

# Weather of 2009: El Nino Pattern, Below Average Temperatures, Hit and Miss Storms

2009 brought a variety of weather to the area and a dramatic change in the weather pattern, courtesy of El Nino. After a couple of very wet years, precipitation returned to below normal, with areas to our south and east receiving considerably more precipitation. Temperatures leaned towards below normal, with an early Arctic Outbreak, a record cool July and an unusually early season cold snap in mid-October.

January was cold, windy, wet, icy and snowy, with nearly continuous frozen precipitation falling. A major ice storm brought upwards of a quarter-inch of glaze, on top of heavy sleet, on the evening of the 6<sup>th</sup>-7<sup>th</sup>. Another winter storm on the 10<sup>th</sup> brought another coating of snow, sleet and ice. 9 inches of snow fell from an Alberta Clipper on the 14<sup>th</sup>-15<sup>th</sup>, followed by an Arctic blast on the 16<sup>th</sup> and 17<sup>th</sup> with lows of -7 and -8, respectively. On the 17<sup>th</sup>-18<sup>th</sup>, another 7.5" of snow fell. Another major winter storm brought heavy snow, sleet, freezing rain and rain on the 27<sup>th</sup>-28<sup>th</sup>. 6.5" of snow and ice fell, with 2.24" of precipitation, 1.96" on the 28<sup>th</sup>. January had 25 days with measurable precipitation and 24 days with measurable snowfall, which totaled a whopping 45.1 inches. This was the coldest January since 2004.

February began where January left off – cold and snowy. High temperatures failed to climb out of the teens on the 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup>, and 4" of snow fell. However, by the 11<sup>th</sup>, temperatures reached a balmy 60, before a cold front ripped through the area with destructive winds that gusted up to 65 mph at the Johnstown airport. The severe wind storm on the 11<sup>th</sup>-12<sup>th</sup> caused much structural damage, power outages and toppled numerous trees. A storm brought more snow and ice on the 18<sup>th</sup>, 6.9" of snow fell on the 22<sup>nd</sup>-23<sup>rd</sup> from lake-effect snow showers, and a thunderstorm was observed on the afternoon of the 27<sup>th</sup>.

March began cold, as a Nor' Easter passed up the east coast, missing us almost entirely. Record cold followed, with a low of only 2 on the 3<sup>rd</sup> and highs of only 16 and 19 on the 2<sup>nd</sup> and 3<sup>rd</sup>, respectively. Temperatures quickly rebounded into the 60s on the 6<sup>th</sup>-8<sup>th</sup>, with unusually warm low temperatures in the 50s on the 7<sup>th</sup> and 8<sup>th</sup>. Only 1.69" of precipitation fell during March, with a meager 1.2" of snowfall.

April brought cool temperatures and frequent precipitation events, though precipitation was slightly below average. On the 7<sup>th</sup>, a chilly high of 29 F and 2 inches of snow was recorded. While temperatures were on the cool side, an early season heat wave brought record highs from the 25<sup>th</sup>-28<sup>th</sup>. All four days were in the 80s, peaking at 85 on the 27<sup>th</sup>, a new April record.

May began cool and wet. Thunderstorms dropped an inch of rain on the 1<sup>st</sup>-2<sup>nd</sup>. Nearly another 2 inches of rain fell from the 3<sup>rd</sup>-6<sup>th</sup>. Temperatures finally began to moderate by mid-month, with highs reaching well into the 70s. A late-season frost was observed on the 18<sup>th</sup>. Heavy thunderstorms dumped 1.49" of rain on the evening of the 28<sup>th</sup>, pushing precipitation above normal for May.

June was a cool month with a lot of missed storms. Three consecutive days from the 3<sup>rd</sup>-5<sup>th</sup> barely even reached 50. Heavy rains of 2+ inches fell just south of the area on the 4<sup>th</sup>-5<sup>th</sup>. Temperatures rebounded to seasonal 70s within a few days. Most of the month's precipitation fell around mid-June. A strong thunderstorm with jolting thunder dropped nearly an inch of rain overnight on the 11<sup>th</sup>-12<sup>th</sup>. On the 17<sup>th</sup>, an unusually cool high of 59 was recorded, along with 1.56" of rainfall on the 17<sup>th</sup> and 18<sup>th</sup>. Flooding rains hit areas just to our south and west; two days later they passed barely to the north and east.

