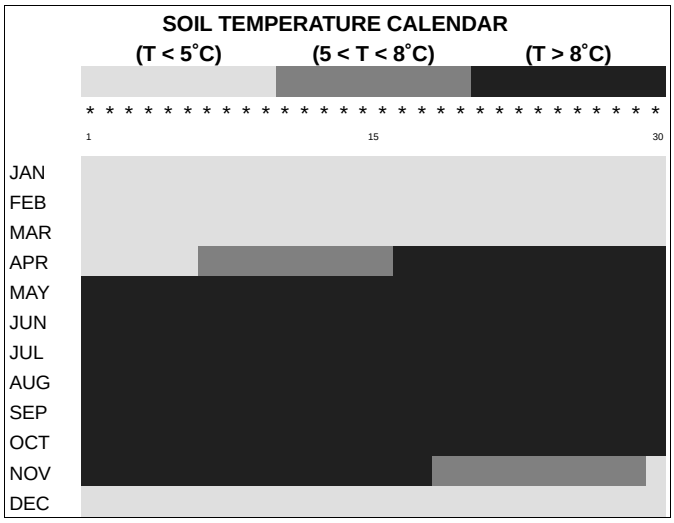
Station: Mercersburg 1 E, PA
Elevation: 540 ft
Period of Record: 1961-1990
Mean Annual Precipitation: 1050 mm
Soil Temperature Regime: Mesic

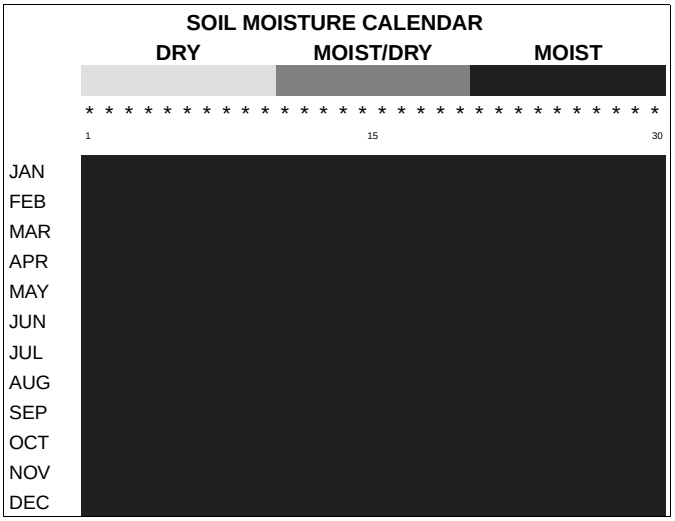
MLRA: 147 Northern Appalachian Ridges and Valleys
Country: USA

Latitude: 39 50 00N
Longitude: 77 54 00W
Waterholding Capacity: 200 mm
Soil Moisture Regime: Udic

SOIL CLIMATIC REGIME ACCORDING TO NEWHALL SIMULATION MODEL (MAST = MAAT + 1.2˚ C; amplitude reduced by 1/3)											
JAN	**FEB**	**MAR**	**APR**	**MAY**	**JUN**	**JUL**	**AUG**	**SEP**	**OCT**	**NOV**	**DEC**
Monthly Precipitation (mm)											
65.8	68.6	90.4	93.0	103.1	103.1	92.7	95.5	86.1	88.4	85.3	78.2
Monthly Air Temperatures (˚C)											
-2.6	-1.2	4.4	10.1	15.4	20.6	23.1	22.1	18.0	11.3	5.9	0.1
Monthly Evapotranspiration (mm)											
0.0	0.0	14.3	44.3	84.0	122.0	142.9	126.9	86.2	44.3	17.1	0.0

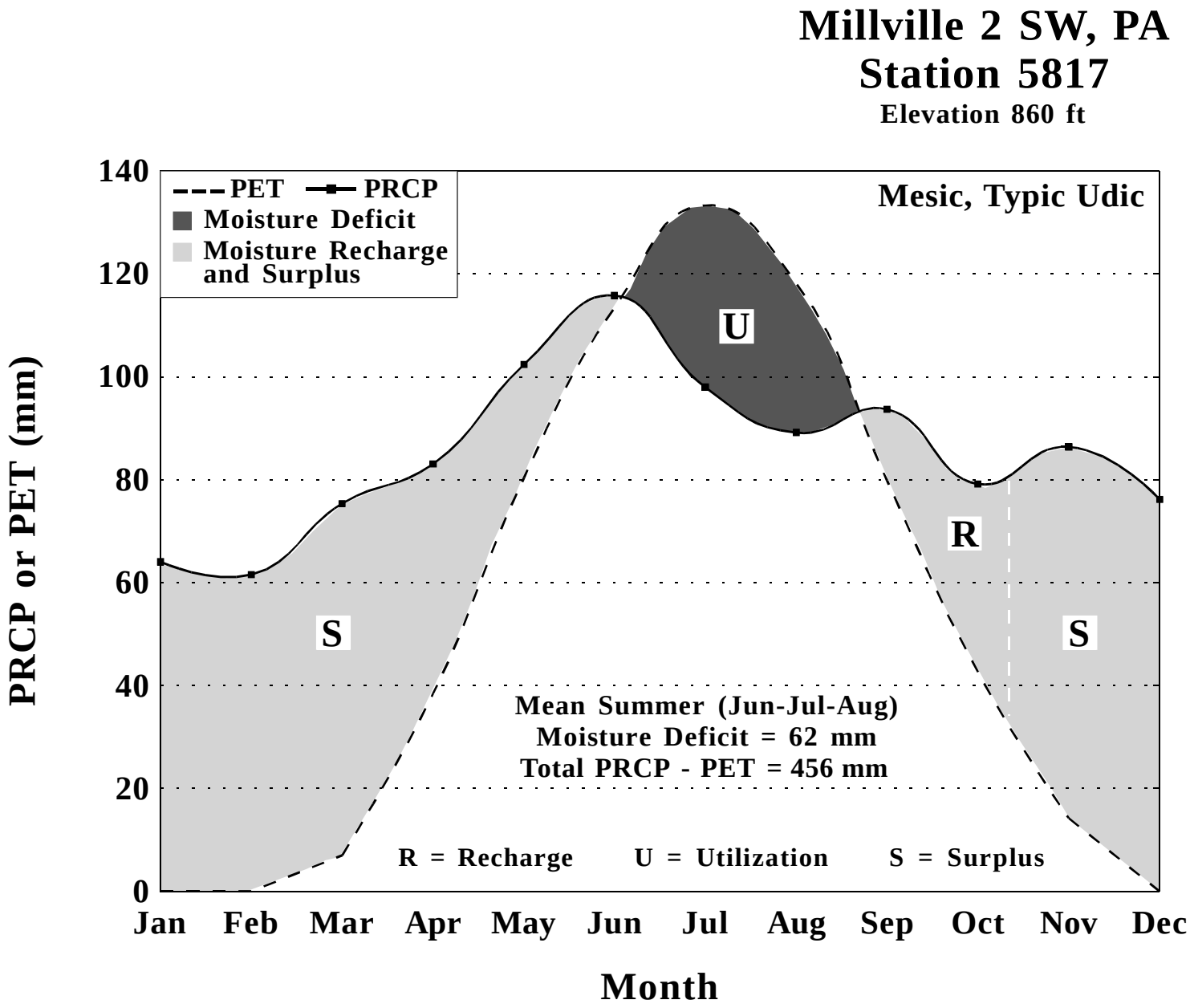
Mean Annual Potential Evapotranspiration: 682 mm
Mean Annual Moisture Surplus: 368 mm
Mean Annual Growing Season (Apr to Sept) Precipitation: 574 mm (55% of MAP)
Mean Summer (Jun-Jul-Aug) Moisture Surplus/Deficit: -101 mm





Number of Cumulative Days That the Moisture Control Section						Highest Number of Consecutive Days That the Moisture Control Section is			
During One Year is			When Soil Temperature is Above 5˚C			Moist in Some Parts		Dry After Summer Solstice	Moist After Winter Solstice
Dry	Moist/Dry	Moist	Dry	Moist/Dry	Moist	Year	T > 8˚C		
0	0	360	0	0	231	360	211	0	120

Computed by BASIC program FLEXNSM (Van Wambeke et al., 1992)
Tentative subdivision: Typic Udic



Moisture balance for Millville 2 SW, Pennsylvania, based upon a period of 1961-1990. PET calculated by Newhall Simulation Model (Van Wambeke et al., 1992).

Station: Millville 2 SW, PA
Elevation: 860 ft
Period of Record: 1961-1990
Mean Annual Precipitation: 1083 mm
Soil Temperature Regime: Mesic

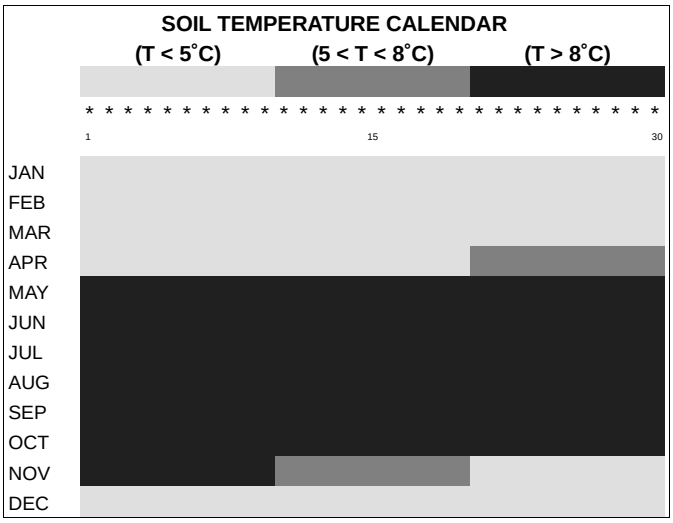
MLRA: 147 Northern Appalachian Ridges and Valleys
Country: USA

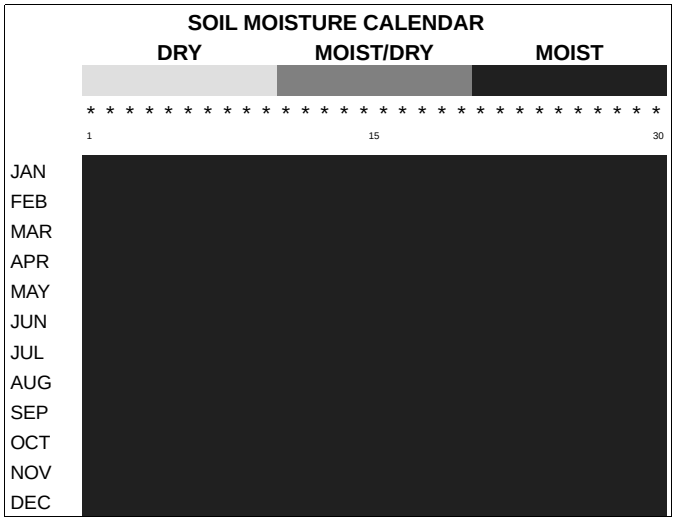
Latitude: 40 20 00N
Longitude: 76 28 00W
Waterholding Capacity: 200 mm
Soil Moisture Regime: Udic

SOIL CLIMATIC REGIME ACCORDING TO NEWHALL SIMULATION MODEL
(MAST = MAAT + 1.2˚ C; amplitude reduced by 1/3)

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Monthly Precipitation (mm)											
64.0	61.5	75.4	83.1	102.4	115.8	98.0	89.2	93.7	79.2	86.4	76.2
Monthly Air Temperatures (˚C)											
-5.0	-3.7	1.9	8.1	13.8	18.6	21.2	20.2	16.2	10.0	4.4	-1.8
Monthly Evapotranspiration (mm)											
0.0	0.0	7.0	38.4	80.4	113.4	133.3	118.2	79.9	42.6	14.2	0.0

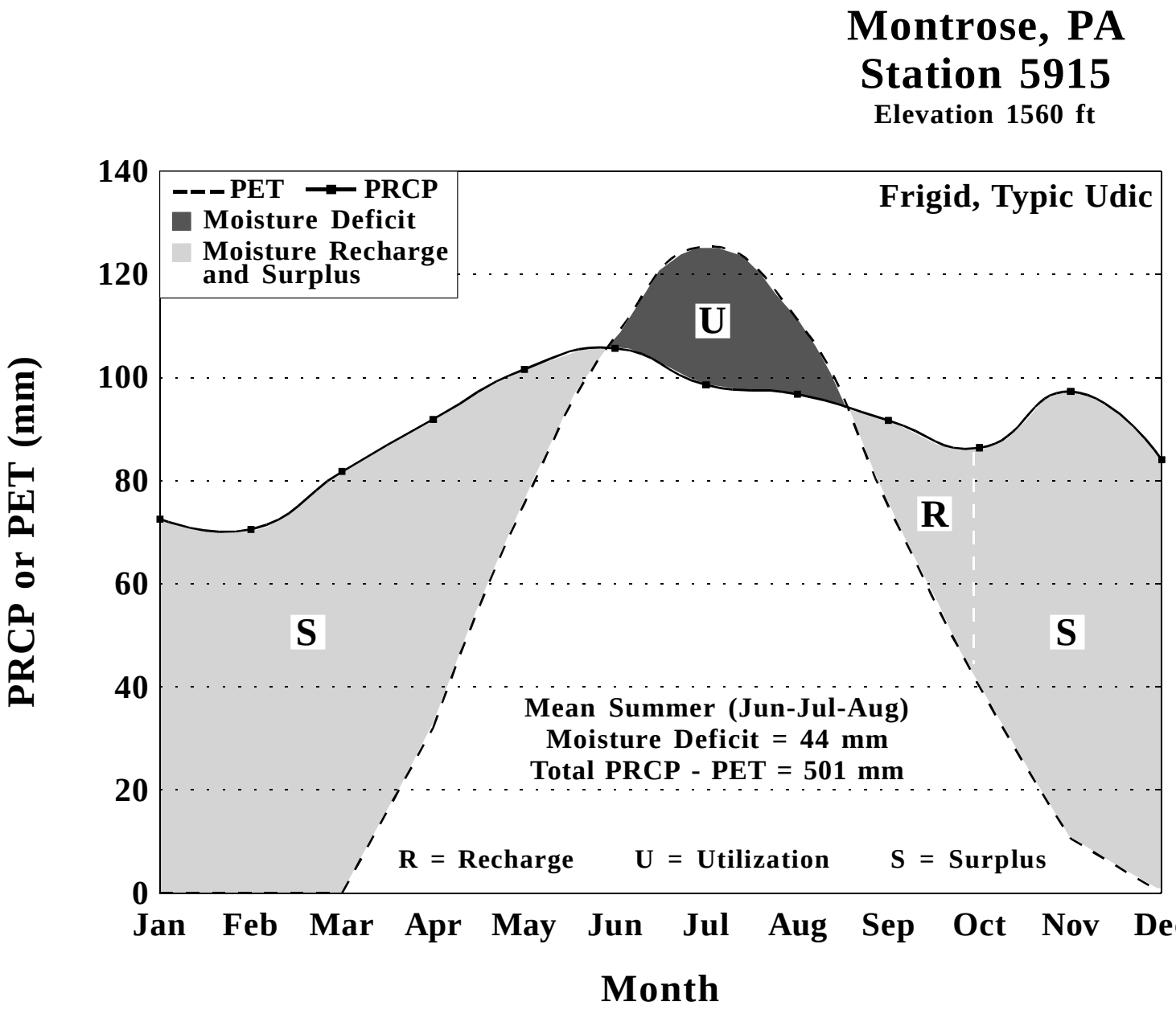
Mean Annual Potential Evapotranspiration: 627 mm
Mean Annual Moisture Surplus: 456 mm
Mean Annual Growing Season (Apr to Sept) Precipitation: 582 mm (54% of MAP)
Mean Summer (Jun-Jul-Aug) Moisture Surplus/Deficit: -62 mm





Number of Cumulative Days That the Moisture Control Section						Highest Number of Consecutive Days That the Moisture Control Section is			
During One Year is			When Soil Temperature is Above 5˚C			Moist in Some Parts		Dry After Summer Solstice	Moist After Winter Solstice
Dry	Moist/Dry	Moist	Dry	Moist/Dry	Moist	Year	T > 8˚C		
0	0	212	0	0	192	360	211	0	120

Computed by BASIC program FLEXNSM (Van Wambeke et al., 1992)
Tentative subdivision: Typic Udic



Moisture balance for Montrose, Pennsylvania, based upon a period of 1961-1990. PET calculated by Newhall Simulation Model (Van Wambeke et al., 1992).

Station: Montrose, PA
Elevation: 1560 ft
Period of Record: 1961-1990
Mean Annual Precipitation: 1079 mm
Soil Temperature Regime: Frigid

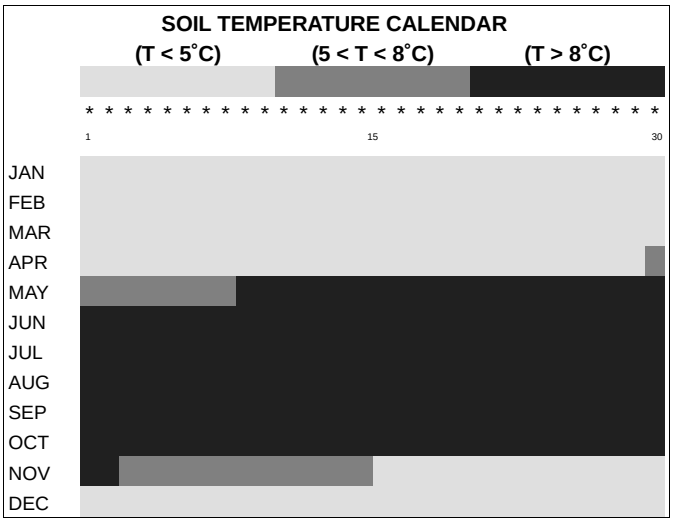
MLRA: 140 Glaciated Allegheny Plateau and Catskill Mtns.
Country: USA

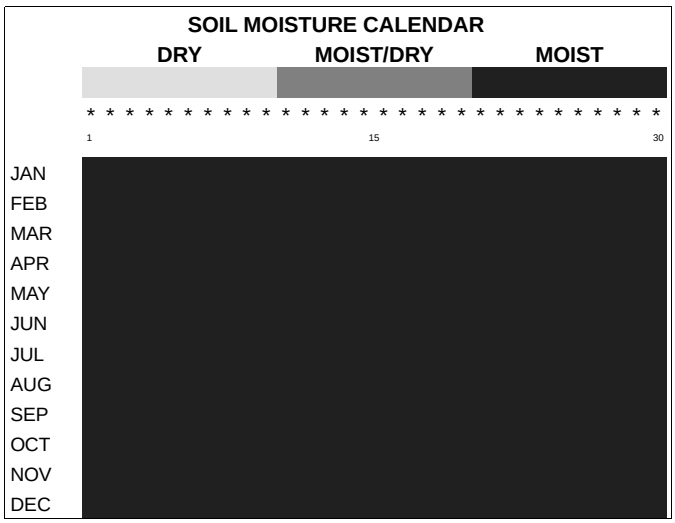
Latitude: 41 50 00N
Longitude: 75 52 00W
Waterholding Capacity: 200 mm
Soil Moisture Regime: Udic

SOIL CLIMATIC REGIME ACCORDING TO NEWHALL SIMULATION MODEL
(MAST = MAAT + 1.2˚ C; amplitude reduced by 1/3)

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Monthly Precipitation (mm)											
72.6	70.6	81.8	91.9	101.6	105.7	98.6	96.8	91.7	86.4	97.3	84.1
Monthly Air Temperatures (˚C)											
-6.7	-5.6	-0.2	6.1	12.3	17.2	19.7	18.7	14.6	8.7	2.8	-3.6
Monthly Evapotranspiration (mm)											
0.0	0.0	0.0	32.1	75.6	107.9	125.4	111.3	75.1	40.0	10.6	

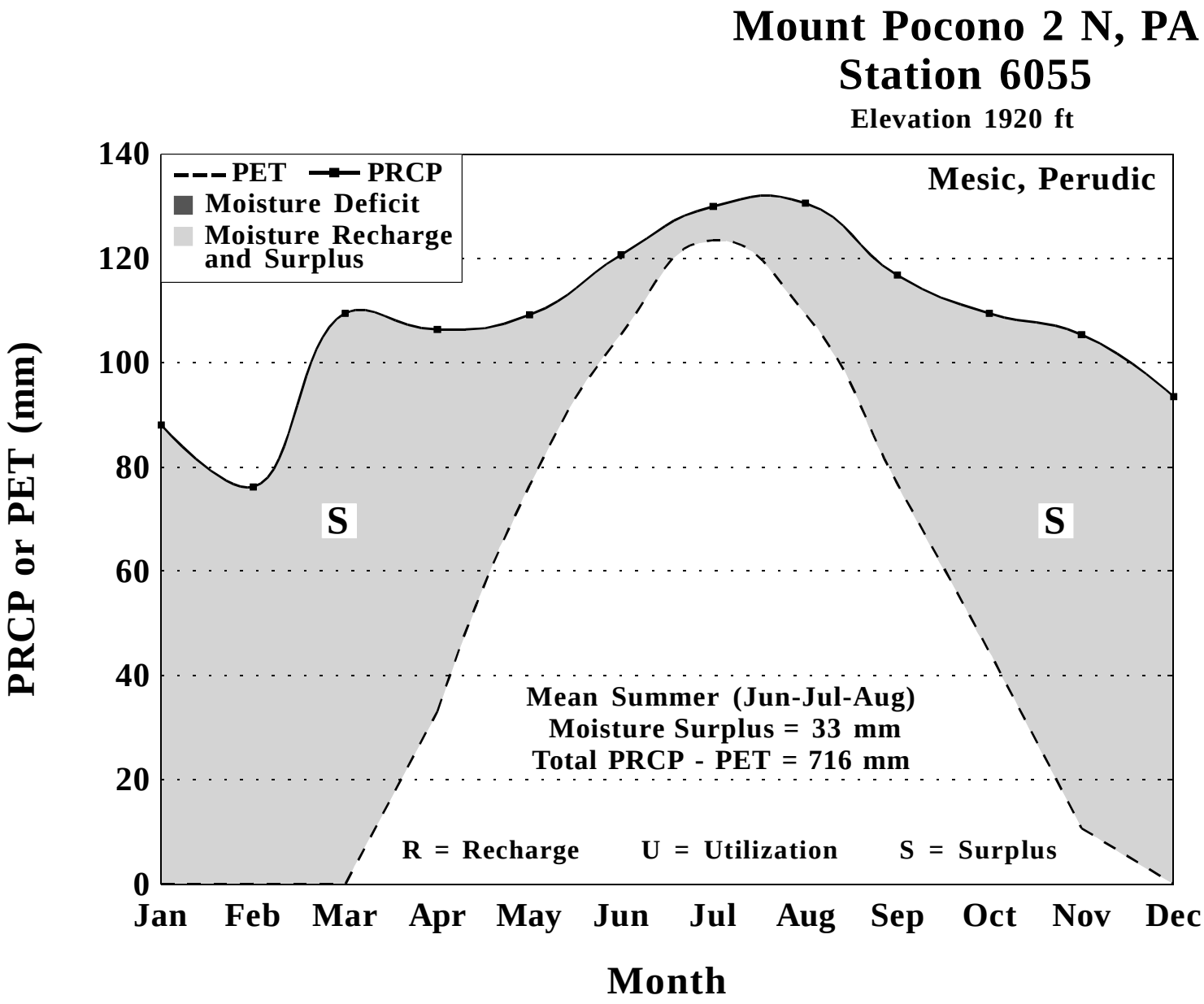
Mean Annual Potential Evapotranspiration: 578 mm
Mean Annual Moisture Surplus: 501 mm
Mean Annual Growing Season (Apr to Sept) Precipitation: 586 mm (54% of MAP)
Mean Summer (Jun-Jul-Aug) Moisture Surplus/Deficit: -44 mm





Number of Cumulative Days That the Moisture Control Section						Highest Number of Consecutive Days That the Moisture Control Section is			
During One Year is			When Soil Temperature is Above 5˚C			Moist in Some Parts		Dry After Summer Solstice	Moist After Winter Solstice
Dry	Moist/Dry	Moist	Dry	Moist/Dry	Moist	Year	T > 8˚C		
0	0	360	0	0	194	360	175	0	120

Computed by BASIC program FLEXNSM (Van Wambeke et al., 1992)
Tentative subdivision: Typic Udic



Moisture balance for Mount Pocono 2 N, Pennsylvania, based upon a period of 1927-1960. PET calculated by Newhall Simulation Model (Van Wambeke et al., 1992).

