

# Weather & Gardening

## How do I utilize Weather and Climate information for successful gardening?

Many of the plants we buy contain tags indicating that they are annual, perennial, temperate, or tropical. In addition, these tags describe how the plant will respond to weather conditions (temperature, rainfall, wind, light and surrounding structures). While you may not be able to control these conditions,

you can fine tune the location (shady vs. sunny) of the plant that is suggested for the specified zone considering the light, heat and the plant hardiness zone information of your area. This brochure should help you, the gardener, understand how local weather and climate can be utilized for successful gardening.

## How does weather affect my garden?



Weather is the ultimate factor determining whether plants will thrive or perish. Temperature, moisture and their extremes have a direct effect on the survival of plants. Climate is the main reason plants favor certain places to grow. Climate is the behavior of the weather which can be described by both average values and extremes over a period of time. Knowing the local climate is a key factor to successful gardening.



WEATHER FORECAST OFFICE  
9200 WHITE LAKE RD  
WHITE LAKE MI 48386



# Weather & Gardening

for Michigan's Thumb Area  
(Huron, Sanilac, & Tuscola Counties)



NOAA's National Weather Service  
Climate Services Program

Weather Forecast Office  
9200 White Lake Rd  
White Lake, MI 48386

Phone: (248) 620 - 9804

Web: <http://weather.gov/detroit>  
E-mail: [w-dtx.webmaster@noaa.gov](mailto:w-dtx.webmaster@noaa.gov)

## What are the key weather elements for gardening?

**Freezes:** Freezing temperatures determine the length of the growing season. Airport (official) temperatures are measured about 5 feet above the ground. As a



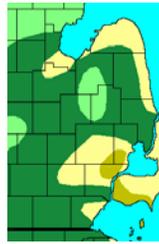
result light frosts can occur when official temperatures are as high as 36°F. Meanwhile killing frosts are likely when the temperature falls to 28°F. The following table provides the probabilities of these temperatures occurring and the length of frost/freeze-free days in the Thumb Area.

Thumb Area Frost/Freeze Data *				
		Probability		
		10%	50%	90%
Spring (Latest Occurrence)	36°F	5/30-6/20	5/16-6/1	5/3-5/13
	32°F	5/15-6/6	5/3-5/19	4/22-5/1
	28°F	5/1-5/17	4/21-5/2	4/11-4/28
Autumn (Earliest Occurrence)	36°F	9/1-9/17	9/15-9/30	9/29-10/13
	32°F	9/9-10/2	9/25-10/18	10/10-11/2
	28°F	9/26-10/17	10/11-10/30	10/27-11/13
# of Frost/Freeze Free Days	36°F	127-152	105-136	83-120
	32°F	153-184	128-167	104-149
	28°F	181-209	161-192	142-174

\* National Climatic Data Center's (NCDC) *Climatology of the United States No. 20 1971-2000.*

Due to the moderating effects of Saginaw Bay and Lake Huron, locations near them will experience less chance of frost and freezing temperatures later in the spring and earlier in the autumn. As a result these locations have a much longer growing season (in the excess of 30 days) than locations in the interior Thumb Area such as Caro and Sandusky.

When selecting perennial plants for your garden, insure they will survive the winter by utilizing the United States Department of Agriculture's (USDA) Plant Hardiness Zone Map. This map factors in average annual minimum temperatures.



Plant Hardiness Zone	Average Annual Minimum Temp (°F)
5a	-15 to -20
5b	-10 to -15
6a	-5 to -10
6b	0 to -5

Plant Hardiness Zones

Plant hardiness zones in the Thumb Area range from zones 5a and 5b (between -10 and -20°F) in the interior areas to zone 6a (between -5 and -10 °F) near Saginaw Bay and Lake Huron. However temperatures have been as cold as -30°F in Caro (February 9, 1934), Millington (February 5, 1918), and Vassar (February 10, 1912). See the following web site for further information on the USDA Plant Hardiness zones:

<http://www.usna.usda.gov/Hardzone/hzm-nm1.html>

**Heat:** Extreme heat stresses plants and can even result in their demise. The American Horticultural Society (AHS) determined Heat Zones based on the average number of days per year with temperatures greater than 85°F. Many plants have this information on their tags, so choose a plant which is suitable to your location.



The Thumb Area normally sees between 15 and 30 days a year in which the temperature exceeds 85°F. This places the Thumb Area in the Plant Heat Zone 4 (>14 to 30 days). See the following web site for further information on the AHS Plant Heat Zones:

[http://www.ahs.org/publications/heat\\_zone\\_map.htm](http://www.ahs.org/publications/heat_zone_map.htm)

**Wind:** Transpiration from the plants and evaporation from the soil causes significant moisture loss. Since wind enhances evaporation and



transpiration, on a hot day the wind will increase water needs, which could dehydrate the plant.

Knowing the average wind speed and direction in your local area can help you plan for better gardening. You can reduce the air circulation by building fences and planting hedges. The annual average wind for the Thumb Area is 9.3 mph from the southwest. For day-to-day information, you can make a more informed decision by consulting the National Weather Service web site for current conditions as well as the forecast for the Thumb Area:

<http://weather.gov/detroit>

**Moisture:** Plant tissues must contain enough water to keep their cells active. Some plants may be advertised as drought-tolerant, but no plant can survive becoming completely dry. Too much water can cut off the oxygen supply to the roots. Knowing the local seasonal rainfall averages and soil types can help determine which plants may need additional watering, or special planting requirements to avoid over watering.



The Thumb Area receives an average of 32.08 inches of precipitation annually. The image below provides a monthly breakdown of this precipitation.