July was exceptionally cool, with a mean temperature of 63.3 F ranking July 2009 the coolest on record. The high on the 2<sup>nd</sup> was only 58, and nearly half of the other days failed to climb out of the 60s. Scattered thunderstorms were common during the second half of July, with again areas just to our north seeming to bear the brunt of the strong to severe storms. On the 29<sup>th</sup> and 31<sup>st</sup>, back-to-back cold fronts brought steady rains to our area and spawned several tornadoes to our south and east. On the 29<sup>th</sup>, an EF2 twister hit the Stroudsburg area in the Pocono Mountain region, along with upwards of 5 inches of rain in some areas. Another tornado hit Oldtown, MD on the 29<sup>th</sup>. On the 31<sup>st</sup>, tornadoes hit parts of north-central Maryland and southeastern PA.

Summer finally made a late arrival in August. Summer bugs were finally heard, as temperatures averaged above normal. While parts of southern and eastern PA were drenched with flooding rains on several occasions in August, precipitation was relatively scant here, until a cold front brought a deluge on the 28<sup>th</sup> and 29<sup>th</sup>, totaling 1.98" of rain in 24 hours. Over an inch fell in 45 minutes on the 28<sup>th</sup>.

September began mild and dry the first week, but also had some of the month's coolest overnight lows. The second week brought clouds and light precipitation, with very heavy rains again passing south & east of us from a slow-moving subtropical system that hugged the east coast. Some much-needed rain

(1.13") finally fell on the 26<sup>th</sup>. More showers and thunderstorms on the final four days produced nearly another inch of rain. Highs were only in the 40s on the 29<sup>th</sup>-30<sup>th</sup>.

October was very active, with many weather systems affecting the area. Precipitation was above normal for the first time since May. A cold front brought damaging winds on the 7<sup>th</sup>, and over an inch of rain fell the evening of the 9<sup>th</sup>. A record cold snap and two Nor' Easters hammered the Mid-Atlantic from the 15<sup>th</sup>-18<sup>th</sup>. Five consecutive days remained in the 30s from the 14<sup>th</sup>-18<sup>th</sup>. Winter storm watches went in effect, but only some wet snow and a few ice pellets fell here. The storm instead hit the central and northern parts of the state, with 4 to 9 inches of heavy, wet snow. Areas such as State College were hard hit with lot of tree and power line damage. After a monthly low of 27 on the 19<sup>th</sup>, temperatures quickly rebounded, reaching 70 on the 22<sup>nd</sup>. Moderate rain events occurred on the 23<sup>rd</sup>-24<sup>th</sup> and again on the 27<sup>th</sup>-28<sup>th</sup>. The heaviest rains, topping 2 inches in some areas from each storm, again fell to the south and east.

November was suddenly inexplicably mild and dry. The month's low of 23 on the 7<sup>th</sup> was immediately followed by the month's high of 69 on the 8<sup>th</sup>. Only one day in the first 18 had any measurable precipitation. There was also an unusually long streak without any sub-freezing temperatures, 19 consecutive days from the 8<sup>th</sup>-26<sup>th</sup>. The season's first measurable snow of 1.5" finally fell on the 27<sup>th</sup>.