Station: Mount Pocono 2N, PA
Elevation: 1920 ft
Period of Record: 1927-1960
Mean Annual Precipitation: 1296 mm
Soil Temperature Regime: Mesic

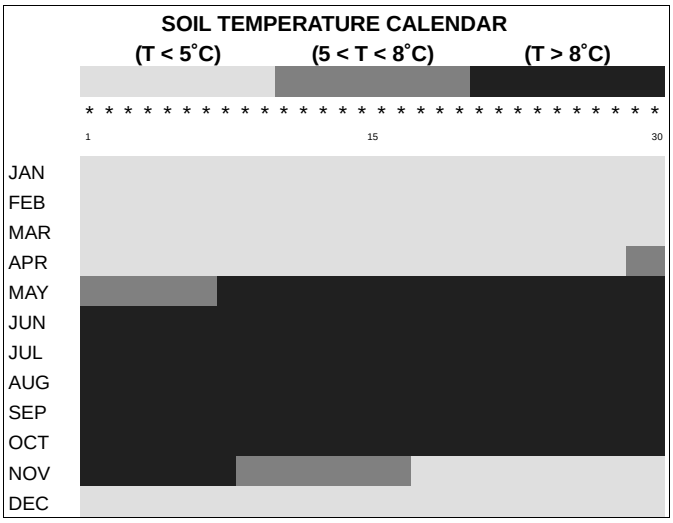
MLRA: 140 Glaciated Allegheny Plateau and Catskill Mtns.
Country: USA

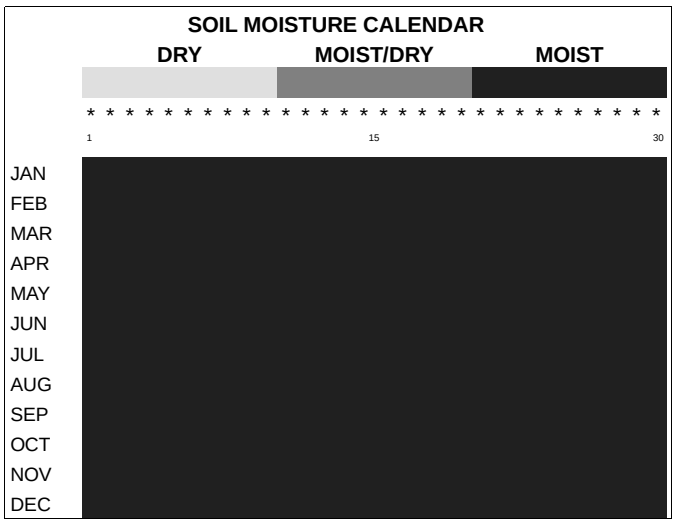
Latitude: 41 09 00N
Longitude: 75 22 00W
Waterholding Capacity: 200 mm
Soil Moisture Regime: Perudic

SOIL CLIMATIC REGIME ACCORDING TO NEWHALL SIMULATION MODEL
(MAST = MAAT + 1.2˚ C; amplitude reduced by 1/3)

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Monthly Precipitation (mm)											
88.1	76.2	109.5	106.4	109.2	120.7	130.0	130.6	116.8	109.5	105.4	93.5
Monthly Air Temperatures (˚C)											
-4.5	-4.4	0.0	6.3	12.5	16.8	19.4	18.4	14.9	9.6	2.9	-3.2
Monthly Evapotranspiration (mm)											
0.0	0.0	0.0	33.1	76.5	105.5	123.5	109.4	76.8	44.5	10.7	0.0

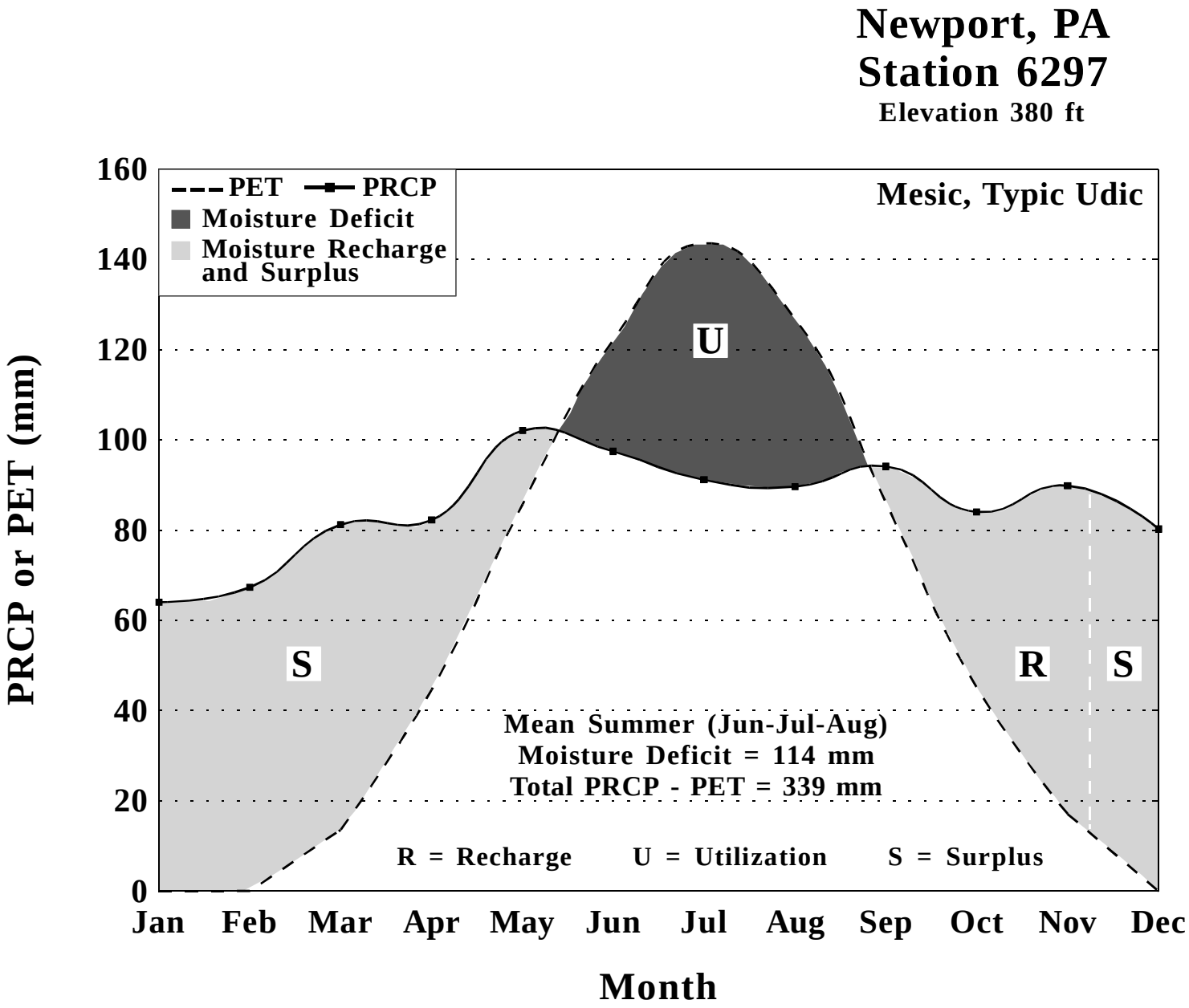
Mean Annual Potential Evapotranspiration: 580 mm
Mean Annual Moisture Surplus: 716 mm
Mean Annual Growing Season (Apr to Sept) Precipitation: 714 mm (56% of MAP)
Mean Summer (Jun-Jul-Aug) Moisture Surplus/Deficit: 33 mm





Number of Cumulative Days That the Moisture Control Section						Highest Number of Consecutive Days That the Moisture Control Section is			
During One Year is			When Soil Temperature is Above 5˚C			Moist in Some Parts		Dry After Summer Solstice	Moist After Winter Solstice
Dry	Moist/Dry	Moist	Dry	Moist/Dry	Moist	Year	T > 8˚C		
0	0	360	0	0	197	360	180	0	120

Computed by BASIC program FLEXNSM (Van Wambeke et al., 1992)
Tentative subdivision: Perudic



Moisture balance for Newport, Pennsylvania, based upon a period of 1961-1990. PET calculated by Newhall Simulation Model (Van Wambeke et al., 1992).

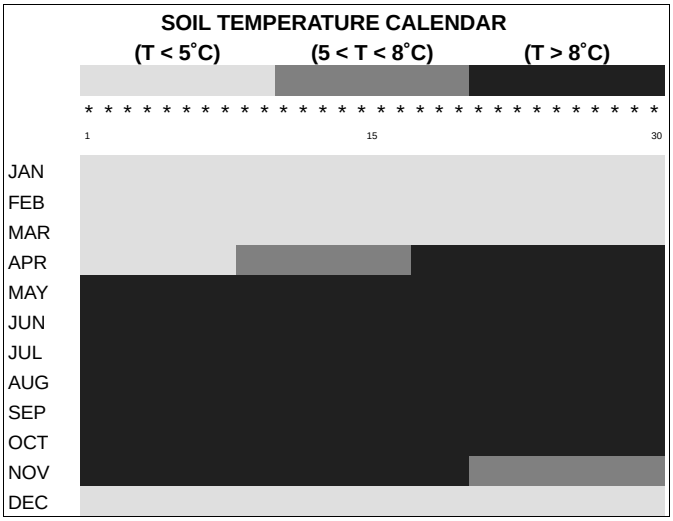
Station: Newport, PA
Elevation: 380 ft
Period of Record: 1961-1990
Mean Annual Precipitation: 1024 mm
Soil Temperature Regime: Mesic

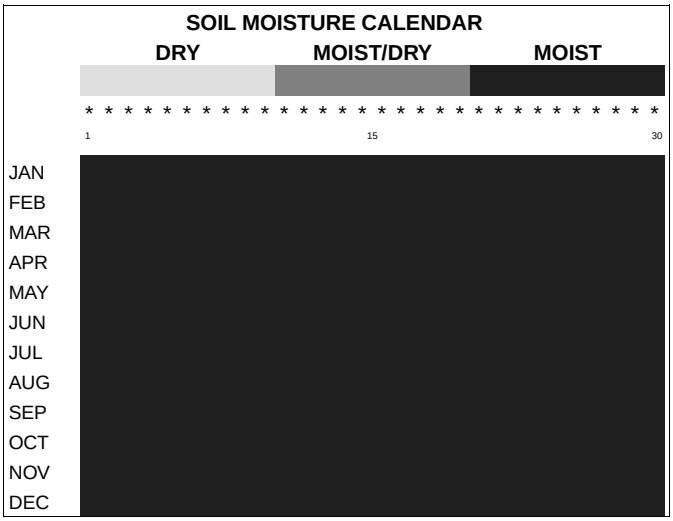
MLRA: 147 Northern Appalachian Ridges and Valleys
Country: USA

Latitude: 40 29 00N
Longitude: 77 08 00W
Waterholding Capacity: 200 mm
Soil Moisture Regime: Udic

SOIL CLIMATIC REGIME ACCORDING TO NEWHALL SIMULATION MODEL (MAST = MAAT + 1.2˚ C; amplitude reduced by 1/3)											
JAN	**FEB**	**MAR**	**APR**	**MAY**	**JUN**	**JUL**	**AUG**	**SEP**	**OCT**	**NOV**	**DEC**
Monthly Precipitation (mm)											
64.0	67.3	81.3	82.3	102.1	97.5	91.2	89.7	94.2	84.1	89.9	80.3
Monthly Air Temperatures (˚C)											
-2.8	-1.5	4.2	10.2	15.6	20.5	23.0	22.1	18.0	11.5	6.0	0.0
Monthly Evapotranspiration (mm)											
0.0	0.0	13.6	44.6	85.8	122.1	143.6	126.9	86.2	45.1	17.1	0.0

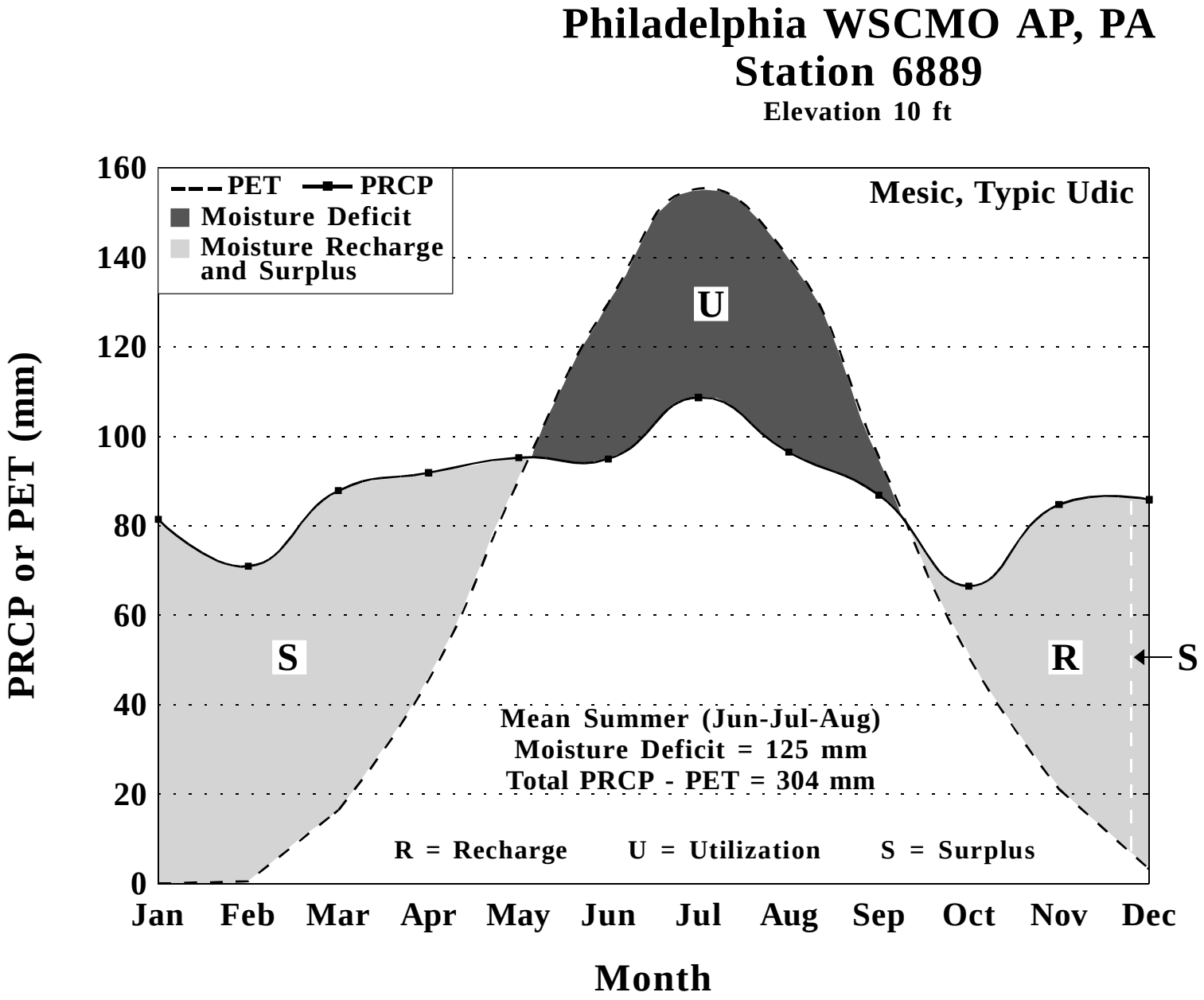
Mean Annual Potential Evapotranspiration: 685 mm
Mean Annual Moisture Surplus: 339 mm
Mean Annual Growing Season (Apr to Sept) Precipitation: 557 mm (54% of MAP)
Mean Summer (Jun-Jul-Aug) Moisture Surplus/Deficit: -114 mm





Number of Cumulative Days That the Moisture Control Section						Highest Number of Consecutive Days That the Moisture Control Section is			
During One Year is			When Soil Temperature is Above 5˚C			Moist in Some Parts		Dry After Summer Solstice	Moist After Winter Solstice
Dry	Moist/Dry	Moist	Dry	Moist/Dry	Moist	Year	T > 8˚C		
0	0	360	0	0	232	360	211	0	120

Computed by BASIC program FLEXNSM (Van Wambeke et al., 1992)
Tentative subdivision: Typic Udic



Moisture balance for Philadelphia WSCMO Airport, Pennsylvania, based upon a period of 1961-1990. PET calculated by Newhall Simulation Model (Van Wambeke et al., 1992).

Station: Philadelphia WSCMO AP, PA
Elevation: 10 ft
Period of Record: 1961-1990
Mean Annual Precipitation: 1052 mm
Soil Temperature Regime: Mesic

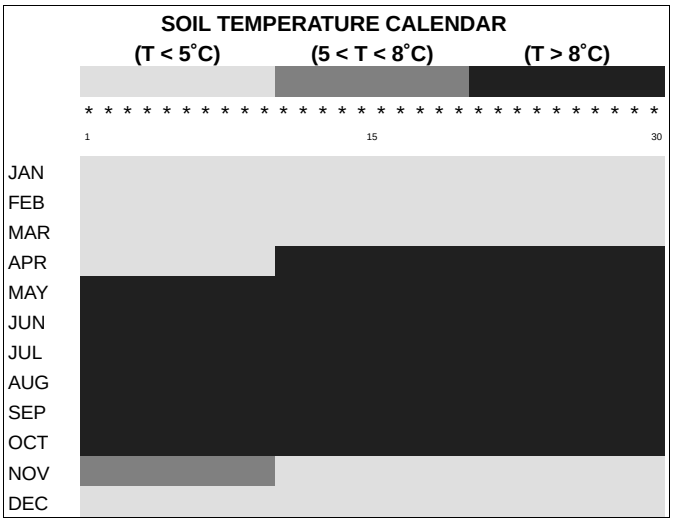
MLRA: 149A Northern Coastal Plain
Country: USA

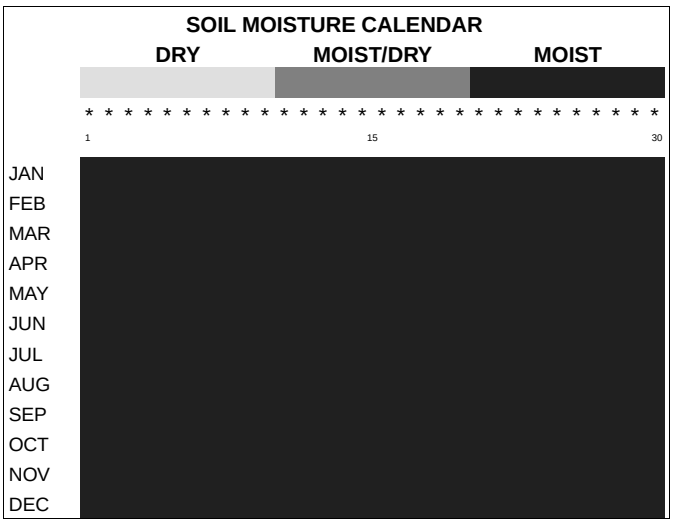
Latitude: 39 53 00N
Longitude: 75 14 00W
Waterholding Capacity: 200 mm
Soil Moisture Regime: Udic

SOIL CLIMATIC REGIME ACCORDING TO NEWHALL SIMULATION MODEL
(MAST = MAAT + 1.2˚ C; amplitude reduced by 1/3)

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Monthly Precipitation (mm)											
81.5	70.9	87.9	91.9	95.3	95.0	108.7	96.5	86.9	66.5	84.8	85.9
Monthly Air Temperatures (˚C)											
-0.9	0.6	5.8	11.3	17.2	22.1	24.8	24.2	20.1	13.6	8.0	2.1
Monthly Evapotranspiration (mm)											
0.0	0.5	16.4	45.5	90.3	129.9	155.4	140.0	95.4	50.6	21.1	3.2

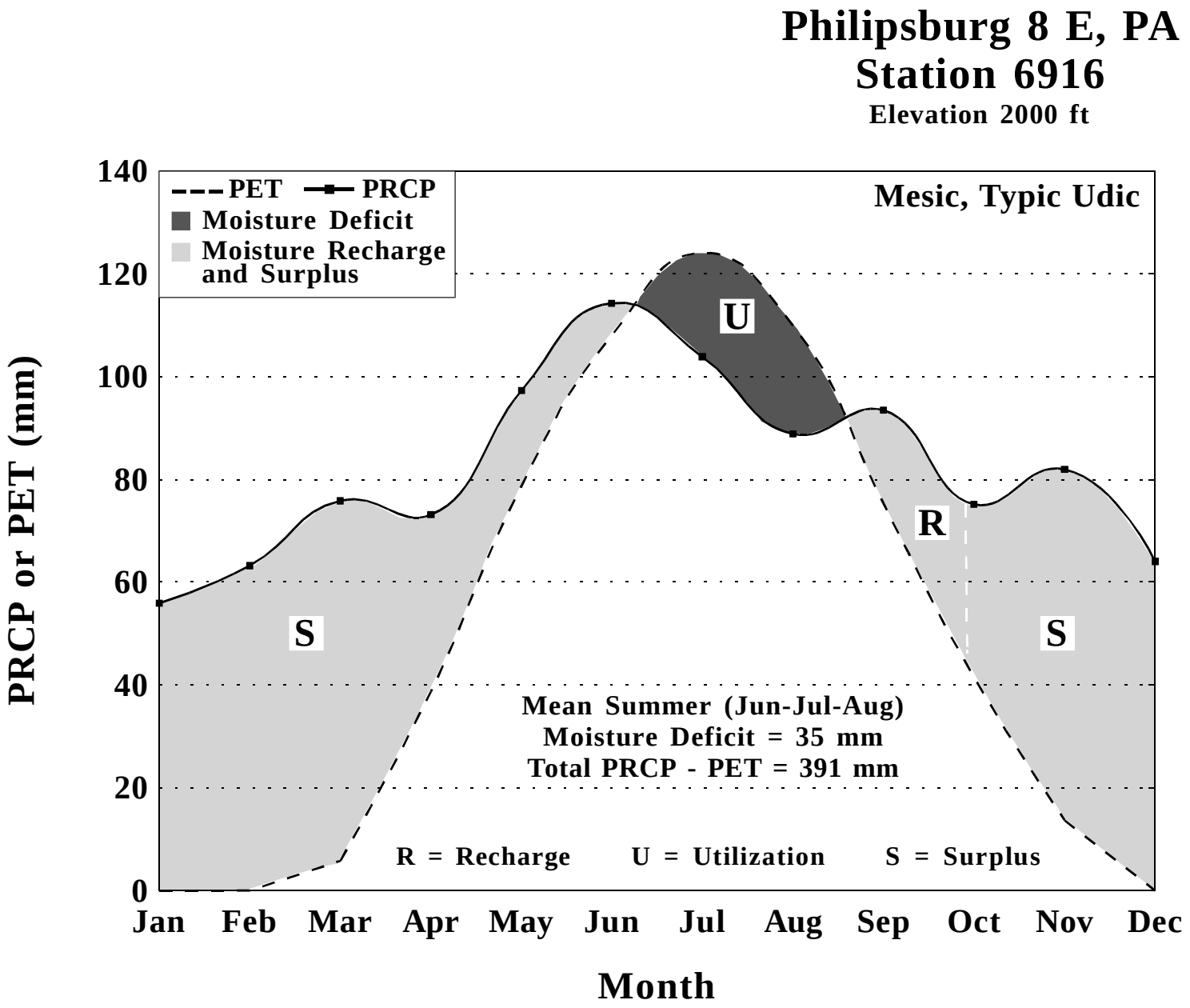
Mean Annual Potential Evapotranspiration: 748 mm
Mean Annual Moisture Surplus: 304 mm
Mean Annual Growing Season (Apr to Sept) Precipitation: 574 mm (55% of MAP)
Mean Summer (Jun-Jul-Aug) Moisture Surplus/Deficit: -125 mm





Number of Cumulative Days That the Moisture Control Section						Highest Number of Consecutive Days That the Moisture Control Section is			
During One Year is			When Soil Temperature is Above 5˚C			Moist in Some Parts		Dry After Summer Solstice	Moist After Winter Solstice
Dry	Moist/Dry	Moist	Dry	Moist/Dry	Moist	Year	T > 8˚C		
0	0	360	0	0	250	360	230	0	120

Computed by BASIC program FLEXNSM (Van Wambeke et al., 1992)
Tentative subdivision: Typic Udic



Moisture balance for Philipsburg 8 E, Pennsylvania, based upon a period of 1961-1990. PET calculated by Newhall Simulation Model (Van Wambeke et al., 1992).

