

Optimal Irrigation Study for Hops

Monthly Average Potential Evapotranspiration (PET) Estimates (inches)

Boston, MA	0.37	0.57	1.15	1.95	3.09	3.58	4.02	3.49	2.29	1.36	0.63	0.37
Bridgeport, CT	0.44	0.63	1.31	2.21	3.41	3.90	4.38	3.76	2.52	1.54	0.74	0.44
Buffalo, NY	0.24	0.40	0.99	1.92	3.26	3.74	4.05	3.43	2.23	1.18	0.47	0.24
Burlington, VT	0.24	0.42	0.97	1.96	3.26	3.74	4.13	3.47	2.18	1.13	0.45	0.23
Caribou, ME	0.17	0.30	0.73	1.51	2.88	3.39	3.64	3.07	1.84	0.89	0.31	0.16



Below is the weekly irrigation amount without Precipitation in different months

September: 10.79 gallons of water/ week for one hop

August: 16.63 gallons of water/ week for one hop

July: 19.786 gallons of water/ week for one hop

June: 18.52 gallons of water/ week for one hop

May: 15.619 gallons of water/ week for one hop

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Here are some brief introductions of how we obtained the amount of water for irrigation every week:

a) We used irrigation recommendations from Chris Lattak in St. Joseph Michigan and made a conversion for Vermont by comparing summer monthly average PET in St. Joseph to Burlington's Monthly PET. We took PET table from previous page for the Reference of Monthly PET in Vermont.

Note: PET stands for potential evapotranspiration, which means the maximum amount of water that would be released into the air through transpiration. It is based on a number of factors such as sun, temperature, humidity and wind. The amount of water available for the plant to pull from the soil can limit transpiration, which is why we call it potential evapotranspiration

b) The weekly precipitation amount is subtracted from the irrigation recommendation to get the actual weekly irrigation amount.

c) The optimal irrigating amount per acre is converted to the optimal amount for one single plant's area.