For the third consecutive year, a parade of nasty winter storms hammered the area in December. The first winter storm brought 2.8" snow on Dec. 5<sup>th</sup>. An intense, fast-moving storm on the night of the 8<sup>th</sup>-9<sup>th</sup> dumped 2.03" of precipitation in only 12 hours, with 5.5" of snow and ice. A cold front passed through that afternoon, bringing winds up to 54 mph at the airport and a thunderstorm with sleet. Snow squalls fell on the 10<sup>th</sup>, and another storm brought light ice accumulations on the 13<sup>th</sup>. Then on the 18<sup>th</sup>-19<sup>th</sup>, the year's heaviest snow of 11.4" fell, 10.5" on the 19<sup>th</sup>, from an intense Nor' Easter. Temperatures were consistently cold from that point on, leading to a welcome White Christmas. It was also an icy Christmas, with sleet and freezing rain. Lake effect snows behind a cold front dropped 5" of snow on the 28<sup>th</sup>. Another fast-moving storm brought 2.6" of snow early on New Year's Eve, with rain and sleet to round out the year.

### 2009 Westmont Area Weather Statistics

2009 Monthly and Annual Climate Summary Westmont 1.1 W, PA, Cambria County Observers Nate & Steve Mullins Station Observation Time: Midnight Lat: 40.316950°, Long: - 78.972324°, Elevation 1980'										
Month	Temperature, ° F							Number of days		
	Mean Max	Mean Min	Mean Temp	Max Temp	Date	Min Temp	Date	Max > 80	Max < 32	Min < 32
Jan	25.0	12.8	18.9	47	4	-8	17	0	26	31
Feb	33.9	19.0	26.4	60	11	0	5	0	15	26
Mar	45.5	28.8	37.2	67	18*	2	3	0	4	20
Apr	56.0	37.8	46.9	85	27	24	7	4	1	10
May	64.4	48.5	56.5	78	21	34	18	0	0	0
Jun	68.8	55.9	62.4	77	25	38	1	0	0	0
Jul	70.1	56.6	63.3	81	16	49	8	1	0	0
Aug	75.3	60.1	67.7	84	16*	51	31	8	0	0
Sep	65.9	53.0	59.4	74	23*	44	30	0	0	0
Oct	53.7	40.2	46.9	70	22	27	19	0	0	4
Nov	50.0	36.0	43.0	69	8	23	7	0	0	9
Dec	32.7	19.1	25.9	50	3	2	24	0	20	30
Year	53.4	39.0	46.2	85	4/27	-8	1/17	13	66	130

Precipitation, Inches			Number of days				Snow/ice, Inches			
Month	Total Precip	Max Day	Date	> 0.01"	> 0.10"	> 0.50"	> 1.00"	Total Snow	Max Day	Date
Jan	5.78	1.96	28	25	11	3	1	45.1	5.3	18
Feb	2.48	0.55	18	16	8	1	0	16.5	4.0	4
Mar	1.69	0.83	26	13	5	1	0	1.2	0.8	3
Apr	3.33	0.78	20	20	10	2	0	2.8	2.0	7
May	5.63	1.49	28	16	13	4	1	-	-	-
Jun	3.88	1.29	17	17	9	2	1	-	-	-
Jul	4.30	0.98	29	14	9	3	0	-	-	-
Aug	3.60	1.44	28	13	9	2	1	-	-	-
Sep	2.59	1.13	26	15	6	1	1	-	-	-
Oct	4.24	1.02	9	16	10	4	1	T	T	18*
Nov	1.57	0.76	19	9	4	1	0	1.5	1.5	27
Dec	5.95	1.55	9	19	11	4	1	31.6	10.5	19
Year	45.04	1.96	1/28	193	105	28	7	98.7	10.5	12/19
Note: * = also occurred on earlier dates										
Number of days with										
Month	Fog	Sleet	Glaze	Thunder	Hail	Dmg wind				
Jan	6	3	5	0	0	0				
Feb	3	1	1	2	0	2				
Mar	5	0	0	0	0	1				
Apr	5	1	0	0	0	0				
May	5	0	0	6	0	0				
Jun	7	0	0	12	0	0				
Jul	13	0	0	7	0	0				
Aug	13	0	0	5	0	0				
Sep	15	0	0	2	0	0				
Oct	12	5	0	0	0	1				
Nov	4	2	0	1	0	0				
Dec	8	5	3	1	0	1				
Year	96	17	9	36	0	5				