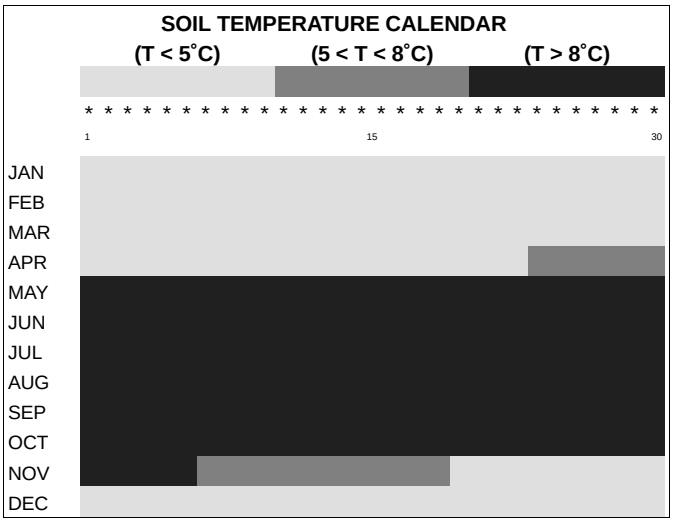
Station: Philipsburg 8 E, PA
Elevation: 2000 ft
Period of Record: 1961-1990
Mean Annual Precipitation: 987 mm
Soil Temperature Regime: Mesic

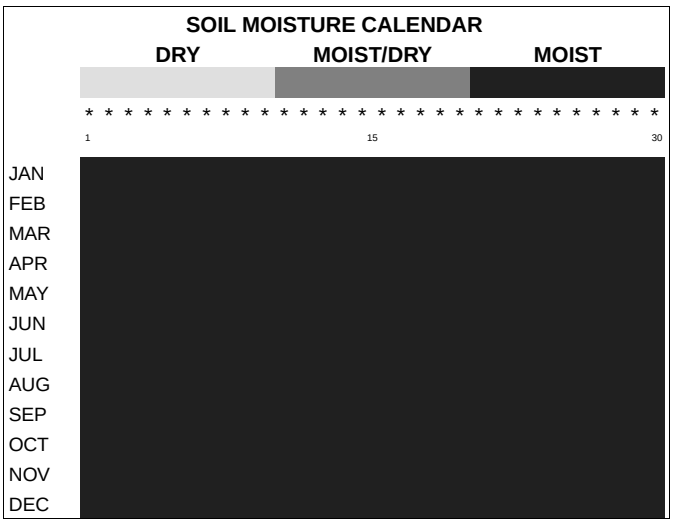
MLRA: 127 Eastern Allegheny Plateau
Country: USA

Latitude: 40 54 00N
Longitude: 78 05 00W
Waterholding Capacity: 200 mm
Soil Moisture Regime: Udic

SOIL CLIMATIC REGIME ACCORDING TO NEWHALL SIMULATION MODEL (MAST = MAAT + 1.2˚ C; amplitude reduced by 1/3)											
JAN	**FEB**	**MAR**	**APR**	**MAY**	**JUN**	**JUL**	**AUG**	**SEP**	**OCT**	**NOV**	**DEC**
Monthly Precipitation (mm)											
55.9	63.2	75.9	73.2	97.3	114.3	103.9	88.9	93.5	75.2	82.0	64.0
Monthly Air Temperatures (˚C)											
-5.2	-4.1	1.4	7.6	13.2	17.5	19.6	18.8	14.9	9.2	3.8	-2.7
Monthly Evapotranspiration (mm)											
0.0	0.0	5.8	38.7	78.8	108.0	124.1	110.0	75.4	41.5	13.7	0.0

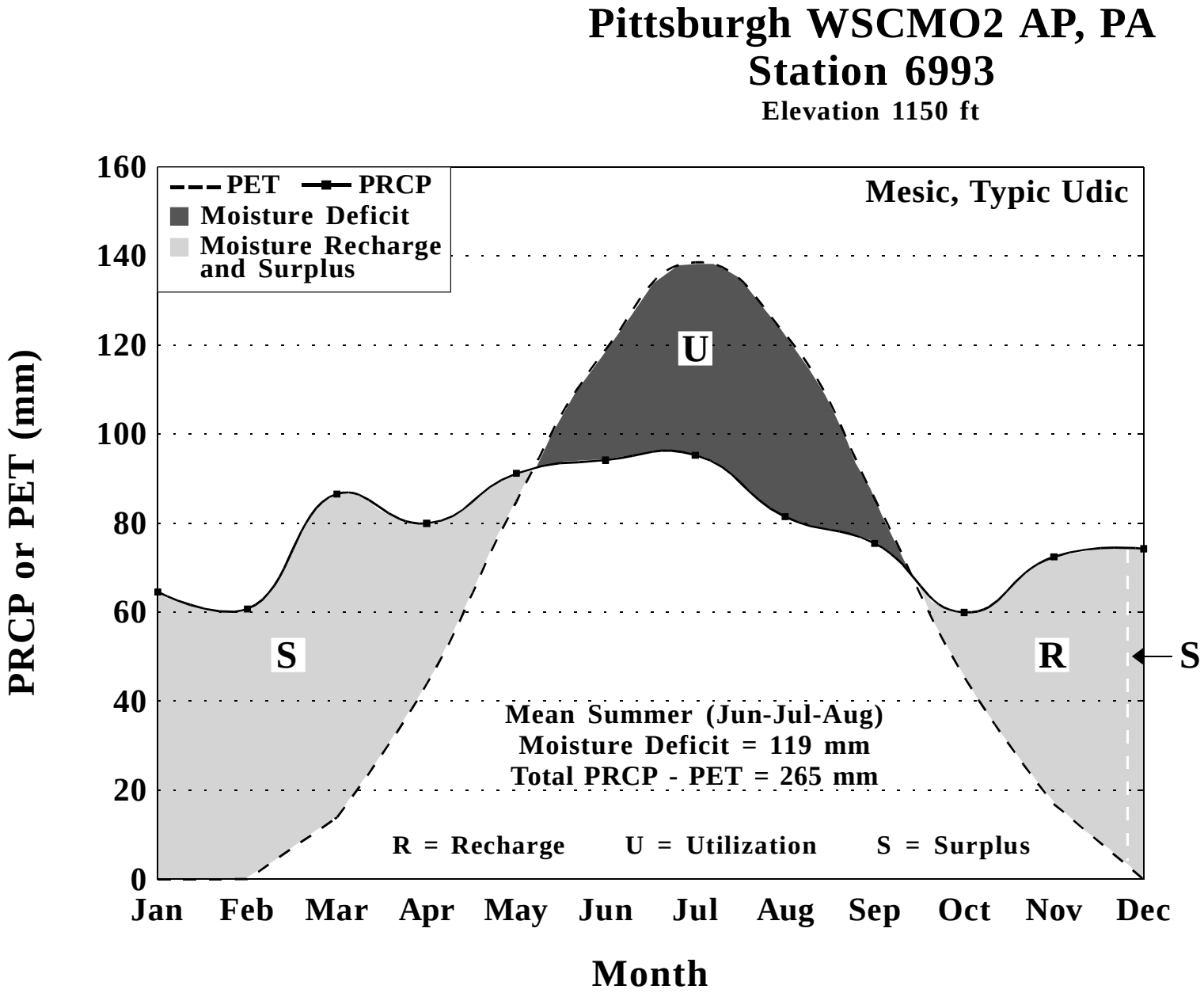
Mean Annual Potential Evapotranspiration: 596 mm
Mean Annual Moisture Surplus: 391 mm
Mean Annual Growing Season (Apr to Sept) Precipitation: 571 mm (58% of MAP)
Mean Summer (Jun-Jul-Aug) Moisture Surplus/Deficit: -35 mm





Number of Cumulative Days That the Moisture Control Section						Highest Number of Consecutive Days That the Moisture Control Section is			
During One Year is			When Soil Temperature is Above 5˚C			Moist in Some Parts		Dry After Summer Solstice	Moist After Winter Solstice
Dry	Moist/Dry	Moist	Dry	Moist/Dry	Moist	Year	T > 8˚C		
0	0	360	0	0	206	360	185	0	120

Computed by BASIC program FLEXNSM (Van Wambeke et al., 1992)
Tentative subdivision: Typic Udic



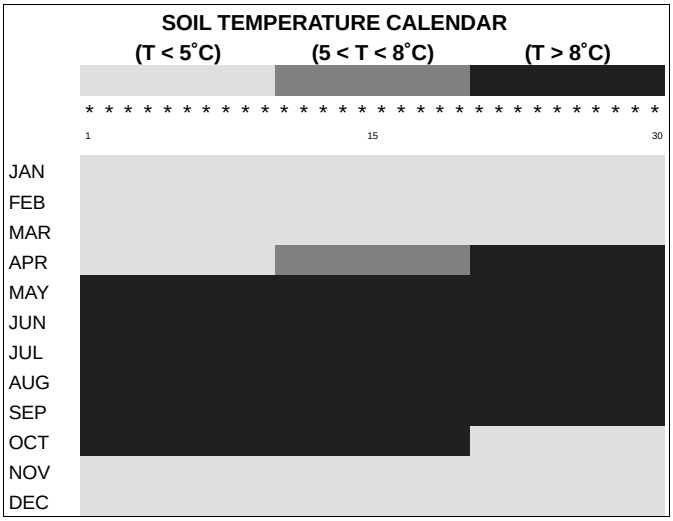
Moisture balance for Pittsburgh WSCMO2 Airport, Pennsylvania, based upon a period of 1961-1990. PET calculated by Newhall Simulation Model (Van Wambeke et al., 1992).

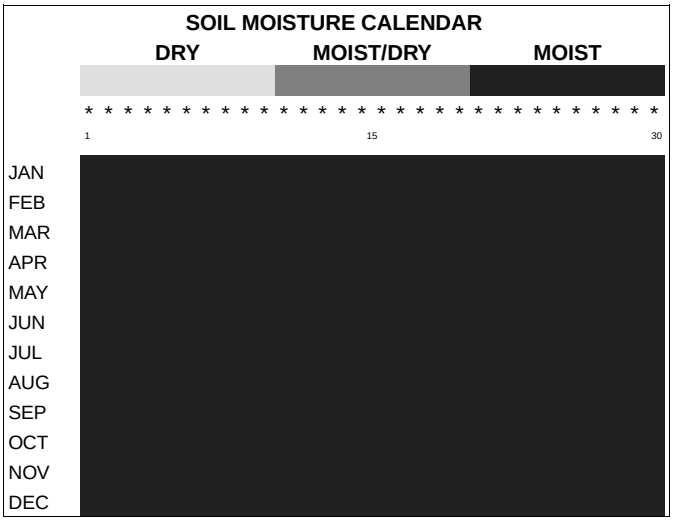
Station: Pittsburgh WSCMO2 AP, PA **MLRA:** 126 Central **Latitude:** 40 30 00N
Elevation: 1150 ft Allegheny Plateau **Longitude:** 80 13 00W
Period of Record: 1961-1990
Mean Annual Precipitation: 936 mm **Country:** USA **Waterholding Capacity:** 200 mm
Soil Temperature Regime: Mesic **Soil Moisture Regime:** Udic

SOIL CLIMATIC REGIME ACCORDING TO NEWHALL SIMULATION MODEL
(MAST = MAAT + 1.2˚ C; amplitude reduced by 1/3)

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Monthly Precipitation (mm)											
64.5	60.7	86.6	80.0	91.2	94.2	95.3	81.5	75.4	59.9	72.4	74.2
Monthly Air Temperatures (˚C)											
-3.3	-1.8	4.1	9.8	15.3	19.9	22.3	21.4	17.7	11.3	5.7	-0.3
Monthly Evapotranspiration (mm)											
0.0	0.0	13.9	43.8	84.9	119.0	138.6	122.5	85.6	45.4	16.9	0.0

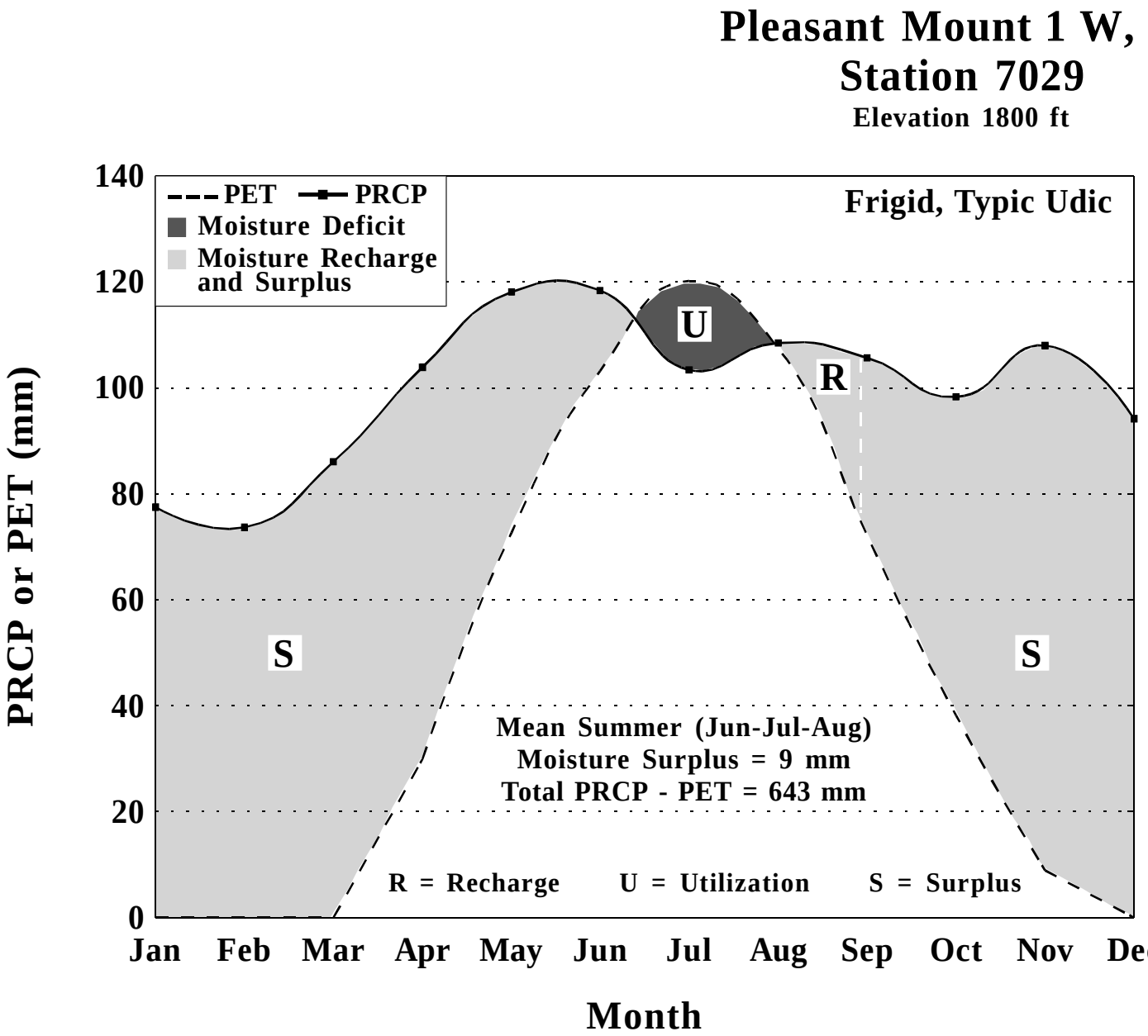
Mean Annual Potential Evapotranspiration: 671 mm
Mean Annual Moisture Surplus: 265 mm
Mean Annual Growing Season (Apr to Sept) Precipitation: 578 mm (55% of MAP)
Mean Summer (Jun-Jul-Aug) Moisture Surplus/Deficit: -119 mm





Number of Cumulative Days That the Moisture Control Section						Highest Number of Consecutive Days That the Moisture Control Section is			
During One Year is			When Soil Temperature is Above 5˚C			Moist in Some Parts		Dry After Summer Solstice	Moist After Winter Solstice
Dry	Moist/Dry	Moist	Dry	Moist/Dry	Moist	Year	T > 8˚C		
0	0	360	0	0	229	360	208	0	120

Computed by BASIC program FLEXNSM (Van Wambeke et al., 1992)
Tentative subdivision: Typic Udic



Moisture balance for Pleasant Mount 1 W, Pennsylvania, based upon a period of 1961-1990. PET calculated by Newhall Simulation Model (Van Wambeke et al., 1992).

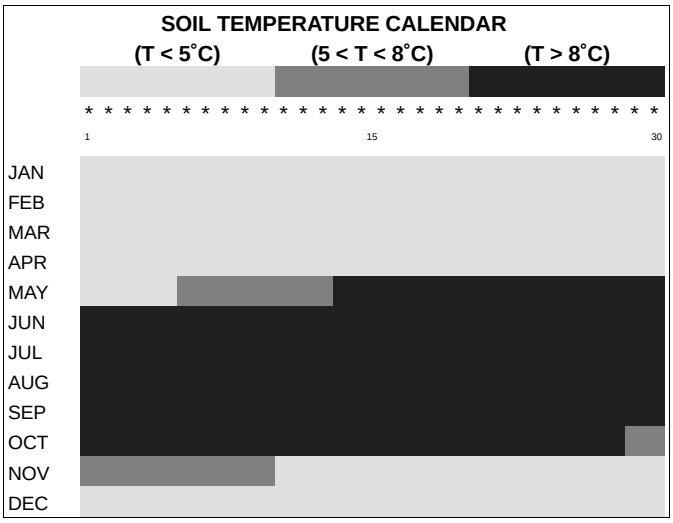
Station: Pleasant Mount 1 W, PA
Elevation: 1800 ft
Period of Record: 1961-1990
Mean Annual Precipitation: 1196 mm
Soil Temperature Regime: Frigid

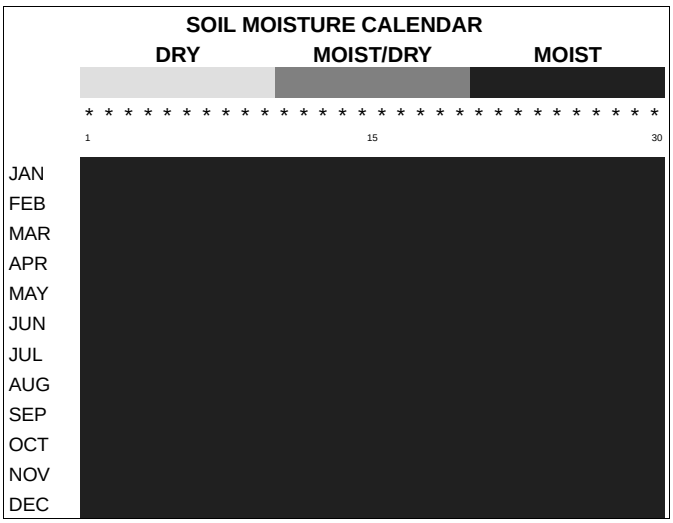
MLRA: 140 Glaciated Allegheny Plateau and Catskill Mtns.
Country: USA

Latitude: 41 44 00N
Longitude: 75 27 00W
Waterholding Capacity: 200 mm
Soil Moisture Regime: Udic

SOIL CLIMATIC REGIME ACCORDING TO NEWHALL SIMULATION MODEL (MAST = MAAT + 1.2˚ C; amplitude reduced by 1/3)											
JAN	**FEB**	**MAR**	**APR**	**MAY**	**JUN**	**JUL**	**AUG**	**SEP**	**OCT**	**NOV**	**DEC**
Monthly Precipitation (mm)											
77.5	73.7	86.1	103.9	118.1	118.4	103.4	108.5	105.7	98.3	108.0	94.2
Monthly Air Temperatures (˚C)											
-7.5	-6.5	-1.2	5.3	11.4	16.1	18.6	17.7	13.6	7.8	2.1	-4.4
Monthly Evapotranspiration (mm)											
0.0	0.0	0.0	29.9	72.7	103.2	120.2	107.5	72.2	38.1	8.9	0.0

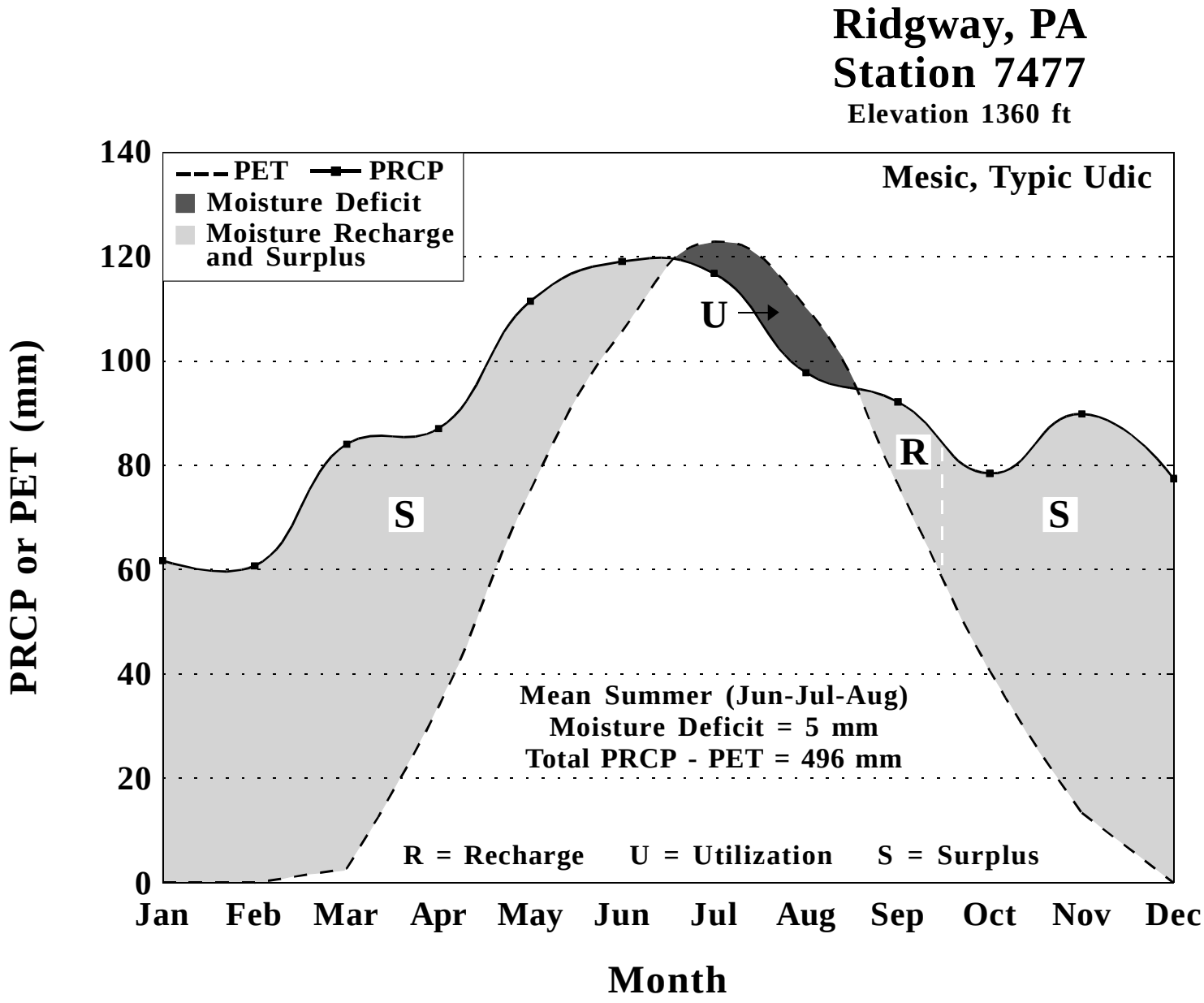
Mean Annual Potential Evapotranspiration: 553 mm
Mean Annual Moisture Surplus: 643 mm
Mean Annual Growing Season (Apr to Sept) Precipitation: 658 mm (55% of MAP)
Mean Summer (Jun-Jul-Aug) Moisture Surplus/Deficit: 9 mm





Number of Cumulative Days That the Moisture Control Section						Highest Number of Consecutive Days That the Moisture Control Section is			
During One Year is			When Soil Temperature is Above 5˚C			Moist in Some Parts		Dry After Summer Solstice	Moist After Winter Solstice
Dry	Moist/Dry	Moist	Dry	Moist/Dry	Moist	Year	T > 8˚C		
0	0	360	0	0	186	360	166	0	120

Computed by BASIC program FLEXNSM (Van Wambeke et al., 1992)
Tentative subdivision: Typic Udic



Moisture balance for Ridgway, Pennsylvania, based upon a period of 1961-1990. PET calculated by Newhall Simulation Model (Van Wambeke et al., 1992).

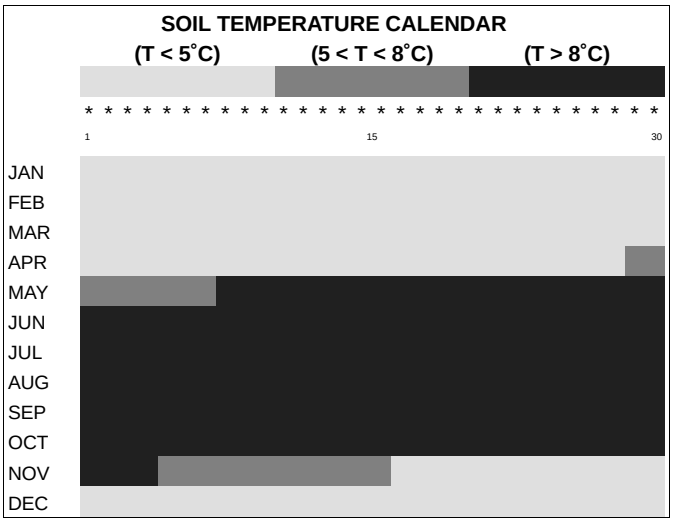
Station: Ridgway, PA
Elevation: 1360 ft
Period of Record: 1961-1990
Mean Annual Precipitation: 1077 mm
Soil Temperature Regime: Mesic

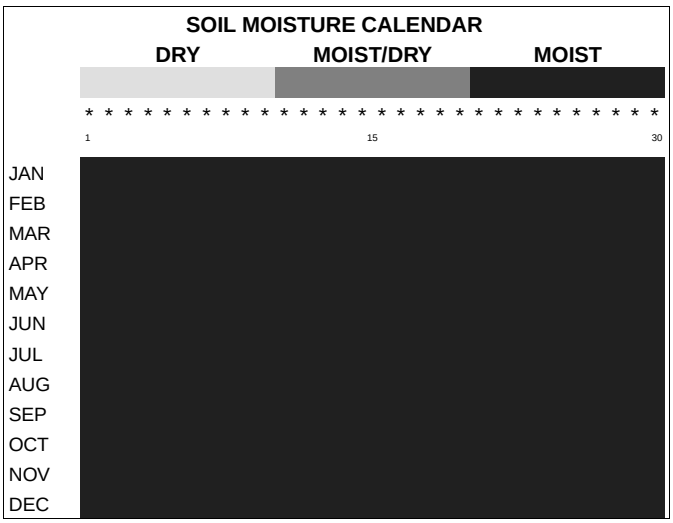
MLRA: 127 Eastern Allegheny Plateau and Mountains
Country: USA

Latitude: 41 25 00N
Longitude: 78 45 00W
Waterholding Capacity: 200 mm
Soil Moisture Regime: Udic

SOIL CLIMATIC REGIME ACCORDING TO NEWHALL SIMULATION MODEL (MAST = MAAT + 1.2˚ C; amplitude reduced by 1/3)											
JAN	**FEB**	**MAR**	**APR**	**MAY**	**JUN**	**JUL**	**AUG**	**SEP**	**OCT**	**NOV**	**DEC**
Monthly Precipitation (mm)											
61.7	60.7	84.1	87.1	111.5	119.1	116.8	97.8	92.2	78.5	89.9	77.5
Monthly Air Temperatures (˚C)											
-5.8	-4.9	0.6	6.4	12.3	16.8	19.3	18.5	14.8	8.8	3.6	-2.5
Monthly Evapotranspiration (mm)											
0.0	0.0	2.7	33.7	75.3	105.7	122.9	110.3	76.4	40.6	13.4	0.0

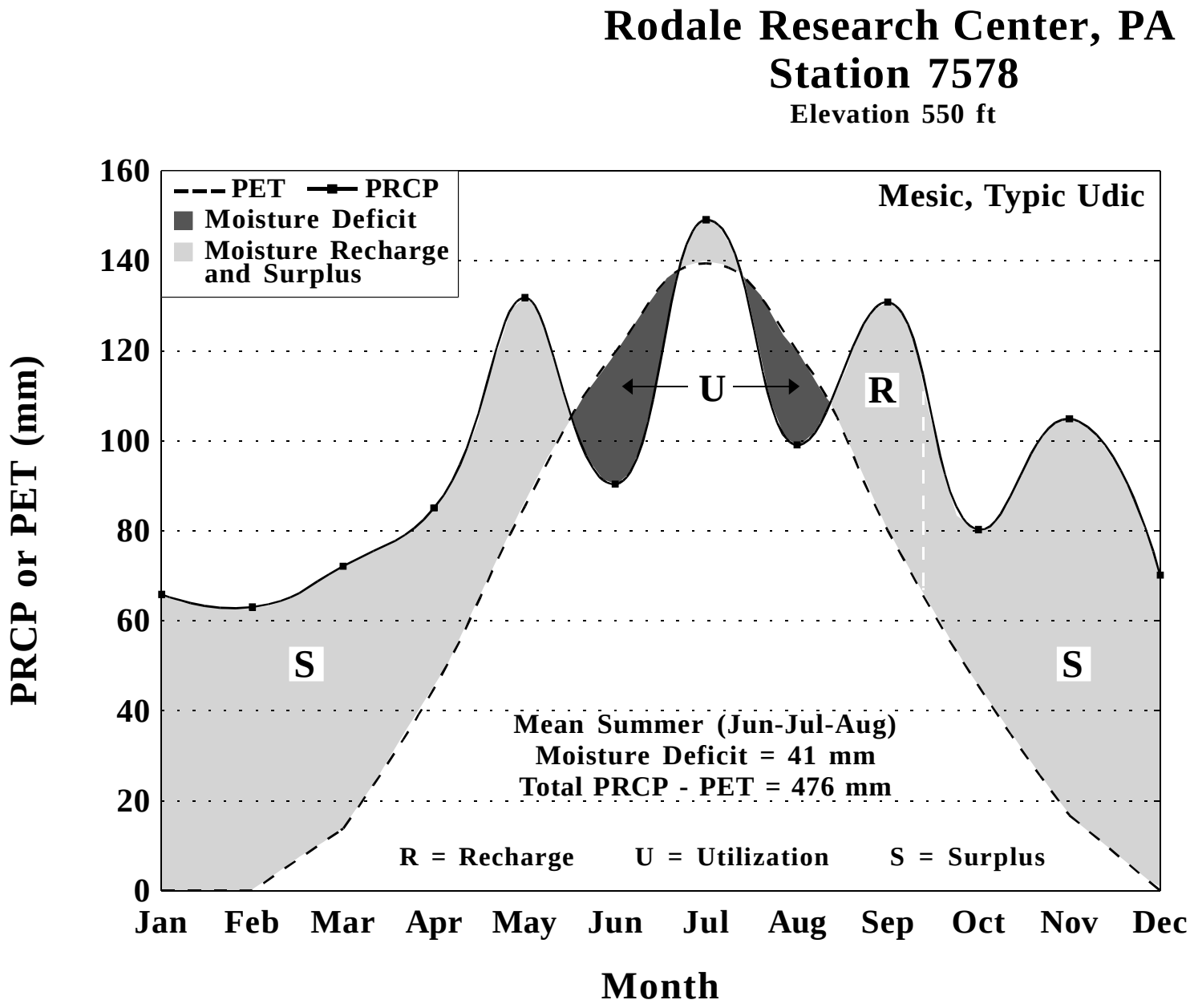
Mean Annual Potential Evapotranspiration: 581 mm
Mean Annual Moisture Surplus: 496 mm
Mean Annual Growing Season (Apr to Sept) Precipitation: 625 mm (58% of MAP)
Mean Summer (Jun-Jul-Aug) Moisture Surplus/Deficit: -5 mm





Number of Cumulative Days That the Moisture Control Section						Highest Number of Consecutive Days That the Moisture Control Section is			
During One Year is			When Soil Temperature is Above 5˚C			Moist in Some Parts		Dry After Summer Solstice	Moist After Winter Solstice
Dry	Moist/Dry	Moist	Dry	Moist/Dry	Moist	Year	T > 8˚C		
0	0	360	0	0	199	360	177	0	120

Computed by BASIC program FLEXNSM (Van Wambeke et al., 1992)
Tentative subdivision: Typic Udic



Moisture balance for Rodale Research Center, Pennsylvania, based upon a period of 1984-1995. PET calculated by Newhall Simulation Model (Van Wambeke et al., 1992).

Station: Rodale Research Center, PA
Elevation: 550 ft
Period of Record: 1984-1995
Mean Annual Precipitation: 1142 mm
Soil Temperature Regime: Mesic

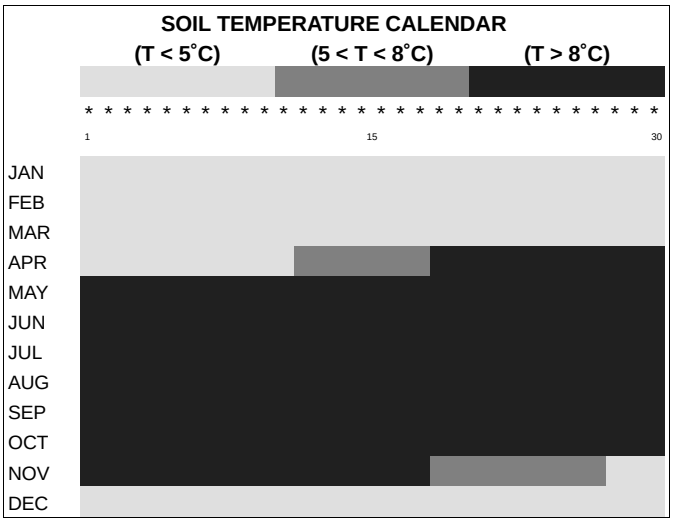
MLRA: 147 Northern Appalachian Ridges and Valleys
Country: USA

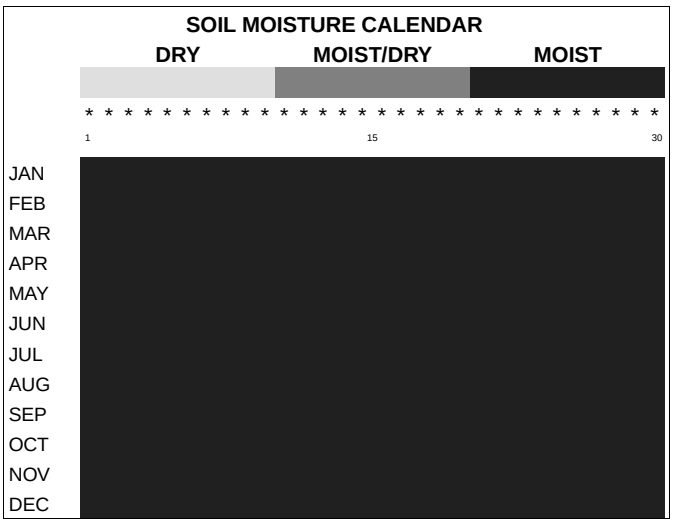
Latitude: 40 33 00N
Longitude: 75 43 00W
Waterholding Capacity: 200 mm
Soil Moisture Regime: Udic

SOIL CLIMATIC REGIME ACCORDING TO NEWHALL SIMULATION MODEL
(MAST = MAAT + 1.2˚ C; amplitude reduced by 1/3)

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Monthly Precipitation (mm)											
65.8	63.0	72.1	85.1	131.8	90.4	149.1	99.1	130.8	80.3	104.9	70.1
Monthly Air Temperatures (˚C)											
-1.8	-0.6	4.0	9.9	15.3	20.0	22.3	21.0	16.7	11.2	5.6	-0.6
Monthly Evapotranspiration (mm)											
0.0	0.0	13.8	44.9	85.5	119.8	139.4	120.1	80.1	45.4	16.8	0.0

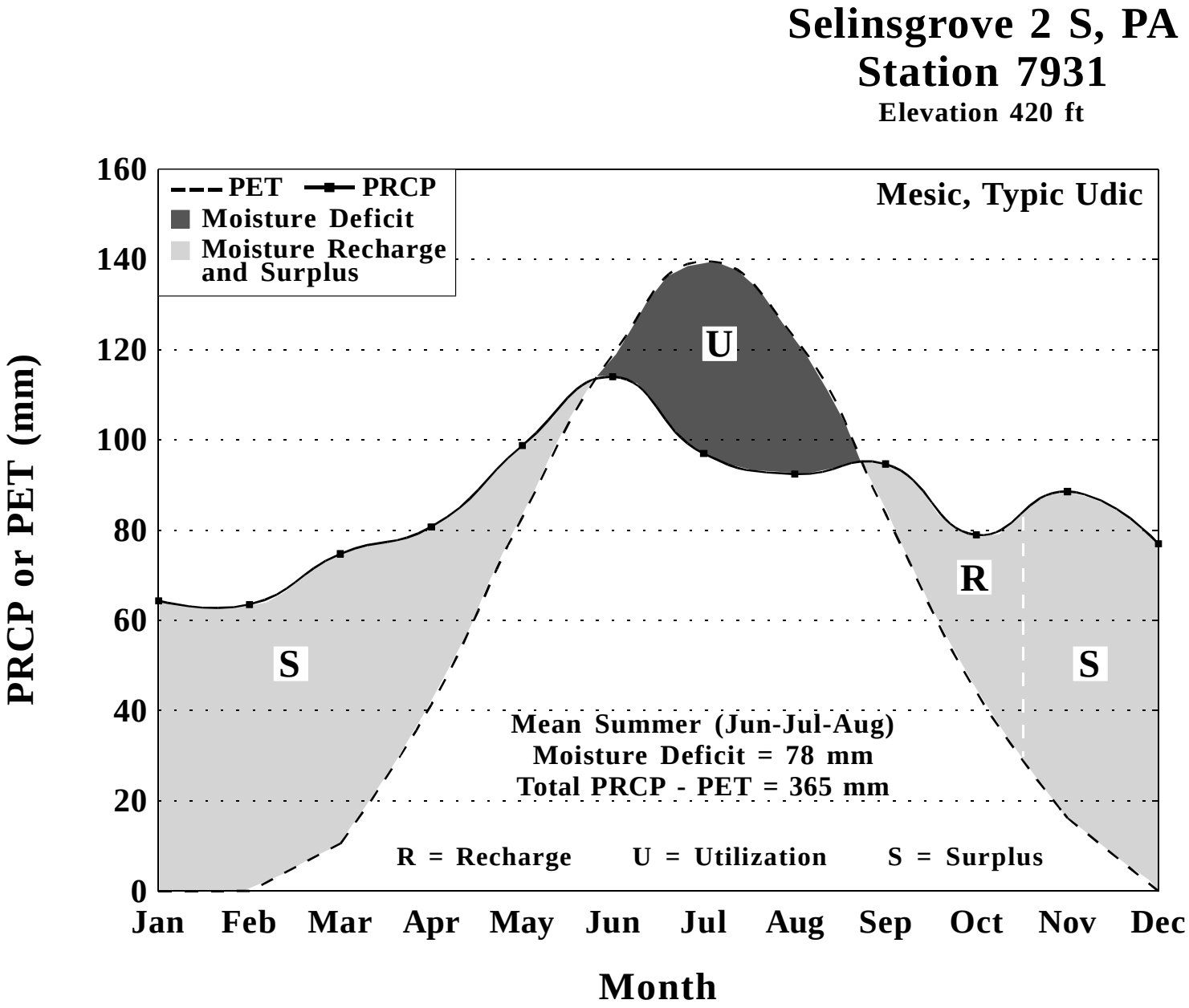
Mean Annual Potential Evapotranspiration: 666 mm
Mean Annual Moisture Surplus: 476 mm
Mean Annual Growing Season (Apr to Sept) Precipitation: 686 mm (60% of MAP)
Mean Summer (Jun-Jul-Aug) Moisture Surplus/Deficit: -41 mm





Number of Cumulative Days That the Moisture Control Section						Highest Number of Consecutive Days That the Moisture Control Section is			
During One Year is			When Soil Temperature is Above 5˚C			Moist in Some Parts		Dry After Summer Solstice	Moist After Winter Solstice
Dry	Moist/Dry	Moist	Dry	Moist/Dry	Moist	Year	T > 8˚C		
0	0	360	0	0	227	360	208	0	120

Computed by BASIC program FLEXNSM (Van Wambeke et al., 1992)
Tentative subdivision: Typic Udic



Moisture balance for Selinsgrove 2 S, Pennsylvania, based upon a period of 1961-1990. PET calculated by Newhall Simulation Model (Van Wambeke et al., 1992).

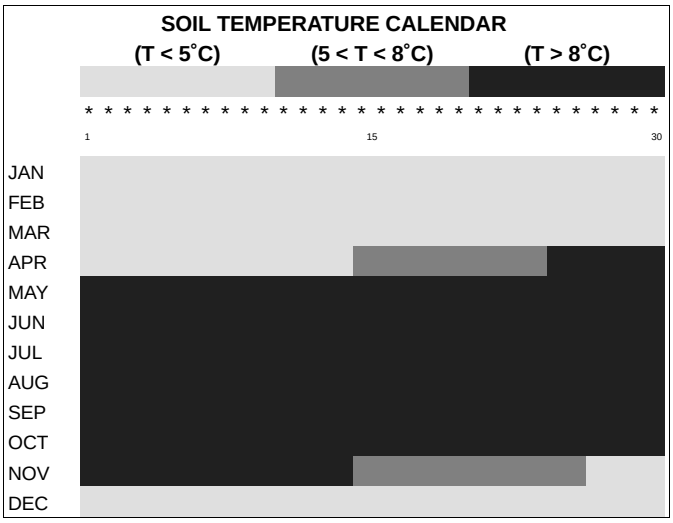
Station: Selinsgrove 2 S, PA
Elevation: 420 ft
Period of Record: 1961-1990
Mean Annual Precipitation: 1025 mm
Soil Temperature Regime: Mesic

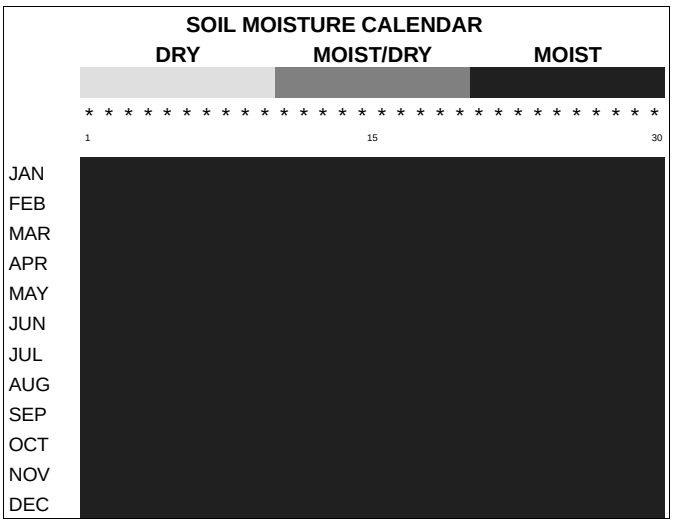
MLRA: 147 Northern Appalachian Ridges and Valleys
Country: USA

Latitude: 40 46 00N
Longitude: 76 52 00W
Waterholding Capacity: 200 mm
Soil Moisture Regime: Udic

SOIL CLIMATIC REGIME ACCORDING TO NEWHALL SIMULATION MODEL (MAST = MAAT + 1.2˚ C; amplitude reduced by 1/3)											
JAN	**FEB**	**MAR**	**APR**	**MAY**	**JUN**	**JUL**	**AUG**	**SEP**	**OCT**	**NOV**	**DEC**
Monthly Precipitation (mm)											
64.3	63.5	74.7	80.8	98.8	114.0	97.0	92.5	94.7	79.0	88.6	77.0
Monthly Air Temperatures (˚C)											
-3.7	-2.4	3.2	9.2	14.8	19.8	22.3	21.3	17.3	10.9	5.4	-0.6
Monthly Evapotranspiration (mm)											
0.0	0.0	10.5	41.3	82.9	118.9	139.6	122.7	83.7	44.0	16.2	0.0

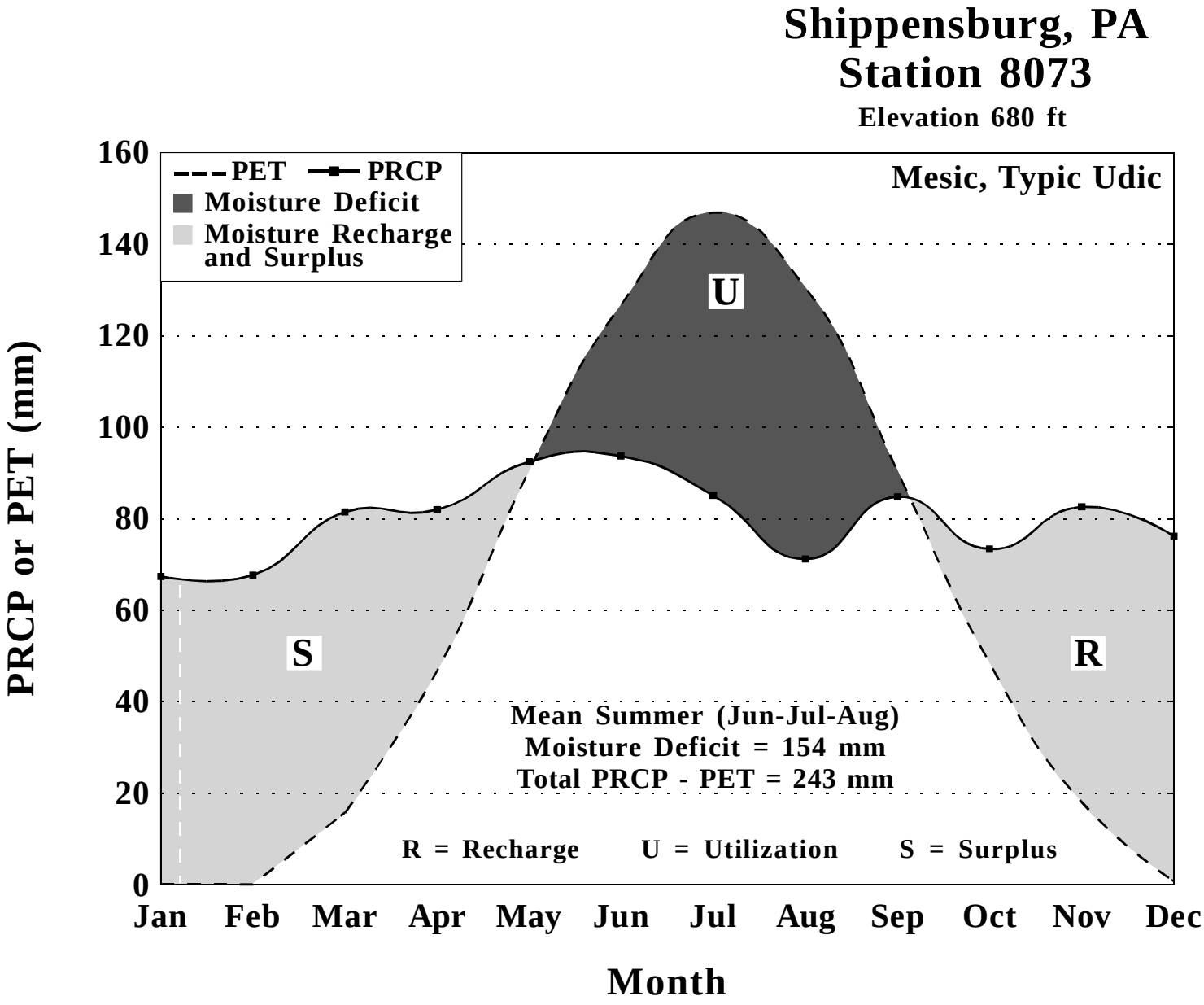
Mean Annual Potential Evapotranspiration: 660 mm
Mean Annual Moisture Surplus: 365 mm
Mean Annual Growing Season (Apr to Sept) Precipitation: 578 mm (56% of MAP)
Mean Summer (Jun-Jul-Aug) Moisture Surplus/Deficit: -78 mm





Number of Cumulative Days That the Moisture Control Section						Highest Number of Consecutive Days That the Moisture Control Section is			
During One Year is			When Soil Temperature is Above 5˚C			Moist in Some Parts		Dry After Summer Solstice	Moist After Winter Solstice
Dry	Moist/Dry	Moist	Dry	Moist/Dry	Moist	Year	T > 8˚C		
0	0	360	0	0	222	360	202	0	120

Computed by BASIC program FLEXNSM (Van Wambeke et al., 1992)
Tentative subdivision: Typic Udic



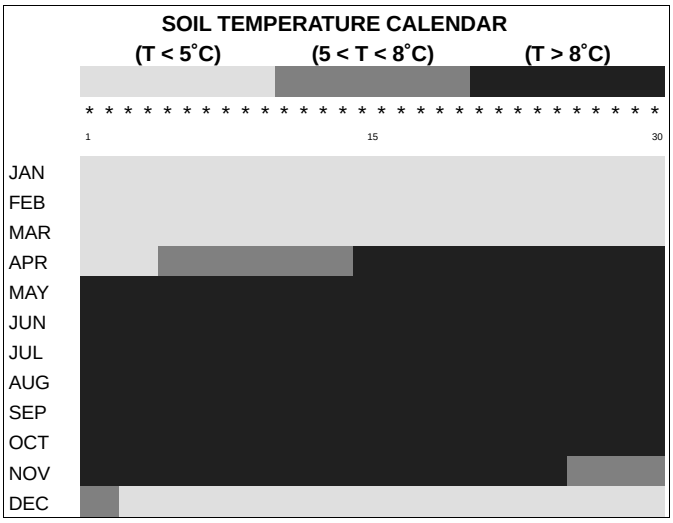
Moisture balance for Shippensburg, Pennsylvania, based upon a period of 1961-1990. PET calculated by Newhall Simulation Model (Van Wambeke et al., 1992).

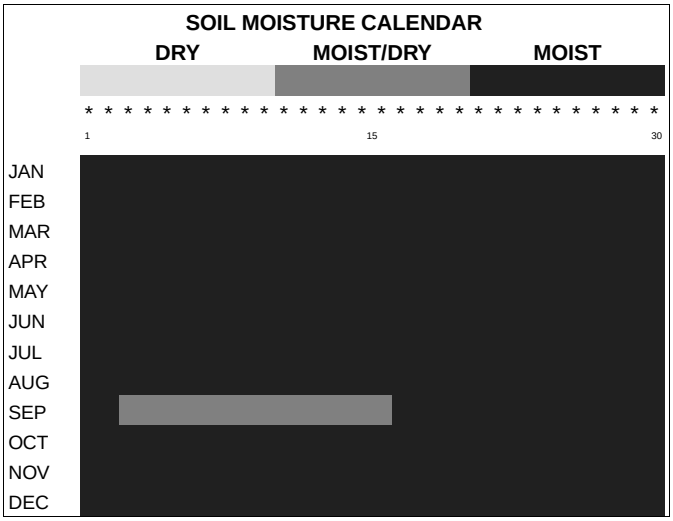
Station: Shippensburg, PA **MLRA:** 130 Blue Ridge **Latitude:** 40 03 00N
Elevation: 680 ft **Longitude:** 77 31 00W
Period of Record: 1961-1990
Mean Annual Precipitation: 958 mm **Country:** USA **Waterholding Capacity:** 200 mm
Soil Temperature Regime: Mesic **Soil Moisture Regime:** Udic

SOIL CLIMATIC REGIME ACCORDING TO NEWHALL SIMULATION MODEL
(MAST = MAAT + 1.2˚ C; amplitude reduced by 1/3)

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Monthly Precipitation (mm)											
67.3	67.6	81.5	82.0	92.5	93.7	85.1	71.1	84.8	73.4	82.6	76.2
Monthly Air Temperatures (˚C)											
-2.0	-0.4	5.1	11.0	16.7	21.3	23.6	22.8	19.0	12.6	6.7	0.6
Monthly Evapotranspiration (mm)											
0.0	0.0	15.7	46.7	90.6	126.7	146.9	130.5	90.4	48.4	18.0	0.7

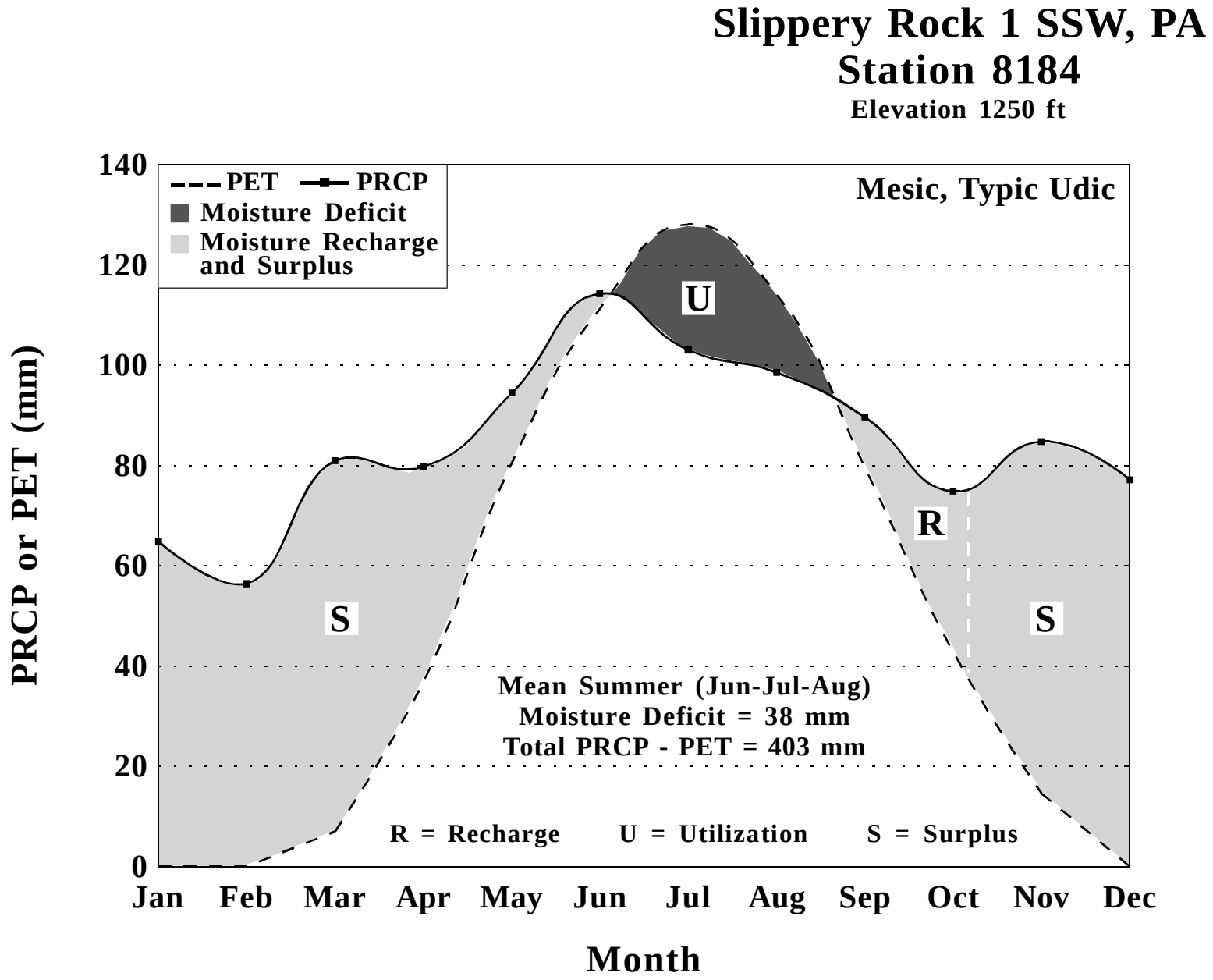
Mean Annual Potential Evapotranspiration: 715 mm
Mean Annual Moisture Surplus: 243 mm
Mean Annual Growing Season (Apr to Sept) Precipitation: 509 mm (53% of MAP)
Mean Summer (Jun-Jul-Aug) Moisture Surplus/Deficit: -154 mm





Number of Cumulative Days That the Moisture Control Section						Highest Number of Consecutive Days That the Moisture Control Section is			
During One Year is			When Soil Temperature is Above 5˚C			Moist in Some Parts		Dry After Summer Solstice	Moist After Winter Solstice
Dry	Moist/Dry	Moist	Dry	Moist/Dry	Moist	Year	T > 8˚C		
0	13	347	0	13	226	360	220	0	120

Computed by BASIC program FLEXNSM (Van Wambeke et al., 1992)
Tentative subdivision: Typic Udic



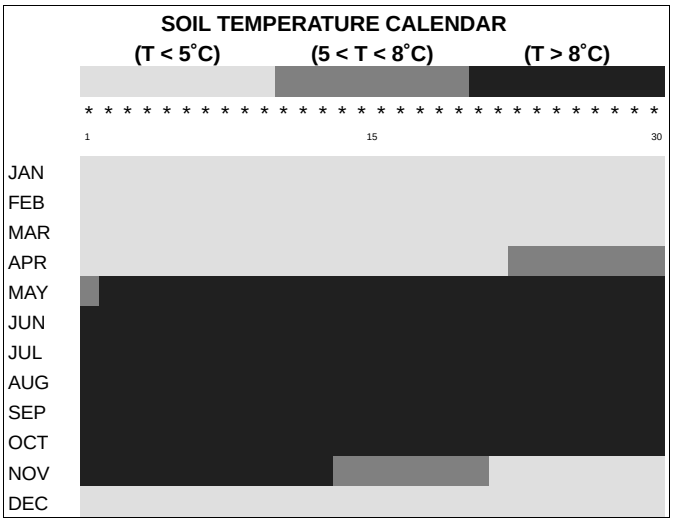
Moisture balance for Slippery Rock 1 SSW, Pennsylvania, based upon a period of 1961-1990. PET calculated by Newhall Simulation Model (Van Wambeke et al., 1992).

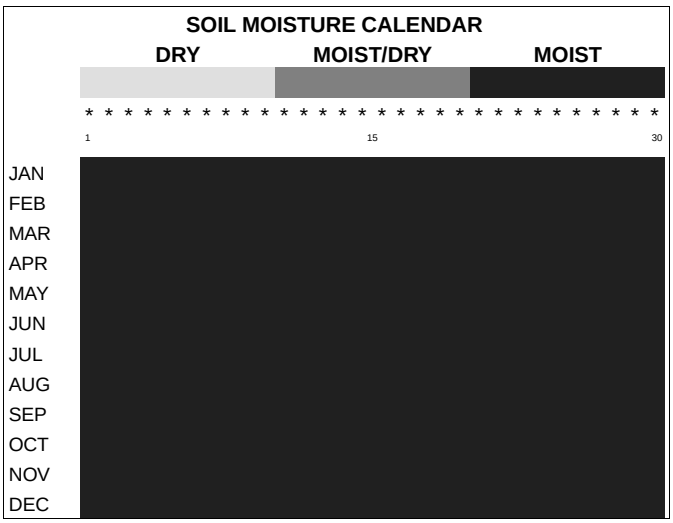
Station: Slippery Rock 1 SSW, PA **MLRA:** 126 Central **Latitude:** 41 03 00N
Elevation: 1250 ft Allegheny Plateau **Longitude:** 80 04 00W
Period of Record: 1961-1990
Mean Annual Precipitation: 1018 mm **Country:** USA **Waterholding Capacity:** 200 mm
Soil Temperature Regime: Mesic **Soil Moisture Regime:** Udic

SOIL CLIMATIC REGIME ACCORDING TO NEWHALL SIMULATION MODEL
(MAST = MAAT + 1.2˚ C; amplitude reduced by 1/3)

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Monthly Precipitation (mm)											
63.8	56.4	81.0	79.8	94.5	114.3	103.1	98.6	89.7	74.9	84.8	77.2
Monthly Air Temperatures (˚C)											
-4.9	-3.8	1.8	7.6	13.7	18.1	20.4	19.5	15.9	9.8	4.3	-1.7
Monthly Evapotranspiration (mm)											
0.0	0.0	7.0	36.9	80.6	111.3	128.1	114.2	79.7	42.8	14.6	0.0

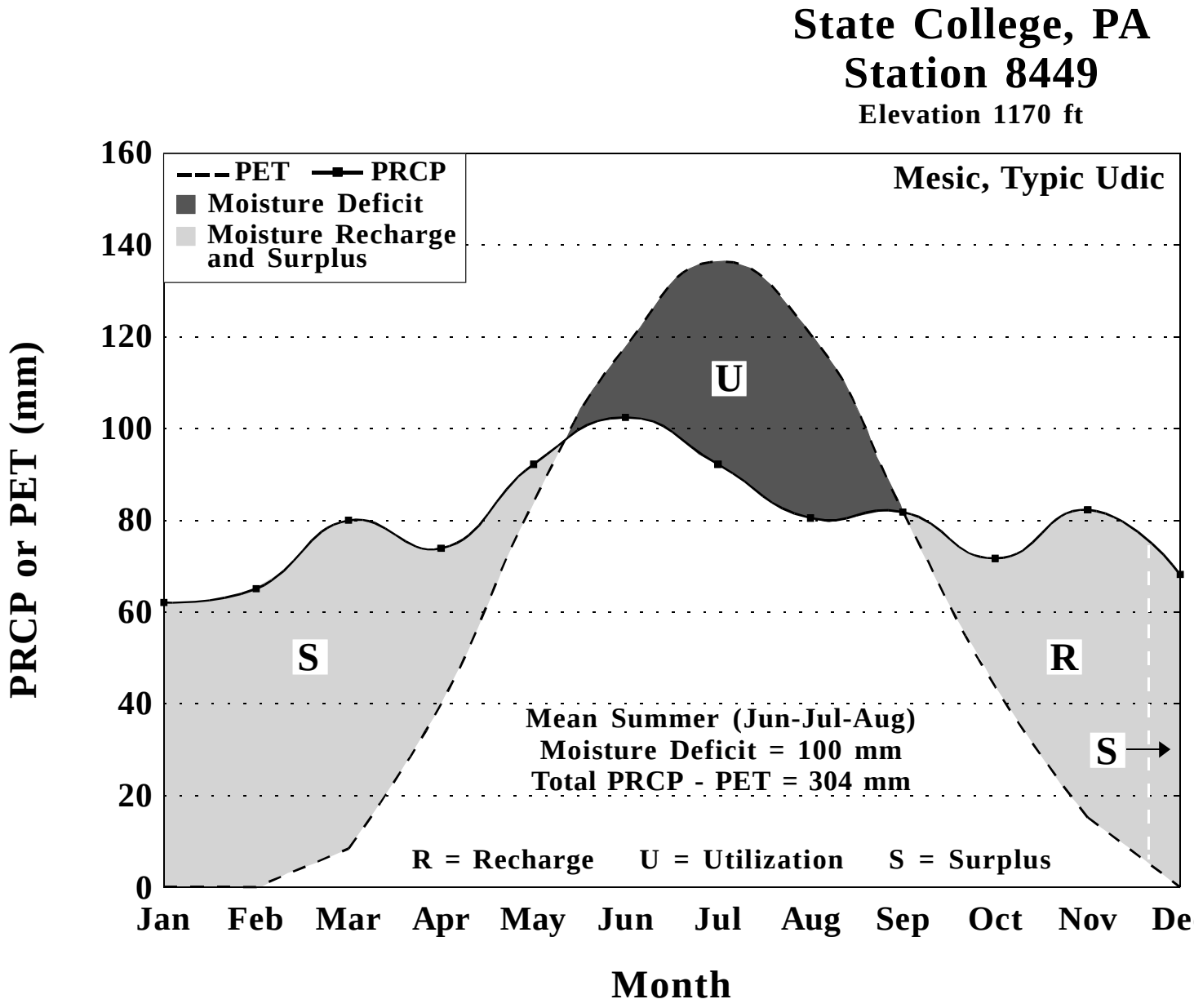
Mean Annual Potential Evapotranspiration: 615 mm
Mean Annual Moisture Surplus: 403 mm
Mean Annual Growing Season (Apr to Sept) Precipitation: 580 mm (57% of MAP)
Mean Summer (Jun-Jul-Aug) Moisture Surplus/Deficit: -38 mm





Number of Cumulative Days That the Moisture Control Section						Highest Number of Consecutive Days That the Moisture Control Section is			
During One Year is			When Soil Temperature is Above 5˚C			Moist in Some Parts		Dry After Summer Solstice	Moist After Winter Solstice
Dry	Moist/Dry	Moist	Dry	Moist/Dry	Moist	Year	T > 8˚C		
0	0	360	0	0	210	360	189	0	120

Computed by BASIC program FLEXNSM (Van Wambeke et al., 1992)
Tentative subdivision: Typic Udic



Moisture balance for State College, Pennsylvania, based upon a period of 1961-1990. PET calculated by Newhall Simulation Model (Van Wambeke et al., 1992).

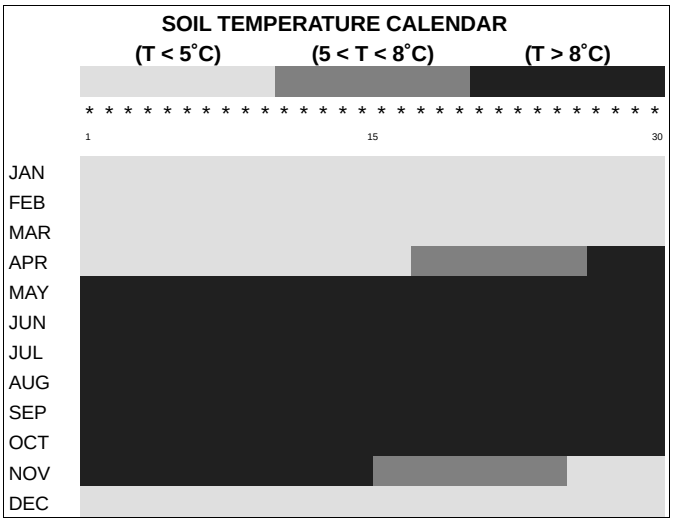
Station: State College, PA
Elevation: 1170 ft
Period of Record: 1961-1990
Mean Annual Precipitation: 952 mm
Soil Temperature Regime: Mesic

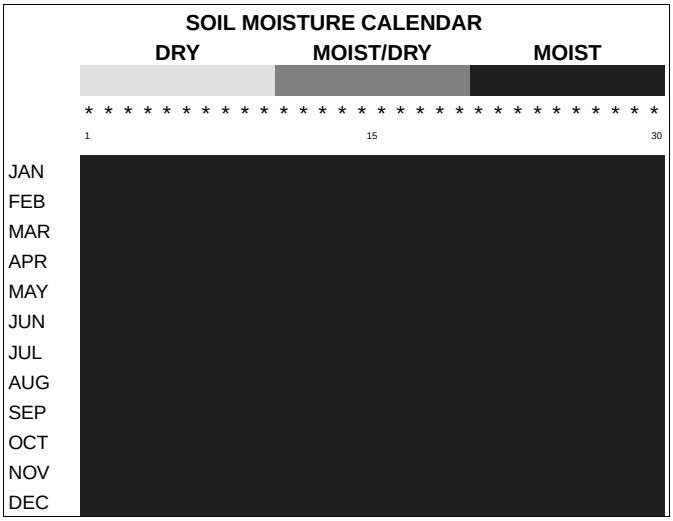
MLRA: 147 Northern Appalachian Ridges and Valleys
Country: USA

Latitude: 40 48 00N
Longitude: 77 52 00W
Waterholding Capacity: 200 mm
Soil Moisture Regime: Udic

SOIL CLIMATIC REGIME ACCORDING TO NEWHALL SIMULATION MODEL (MAST = MAAT + 1.2˚ C; amplitude reduced by 1/3)											
JAN	**FEB**	**MAR**	**APR**	**MAY**	**JUN**	**JUL**	**AUG**	**SEP**	**OCT**	**NOV**	**DEC**
Monthly Precipitation (mm)											
62.0	65.0	80.0	73.9	92.2	102.4	92.2	80.5	81.8	71.6	82.3	68.1
Monthly Air Temperatures (˚C)											
-4.1	-2.9	2.5	8.7	14.8	19.6	21.8	20.9	16.8	10.6	4.9	-1.2
Monthly Evapotranspiration (mm)											
0.0	0.0	8.4	39.9	84.0	117.8	136.4	120.6	81.9	43.6	15.2	0.0

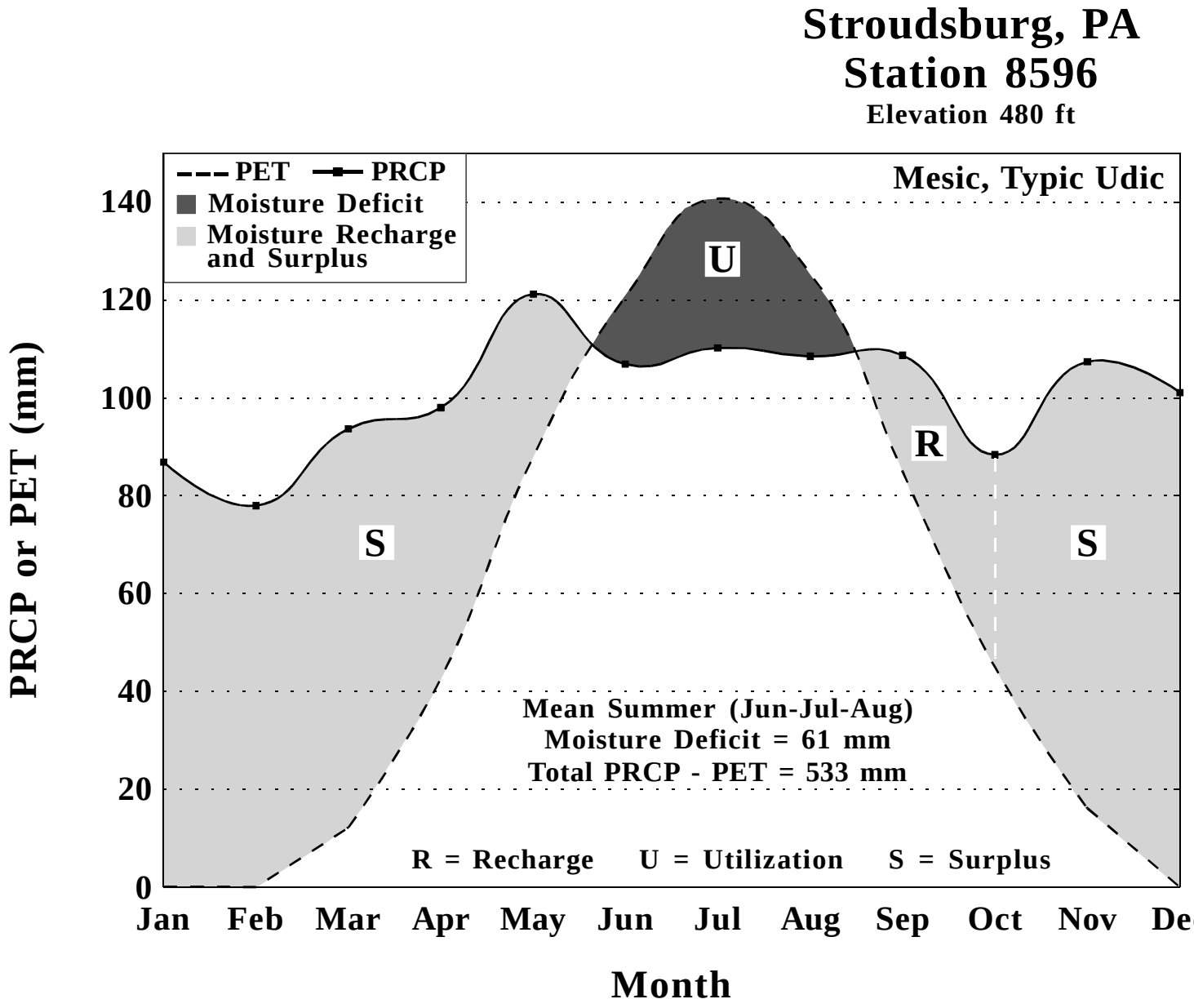
Mean Annual Potential Evapotranspiration: 648 mm
Mean Annual Moisture Surplus: 304 mm
Mean Annual Growing Season (Apr to Sept) Precipitation: 523 mm (55% of MAP)
Mean Summer (Jun-Jul-Aug) Moisture Surplus/Deficit: -100 mm





Number of Cumulative Days That the Moisture Control Section						Highest Number of Consecutive Days That the Moisture Control Section is			
During One Year is			When Soil Temperature is Above 5˚C			Moist in Some Parts		Dry After Summer Solstice	Moist After Winter Solstice
Dry	Moist/Dry	Moist	Dry	Moist/Dry	Moist	Year	T > 8˚C		
0	0	360	0	0	217	360	198	0	120

Computed by BASIC program FLEXNSM (Van Wambeke et al., 1992)
Tentative subdivision: Typic Udic



Moisture balance for Stroudsburg, Pennsylvania, based upon a period of 1961-1990. PET calculated by Newhall Simulation Model (Van Wambeke et al., 1992).

Station: Stroudsburg, PA
Elevation: 480 ft
Period of Record: 1961-1990
Mean Annual Precipitation: 1209 mm
Soil Temperature Regime: Mesic

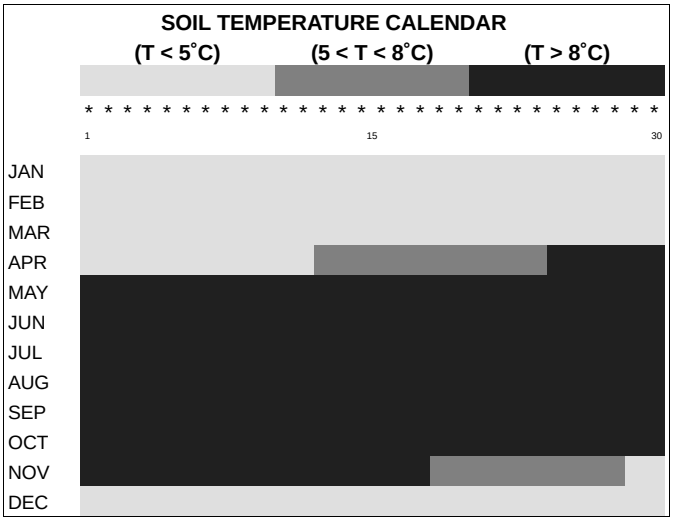
MLRA: 140 Glaciated Allegheny Plateau and Catskill Mtns.
Country: USA

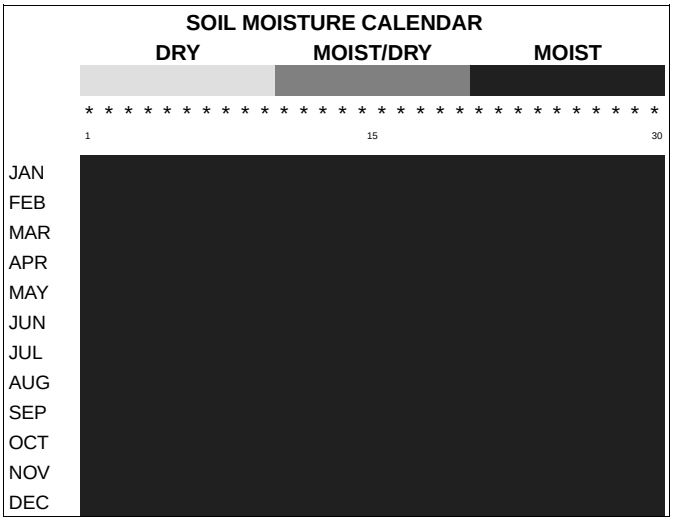
Latitude: 41 00 00N
Longitude: 75 11 00W
Waterholding Capacity: 200 mm
Soil Moisture Regime: Udic

SOIL CLIMATIC REGIME ACCORDING TO NEWHALL SIMULATION MODEL
(MAST = MAAT + 1.2˚ C; amplitude reduced by 1/3)

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Monthly Precipitation (mm)											
86.9	78.0	93.7	98.0	121.2	106.9	110.2	108.5	108.7	88.4	107.4	101.1
Monthly Air Temperatures (˚C)											
-3.4	-1.8	3.7	9.6	15.7	20.1	22.6	21.7	17.7	11.3	5.6	-0.7
Monthly Evapotranspiration (mm)											
0.0	0.0	12.2	42.6	88.0	120.6	140.7	125.4	85.0	44.9	16.1	0.0

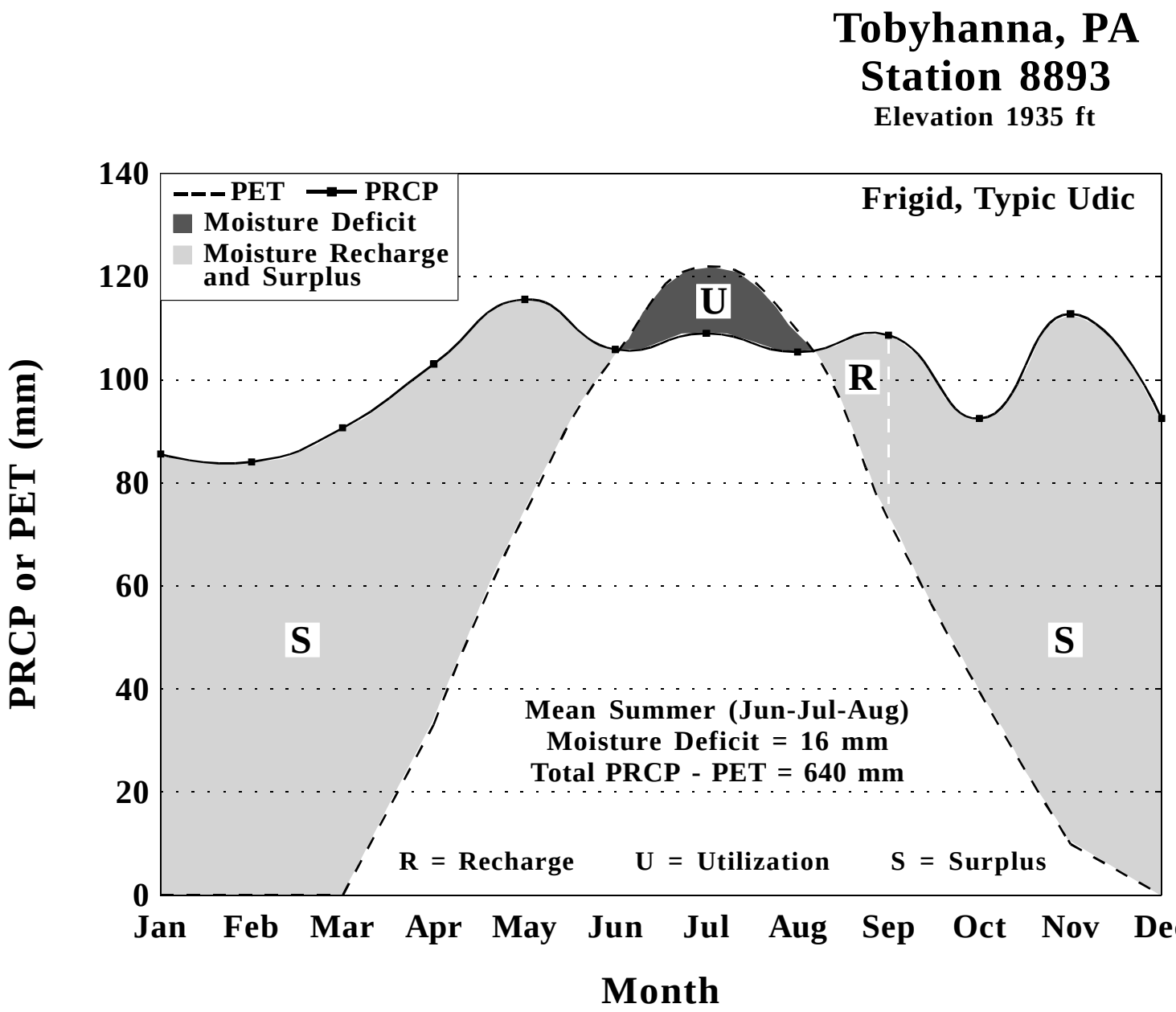
Mean Annual Potential Evapotranspiration: 676 mm
Mean Annual Moisture Surplus: 533 mm
Mean Annual Growing Season (Apr to Sept) Precipitation: 653 mm (54% of MAP)
Mean Summer (Jun-Jul-Aug) Moisture Surplus/Deficit: -61 mm





Number of Cumulative Days That the Moisture Control Section						Highest Number of Consecutive Days That the Moisture Control Section is			
During One Year is			When Soil Temperature is Above 5˚C			Moist in Some Parts		Dry After Summer Solstice	Moist After Winter Solstice
Dry	Moist/Dry	Moist	Dry	Moist/Dry	Moist	Year	T > 8˚C		
0	0	360	0	0	226	360	207	0	120

Computed by BASIC program FLEXNSM (Van Wambeke et al., 1992)
Tentative subdivision: Typic Udic



Moisture balance for Tobyhanna, Pennsylvania, based upon a period of 1961-1990. PET calculated by Newhall Simulation Model (Van Wambeke et al., 1992).

Station: Tobyhanna, PA
Elevation: 1935 ft
Period of Record: 1961-1990
Mean Annual Precipitation: 1206 mm
Soil Temperature Regime: Frigid

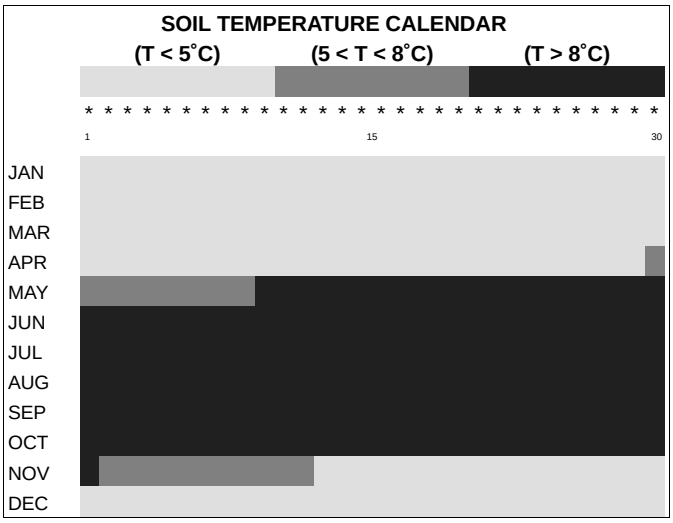
MLRA: 140 Glaciated Allegheny Plateau and Catskill Mtns.
Country: USA

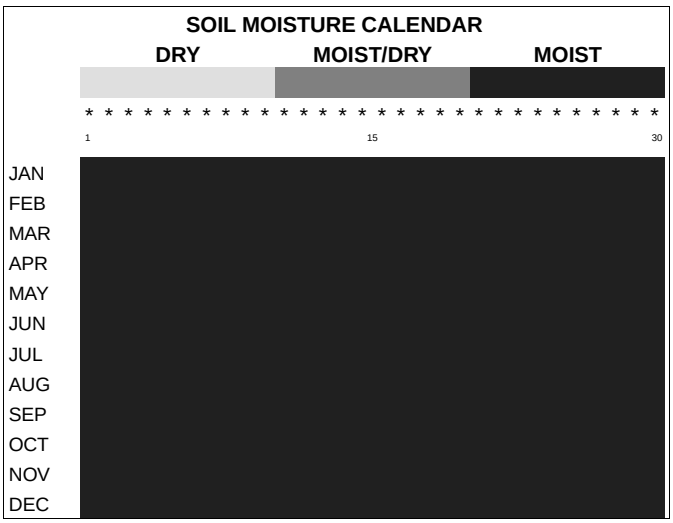
Latitude: 41 11 00N
Longitude: 75 25 00W
Waterholding Capacity: 200 mm
Soil Moisture Regime: Udic

SOIL CLIMATIC REGIME ACCORDING TO NEWHALL SIMULATION MODEL
(MAST = MAAT + 1.2˚ C; amplitude reduced by 1/3)

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Monthly Precipitation (mm)											
85.6	84.1	90.7	103.1	115.6	105.9	109.0	105.4	108.7	92.5	112.8	92.5
Monthly Air Temperatures (˚C)											
-6.6	-5.7	-0.3	6.1	11.8	16.5	19.0	18.2	13.9	8.3	2.5	-3.6
Monthly Evapotranspiration (mm)											
0.0	0.0	0.0	33.1	74.0	104.8	122.0	109.6	72.8	39.4	9.9	0.0

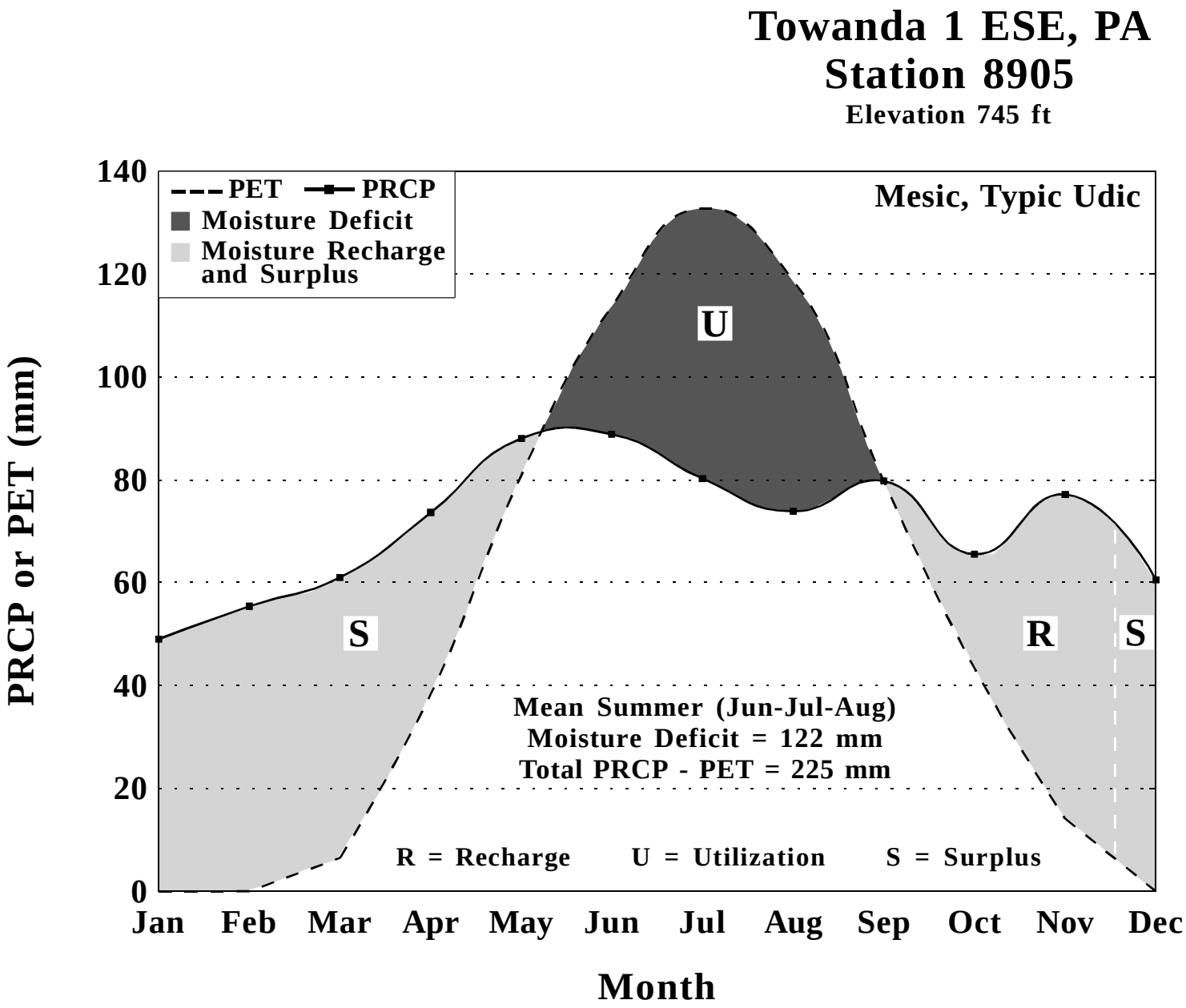
Mean Annual Potential Evapotranspiration: 566 mm
Mean Annual Moisture Surplus: 640 mm
Mean Annual Growing Season (Apr to Sept) Precipitation: 648 mm (54% of MAP)
Mean Summer (Jun-Jul-Aug) Moisture Surplus/Deficit: -16 mm





Number of Cumulative Days That the Moisture Control Section						Highest Number of Consecutive Days That the Moisture Control Section is			
During One Year is			When Soil Temperature is Above 5˚C			Moist in Some Parts		Dry After Summer Solstice	Moist After Winter Solstice
Dry	Moist/Dry	Moist	Dry	Moist/Dry	Moist	Year	T > 8˚C		
0	0	360	0	0	193	360	172	0	120

Computed by BASIC program FLEXNSM (Van Wambeke et al., 1992)
Tentative subdivision: Typic Udic



Moisture balance for Towanda 1 ESE, Pennsylvania, based upon a period of 1961-1990. PET calculated by Newhall Simulation Model (Van Wambeke et al., 1992).

Station: Towanda 1 ESE, PA
Elevation: 745 ft
Period of Record: 1961-1990
Mean Annual Precipitation: 853 mm
Soil Temperature Regime: Mesic

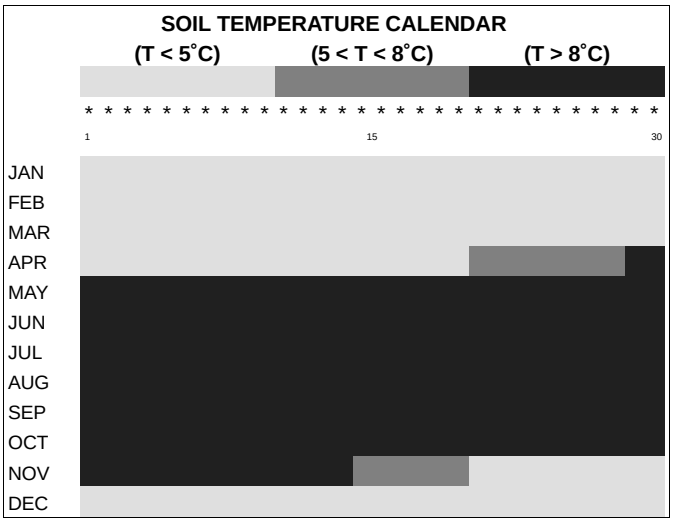
MLRA: 140 Glaciated Allegheny Plateau and Catskill Mtns.
Country: USA

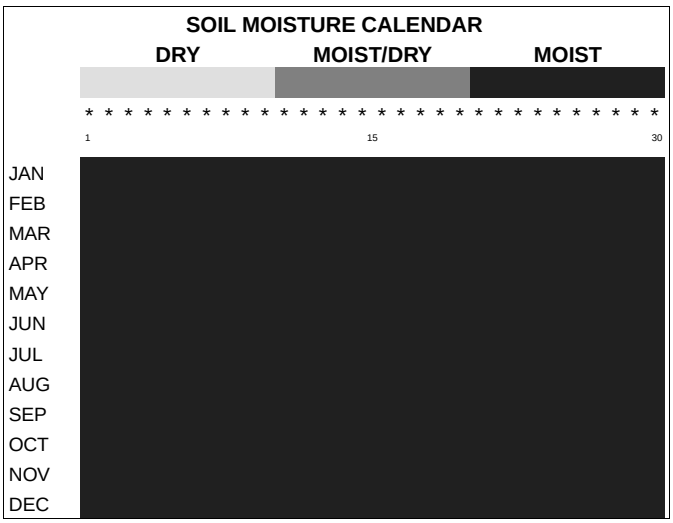
Latitude: 41 45 00N
Longitude: 76 25 00W
Waterholding Capacity: 200 mm
Soil Moisture Regime: Udic

SOIL CLIMATIC REGIME ACCORDING TO NEWHALL SIMULATION MODEL
(MAST = MAAT + 1.2˚ C; amplitude reduced by 1/3)

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Monthly Precipitation (mm)											
49.0	55.4	61.0	73.7	88.1	88.9	80.3	73.9	79.8	65.5	77.2	60.5
Monthly Air Temperatures (˚C)											
-4.8	-3.9	1.8	8.1	13.9	18.6	21.2	20.3	16.2	10.2	4.4	-1.5
Monthly Evapotranspiration (mm)											
0.0	0.0	6.5	38.3	81.0	113.7	132.8	118.8	79.8	43.3	14.1	0.0

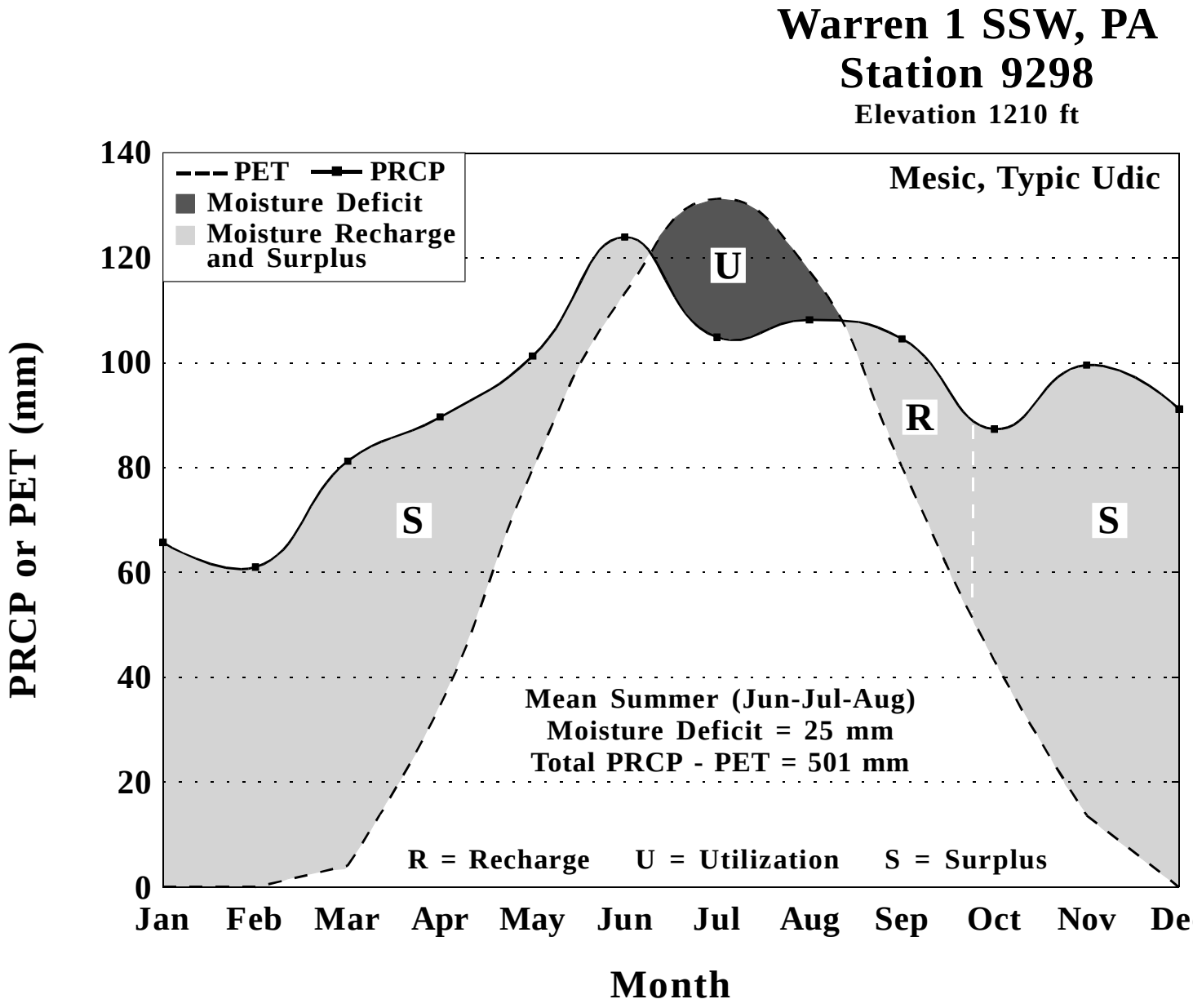
Mean Annual Potential Evapotranspiration: 628 mm
Mean Annual Moisture Surplus: 225 mm
Mean Annual Growing Season (Apr to Sept) Precipitation: 485 mm (57% of MAP)
Mean Summer (Jun-Jul-Aug) Moisture Surplus/Deficit: -122 mm





Number of Cumulative Days That the Moisture Control Section						Highest Number of Consecutive Days That the Moisture Control Section is			
During One Year is			When Soil Temperature is Above 5˚C			Moist in Some Parts		Dry After Summer Solstice	Moist After Winter Solstice
Dry	Moist/Dry	Moist	Dry	Moist/Dry	Moist	Year	T > 8˚C		
0	0	360	0	0	211	360	193	0	120

Computed by BASIC program FLEXNSM (Van Wambeke et al., 1992)
Tentative subdivision: Typic Udic



Moisture balance for Warren 1 SSW, Pennsylvania, based upon a period of 1961-1990. PET calculated by Newhall Simulation Model (Van Wambeke et al., 1992).

Station: Warren 1 SSW, PA
Elevation: 1210 ft
Period of Record: 1961-1990
Mean Annual Precipitation: 1119 mm
Soil Temperature Regime: Mesic

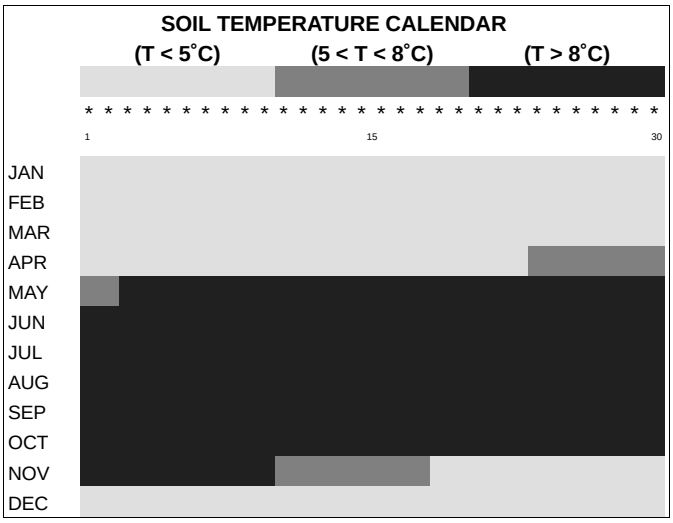
MLRA: 127 Eastern Allegheny Plateau and Mountains
Country: USA

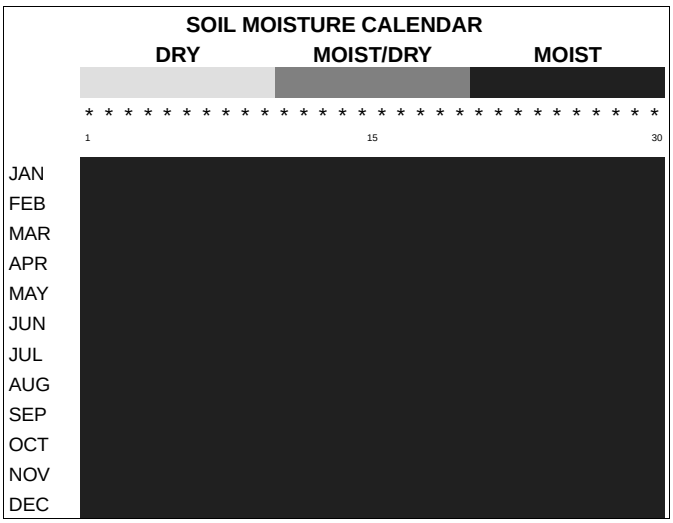
Latitude: 41 51 00N
Longitude: 79 09 00W
Waterholding Capacity: 200 mm
Soil Moisture Regime: Udic

SOIL CLIMATIC REGIME ACCORDING TO NEWHALL SIMULATION MODEL
(MAST = MAAT + 1.2˚ C; amplitude reduced by 1/3)

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Monthly Precipitation (mm)											
65.8	61.0	81.3	89.7	101.3	124.0	104.9	108.2	104.6	87.4	99.6	91.2
Monthly Air Temperatures (˚C)											
-5.0	-4.3	1.2	7.2	13.6	18.4	20.9	20.1	16.1	10.0	4.2	-1.9
Monthly Evapotranspiration (mm)											
0.0	0.0	4.1	34.6	79.7	113.2	131.3	117.5	80.2	43.2	13.7	0.0

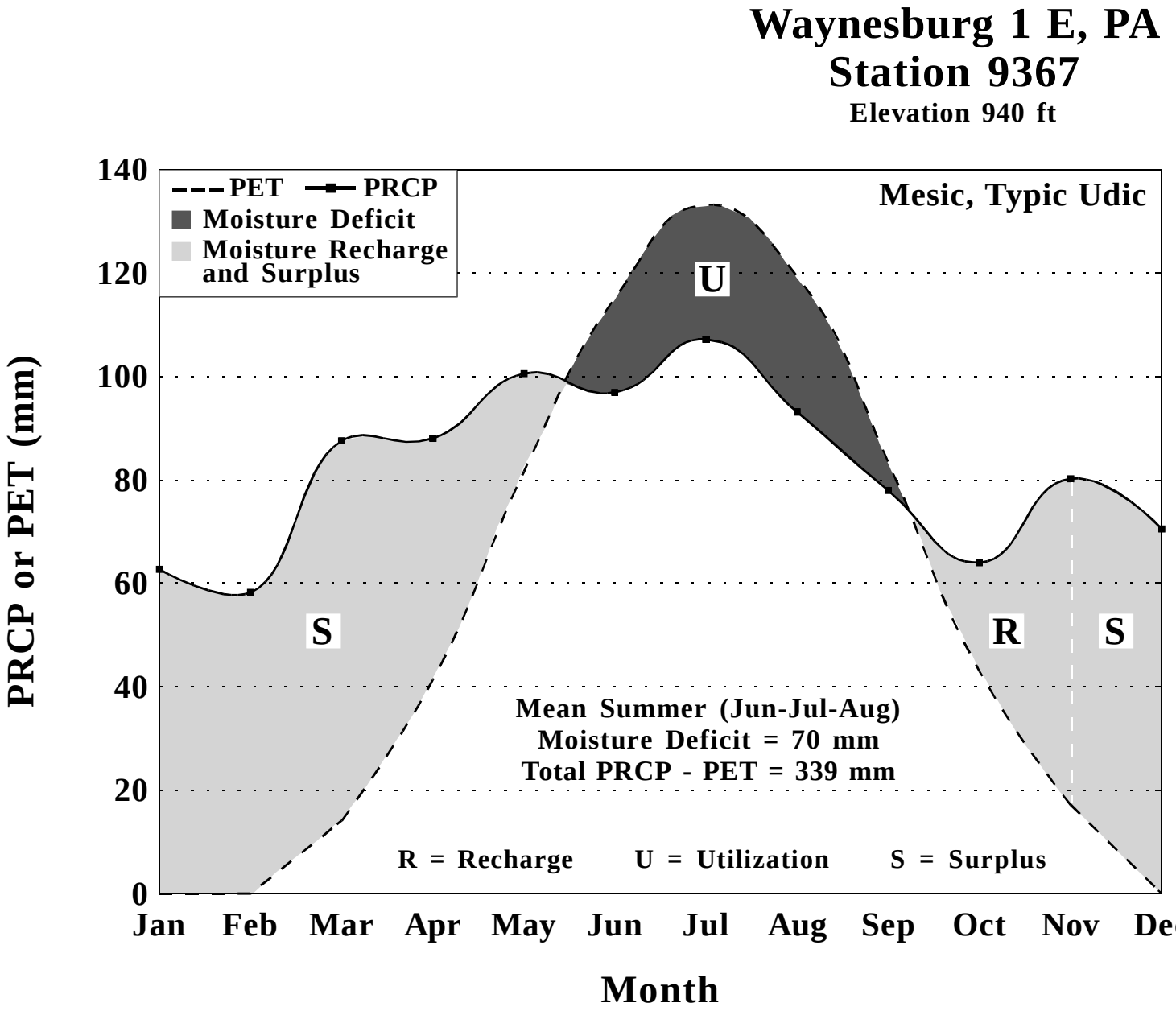
Mean Annual Potential Evapotranspiration: 618 mm
Mean Annual Moisture Surplus: 501 mm
Mean Annual Growing Season (Apr to Sept) Precipitation: 633 mm (57% of MAP)
Mean Summer (Jun-Jul-Aug) Moisture Surplus/Deficit: -25 mm





Number of Cumulative Days That the Moisture Control Section						Highest Number of Consecutive Days That the Moisture Control Section is			
During One Year is			When Soil Temperature is Above 5˚C			Moist in Some Parts		Dry After Summer Solstice	Moist After Winter Solstice
Dry	Moist/Dry	Moist	Dry	Moist/Dry	Moist	Year	T > 8˚C		
0	0	360	0	0	207	360	188	0	120

Computed by BASIC program FLEXNSM (Van Wambeke et al., 1992)
Tentative subdivision: Typic Udic

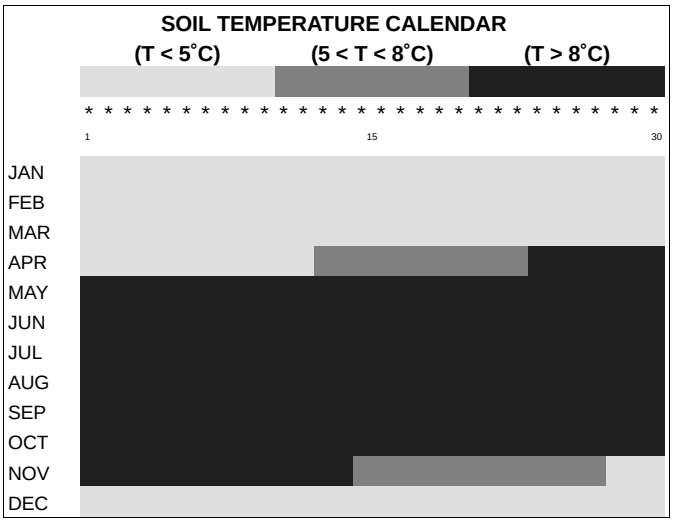


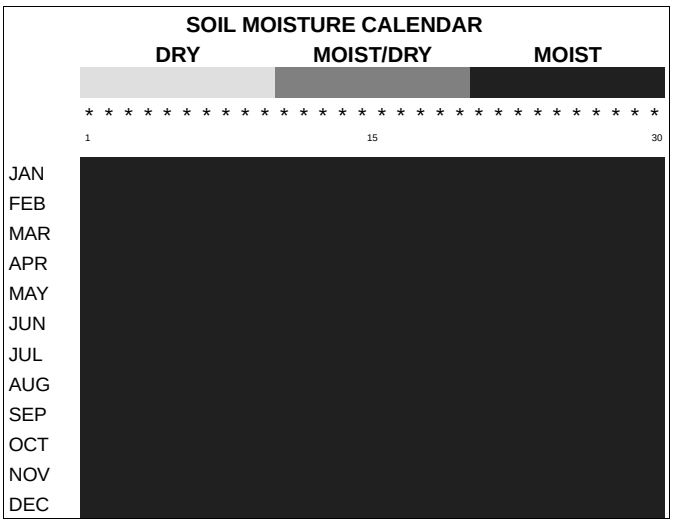
Moisture balance for Waynesburg 1 E, Pennsylvania, based upon a period of 1961-1990. PET calculated by Newhall Simulation Model (Van Wambeke et al., 1992).

Station: Waynesburg 1 E, PA **MLRA:** 126 Central **Latitude:** 39 54 00N
Elevation: 940 ft Allegheny Plateau **Longitude:** 80 10 00W
Period of Record: 1961-1990
Mean Annual Precipitation: 988 mm **Country:** USA **Waterholding Capacity:** 200 mm
Soil Temperature Regime: Mesic **Soil Moisture Regime:** Udic

SOIL CLIMATIC REGIME ACCORDING TO NEWHALL SIMULATION MODEL (MAST = MAAT + 1.2˚ C; amplitude reduced by 1/3)											
JAN	**FEB**	**MAR**	**APR**	**MAY**	**JUN**	**JUL**	**AUG**	**SEP**	**OCT**	**NOV**	**DEC**
Monthly Precipitation (mm)											
62.7	58.2	87.6	88.1	100.6	97.0	107.2	93.2	78.0	64.0	80.3	70.6
Monthly Air Temperatures (˚C)											
-2.9	-1.8	3.9	9.0	14.6	19.3	21.6	20.8	17.1	10.5	5.4	0.0
Monthly Evapotranspiration (mm)											
0.0	0.0	14.1	41.3	81.7	115.1	133.2	119.4	83.5	43.0	17.2	0.0

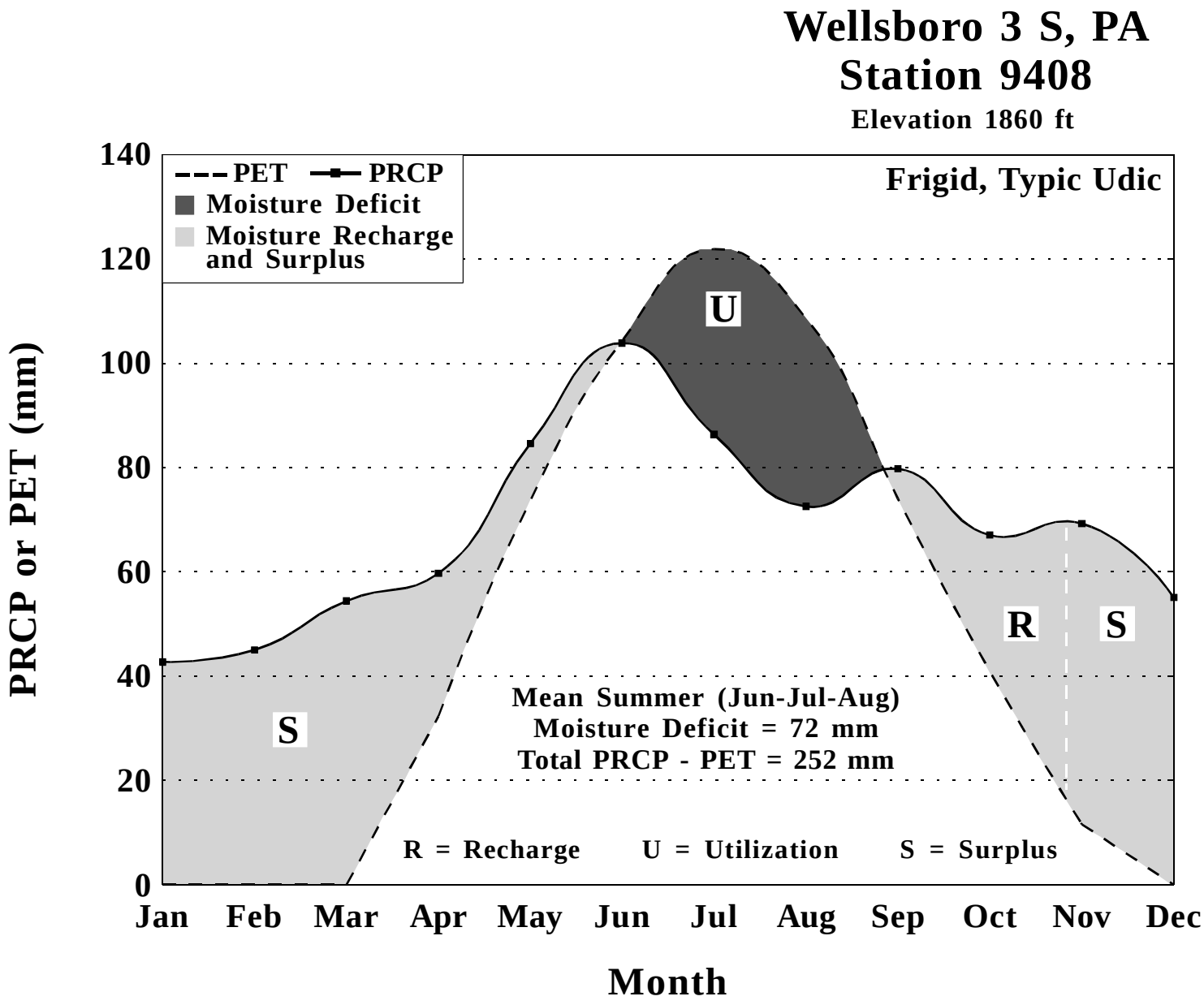
Mean Annual Potential Evapotranspiration: 649 mm
Mean Annual Moisture Surplus: 339 mm
Mean Annual Growing Season (Apr to Sept) Precipitation: 564 mm (57% of MAP)
Mean Summer (Jun-Jul-Aug) Moisture Surplus/Deficit: -70 mm





Number of Cumulative Days That the Moisture Control Section						Highest Number of Consecutive Days That the Moisture Control Section is			
During One Year is			When Soil Temperature is Above 5˚C			Moist in Some Parts		Dry After Summer Solstice	Moist After Winter Solstice
Dry	Moist/Dry	Moist	Dry	Moist/Dry	Moist	Year	T > 8˚C		
0	0	360	0	0	226	360	201	0	120

Computed by BASIC program FLEXNSM (Van Wambeke et al., 1992)
Tentative subdivision: Typic Udic



Moisture balance for Wellsboro 3 S, Pennsylvania, based upon a period of 1961-1990. PET calculated by Newhall Simulation Model (Van Wambeke et al., 1992).

Station: Wellsboro 3 S, PA
Elevation: 1860 ft
Period of Record: 1961-1990
Mean Annual Precipitation: 820 mm
Soil Temperature Regime: Frigid

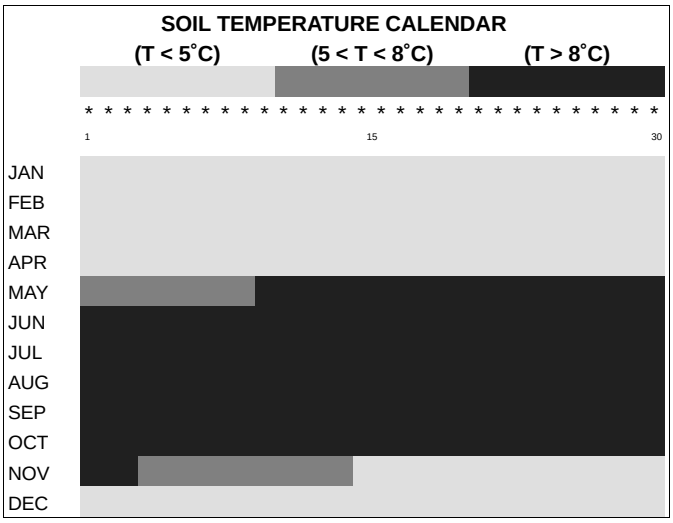
MLRA: 140 Glaciated Allegheny Plateau and Catskill Mtns.
Country: USA

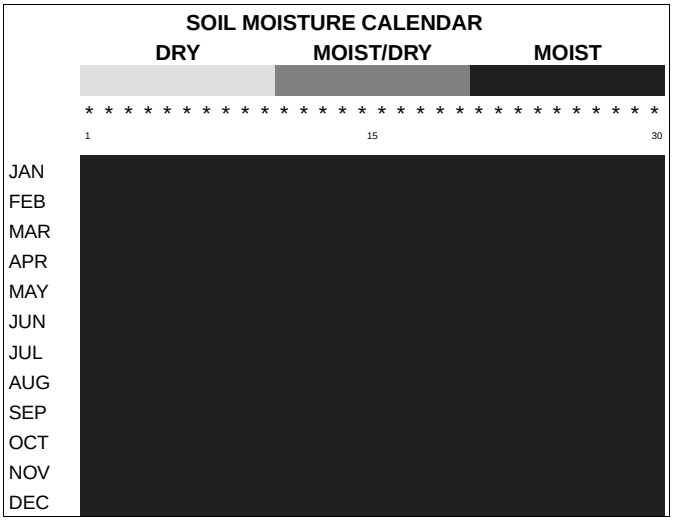
Latitude: 41 42 00N
Longitude: 77 16 00W
Waterholding Capacity: 200 mm
Soil Moisture Regime: Udic

SOIL CLIMATIC REGIME ACCORDING TO NEWHALL SIMULATION MODEL
(MAST = MAAT + 1.2˚ C; amplitude reduced by 1/3)

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Monthly Precipitation (mm)											
42.7	45.0	54.4	59.7	84.6	103.9	103.9	86.4	72.6	67.1	69.3	55.1
Monthly Air Temperatures (˚C)											
-6.5	-5.7	-0.4	5.9	11.8	16.4	19.0	18.1	14.2	8.6	2.9	-3.6
Monthly Evapotranspiration (mm)											
0.0	0.0	0.0	32.3	73.8	121.9	108.7	74.1	74.1	40.9	11.6	0.0

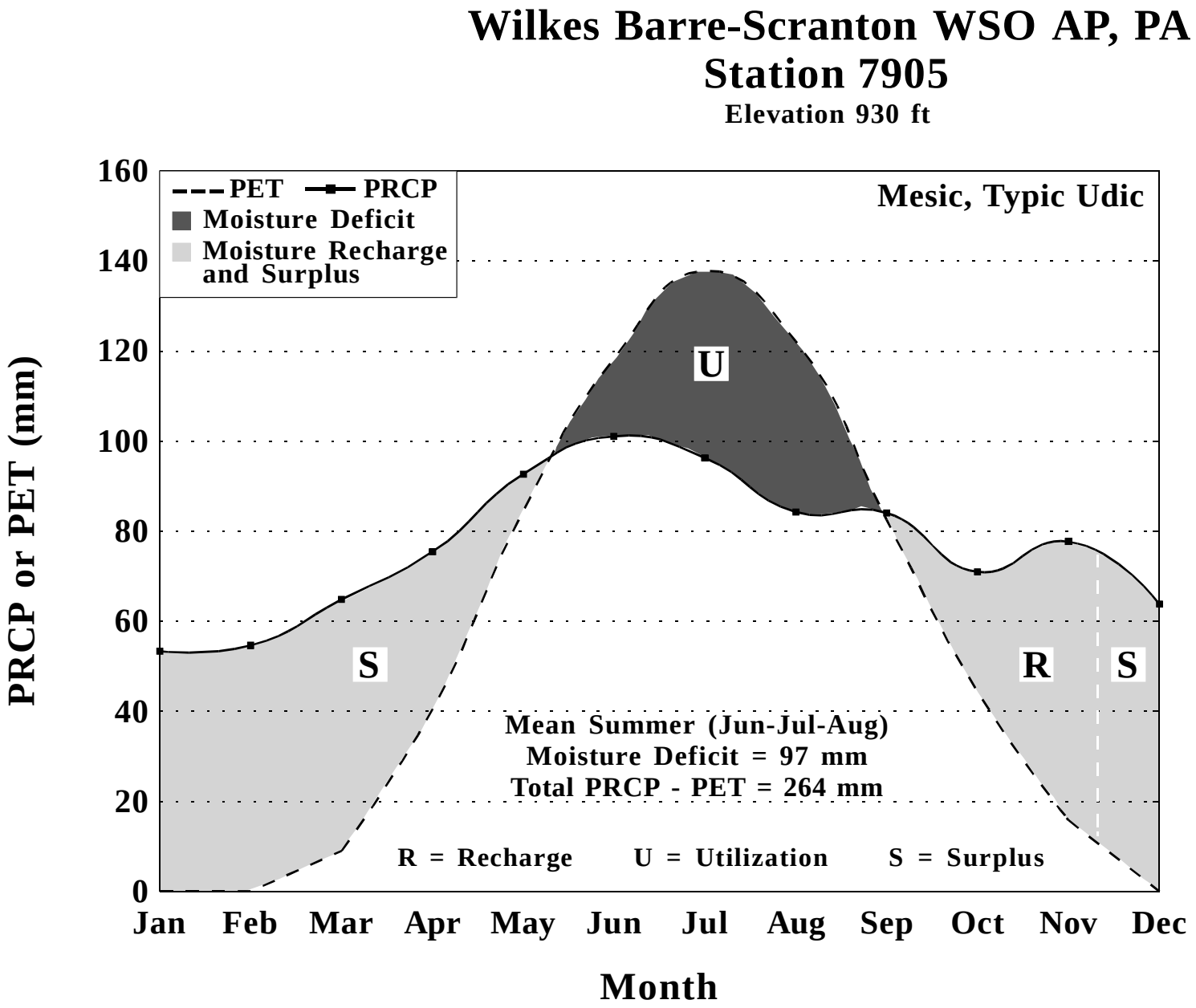
Mean Annual Potential Evapotranspiration: 568 mm
Mean Annual Moisture Surplus: 252 mm
Mean Annual Growing Season (Apr to Sept) Precipitation: 487 mm (59% of MAP)
Mean Summer (Jun-Jul-Aug) Moisture Surplus/Deficit: -72 mm





Number of Cumulative Days That the Moisture Control Section						Highest Number of Consecutive Days That the Moisture Control Section is			
During One Year is			When Soil Temperature is Above 5˚C			Moist in Some Parts		Dry After Summer Solstice	Moist After Winter Solstice
Dry	Moist/Dry	Moist	Dry	Moist/Dry	Moist	Year	T > 8˚C		
0	0	360	0	0	194	360	174	0	120

Computed by BASIC program FLEXNSM (Van Wambeke et al., 1992)
Tentative subdivision: Typic Udic



Moisture balance for Wilkes Barre-Scranton WSO Airport, Pennsylvania, based upon a period of 1961-1990. PET calculated by Newhall Simulation Model (Van Wambeke et al., 1992).

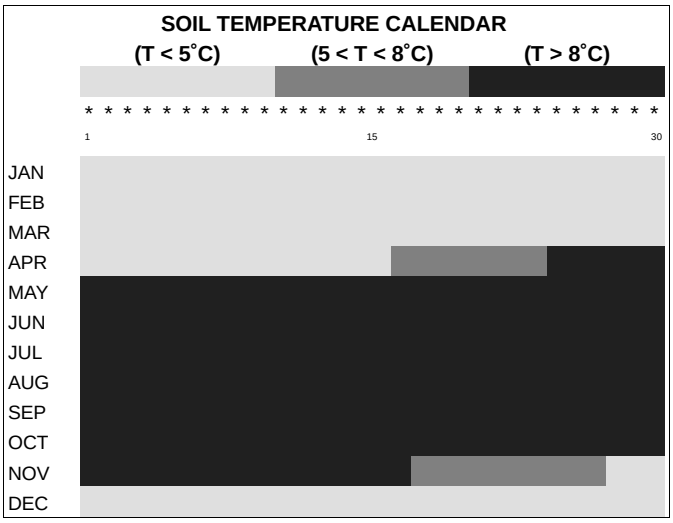
Station: Wilkes Barre-Scranton WSO AP, PA
Elevation: 930 ft
Period of Record: 1961-1990
Mean Annual Precipitation: 919 mm
Soil Temperature Regime: Mesic

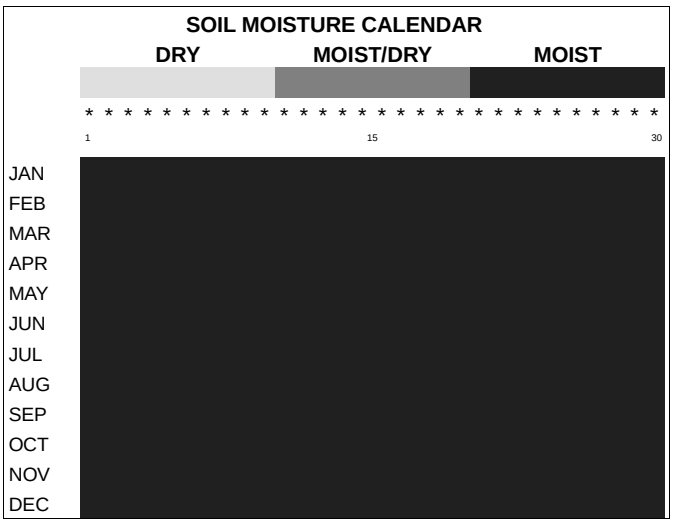
MLRA: 140 Glaciated Allegheny Plateau & Catskill Mtns.
Country: USA

Latitude: 41 20 00N
Longitude: 75 44 00W
Waterholding Capacity: 200 mm
Soil Moisture Regime: Udic

SOIL CLIMATIC REGIME ACCORDING TO NEWHALL SIMULATION MODEL (MAST = MAAT + 1.2˚ C; amplitude reduced by 1/3)											
JAN	**FEB**	**MAR**	**APR**	**MAY**	**JUN**	**JUL**	**AUG**	**SEP**	**OCT**	**NOV**	**DEC**
Monthly Precipitation (mm)											
53.3	54.6	64.8	75.4	92.7	101.1	96.3	84.3	84.1	70.9	77.7	63.8
Monthly Air Temperatures (˚C)											
-4.1	-2.9	2.7	8.9	14.9	19.6	22.1	21.1	17.0	10.8	5.2	-1.1
Monthly Evapotranspiration (mm)											
0.0	0.0	9.0	40.4	84.6	118.3	137.8	122.2	82.6	44.3	15.8	0.0

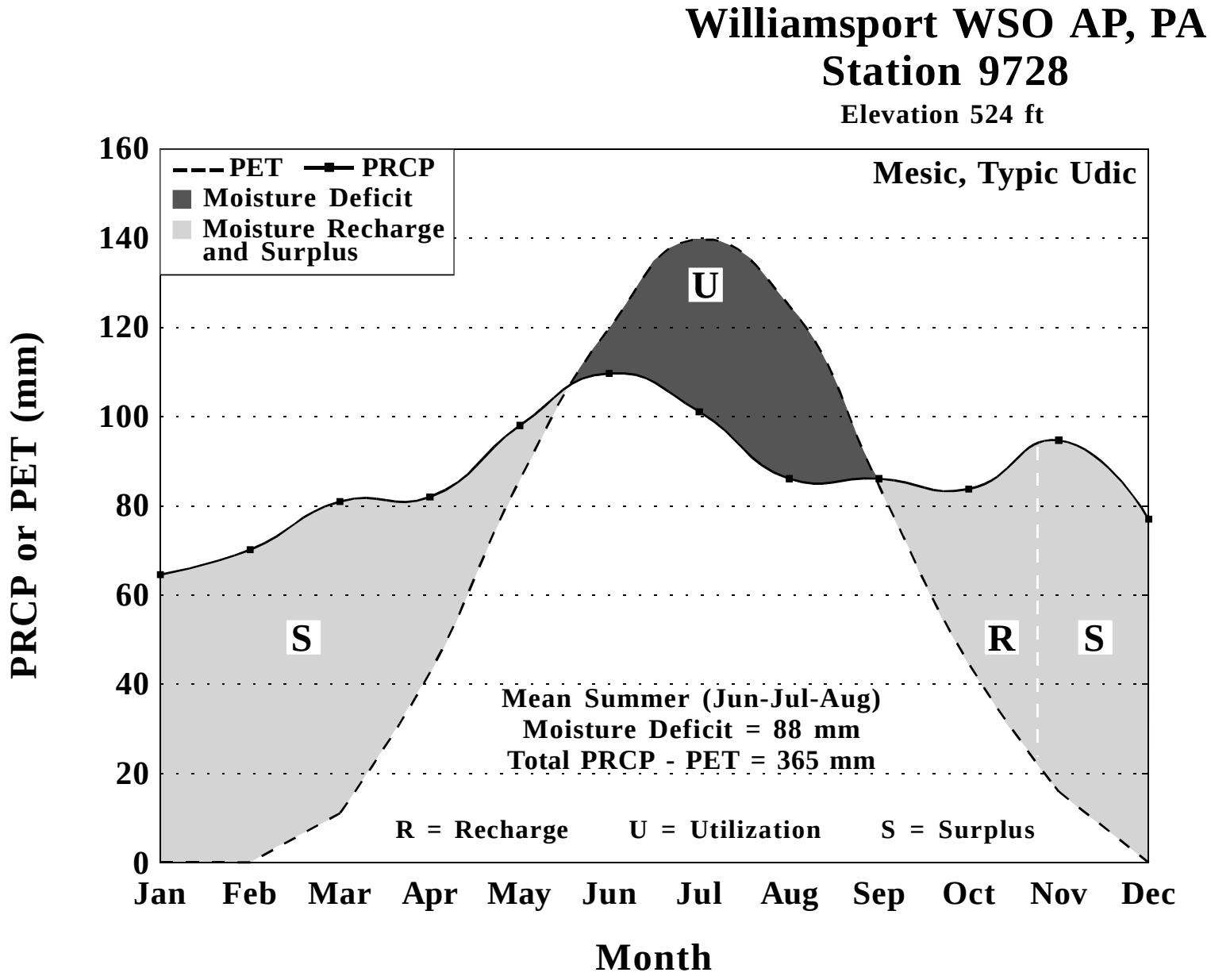
Mean Annual Potential Evapotranspiration: 655 mm
Mean Annual Moisture Surplus: 264 mm
Mean Annual Growing Season (Apr to Sept) Precipitation: 534 mm (58% of MAP)
Mean Summer (Jun-Jul-Aug) Moisture Surplus/Deficit: -97 mm





Number of Cumulative Days That the Moisture Control Section						Highest Number of Consecutive Days That the Moisture Control Section is			
During One Year is			When Soil Temperature is Above 5˚C			Moist in Some Parts		Dry After Summer Solstice	Moist After Winter Solstice
Dry	Moist/Dry	Moist	Dry	Moist/Dry	Moist	Year	T > 8˚C		
0	0	360	0	0	220	360	201	0	120

Computed by BASIC program FLEXNSM (Van Wambeke et al., 1992)
Tentative subdivision: Typic Udic



Moisture balance for Williamsport WSO Airport, Pennsylvania, based upon a period of 1961-1990. PET calculated by Newhall Simulation Model (Van Wambeke et al., 1992).

Station: Williamsport WSO AP, PA
Elevation: 524 ft
Period of Record: 1961-1990
Mean Annual Precipitation: 1034 mm
Soil Temperature Regime: Mesic

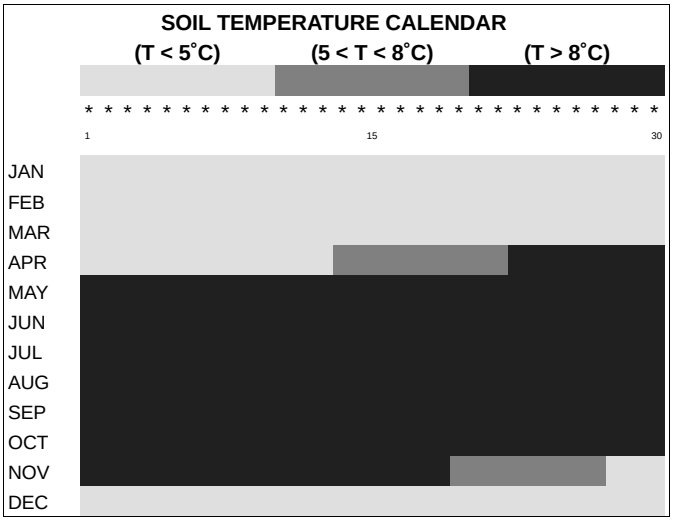
MLRA: 147 Northern Appalachian Ridges and Valleys
Country: USA

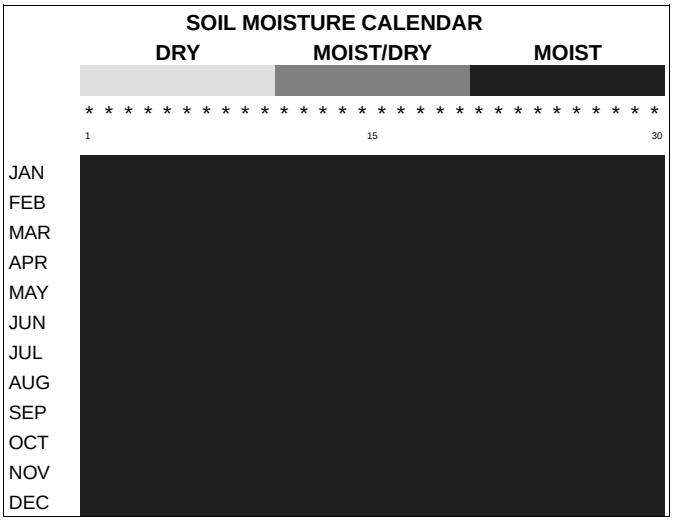
Latitude: 41 15 00N
Longitude: 76 55 00W
Waterholding Capacity: 200 mm
Soil Moisture Regime: Udic

SOIL CLIMATIC REGIME ACCORDING TO NEWHALL SIMULATION MODEL
(MAST = MAAT + 1.2˚ C; amplitude reduced by 1/3)

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Monthly Precipitation (mm)											
64.5	70.1	81.0	82.0	98.0	109.7	101.1	86.1	86.1	83.8	94.7	77.0
Monthly Air Temperatures (˚C)											
-3.8	-2.2	3.4	9.5	15.3	19.9	22.4	21.6	17.5	11.1	5.4	-0.6
Monthly Evapotranspiration (mm)											
0.0	0.0	11.1	42.6	85.9	119.8	139.7	124.9	84.5	44.6	15.9	0.0

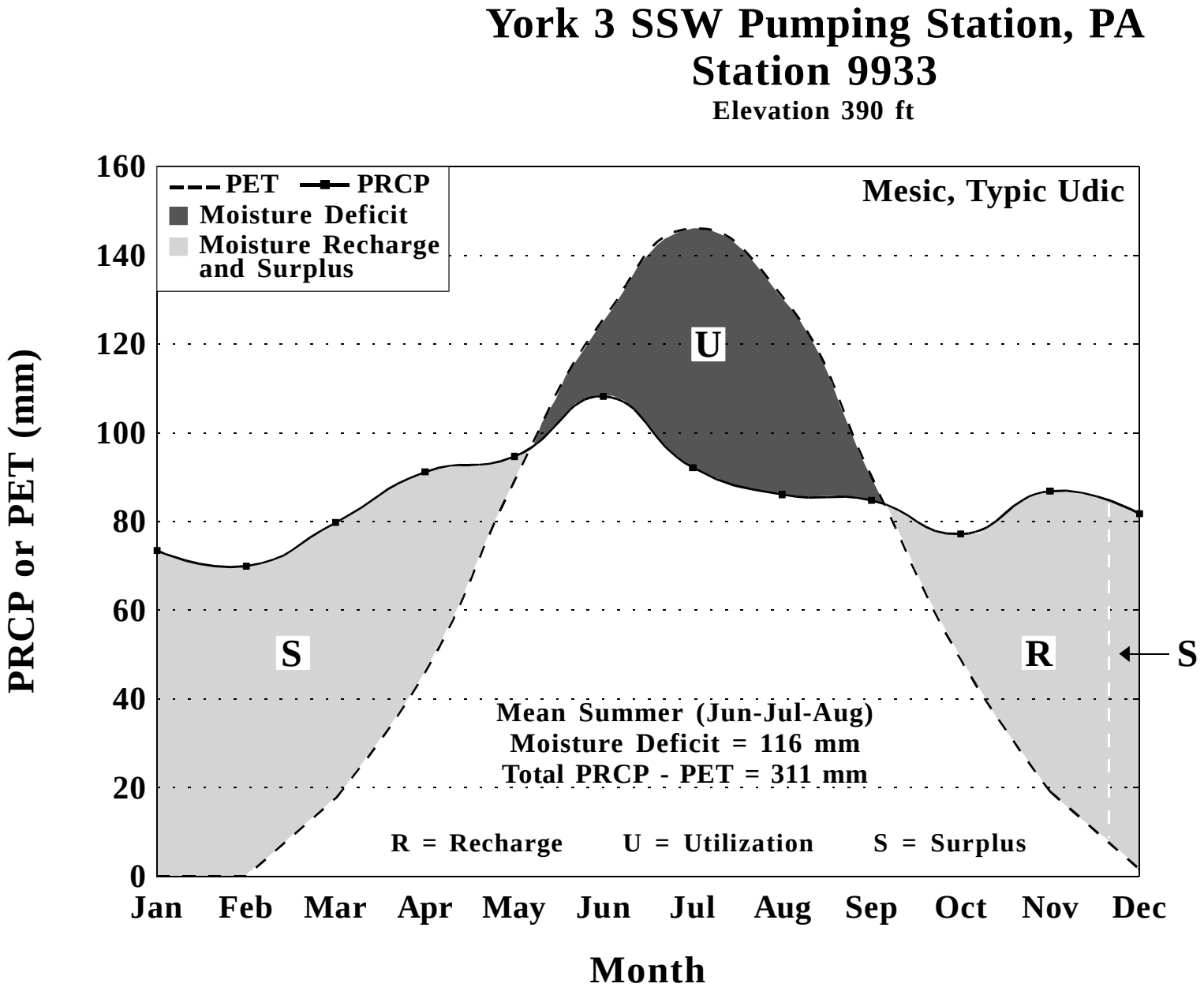
Mean Annual Potential Evapotranspiration: 669 mm
Mean Annual Moisture Surplus: 365 mm
Mean Annual Growing Season (Apr to Sept) Precipitation: 563 mm (54% of MAP)
Mean Summer (Jun-Jul-Aug) Moisture Surplus/Deficit: -88 mm





Number of Cumulative Days That the Moisture Control Section						Highest Number of Consecutive Days That the Moisture Control Section is			
During One Year is			When Soil Temperature is Above 5˚C			Moist in Some Parts		Dry After Summer Solstice	Moist After Winter Solstice
Dry	Moist/Dry	Moist	Dry	Moist/Dry	Moist	Year	T > 8˚C		
0	0	360	0	0	225	360	205	0	120

Computed by BASIC program FLEXNSM (Van Wambeke et al., 1992)
Tentative subdivision: Typic Udic

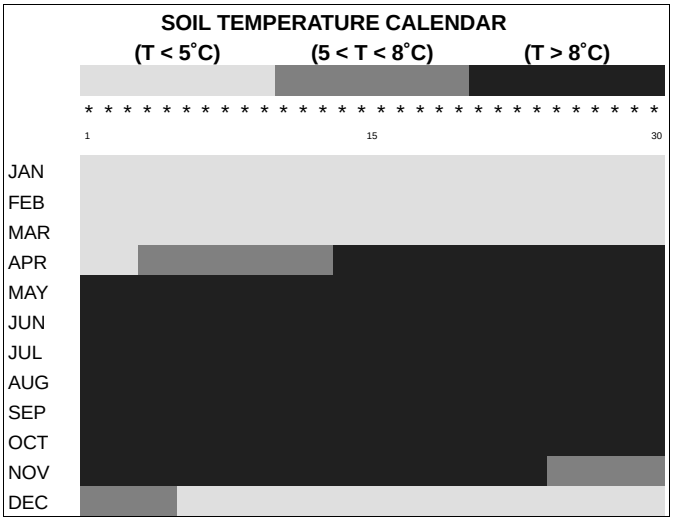


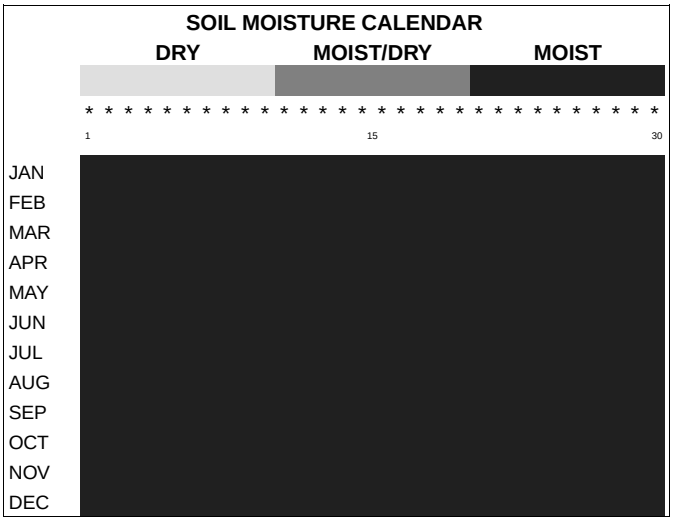
Moisture balance for York 3 SSW Pumping Station, Pennsylvania, based upon a period of 1961-1990. PET calculated by Newhall Simulation Model (Van Wambeke et al., 1992).

Station: York 3 SSW Pumping Stn., PA **MLRA:** 148 Northern Piedmont **Latitude:** 39 55 00N
Elevation: 390 ft **Longitude:** 76 45 00W
Period of Record: 1961-1990
Mean Annual Precipitation: 1026 mm **Country:** USA **Waterholding Capacity:** 200 mm
Soil Temperature Regime: Mesic **Soil Moisture Regime:** Udic

SOIL CLIMATIC REGIME ACCORDING TO NEWHALL SIMULATION MODEL (MAST = MAAT + 1.2˚ C; amplitude reduced by 1/3)											
JAN	**FEB**	**MAR**	**APR**	**MAY**	**JUN**	**JUL**	**AUG**	**SEP**	**OCT**	**NOV**	**DEC**
Monthly Precipitation (mm)											
73.4	69.9	79.8	91.2	94.7	108.2	92.2	86.1	84.8	77.2	86.9	81.8
Monthly Air Temperatures (˚C)											
-1.7	-0.1	5.6	10.9	16.6	21.3	23.6	22.8	19.0	12.7	6.9	1.1
Monthly Evapotranspiration (mm)											
0.0	0.0	17.6	45.9	89.2	125.6	146.1	130.8	90.2	48.8	19.2	1.6

Mean Annual Potential Evapotranspiration: 715 mm
Mean Annual Moisture Surplus: 311 mm
Mean Annual Growing Season (Apr to Sept) Precipitation: 557 mm (54% of MAP)
Mean Summer (Jun-Jul-Aug) Moisture Surplus/Deficit: -116 mm





Number of Cumulative Days That the Moisture Control Section						Highest Number of Consecutive Days That the Moisture Control Section is			
During One Year is			When Soil Temperature is Above 5˚C			Moist in Some Parts		Dry After Summer Solstice	Moist After Winter Solstice
Dry	Moist/Dry	Moist	Dry	Moist/Dry	Moist	Year	T > 8˚C		
0	0	360	0	0	244	360	222	0	120

Computed by BASIC program FLEXNSM (Van Wambeke et al., 1992)
Tentative subdivision: Typic Udic

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