

Watering



The Vermont and New York Master Gardener Programs, supported by the University of Vermont and Cornell Extension and Lake Champlain Sea Grant, support the objectives of the Lake Champlain Management Plan and Basin Program. This factsheet is intended to help prevent or reduce pollution coming from residences within the Lake Champlain Basin.

Plants need timely watering

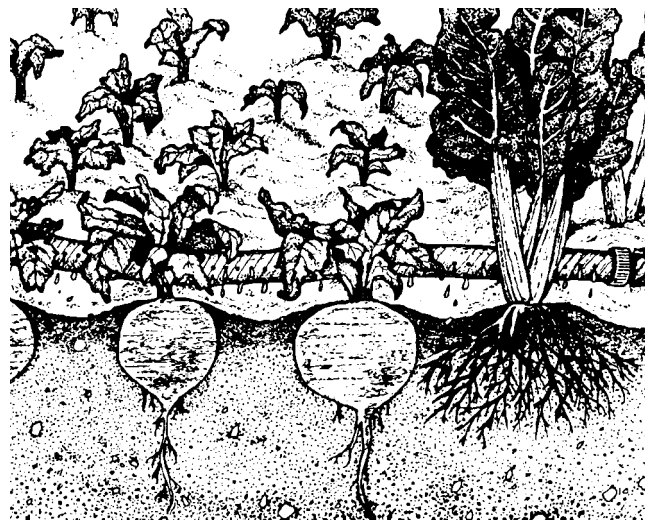
Proper watering is essential to a healthy garden. Most garden plants contain over 90% water. If water is applied at the proper times in correct amounts, it is possible to conserve it, thereby protecting water quality.

Overwatering can wash away soil, chemicals, and plant nutrients, which can find their way into rivers, ponds, and lakes—creating a hazard to aquatic life.

The method can make a difference

Hand watering

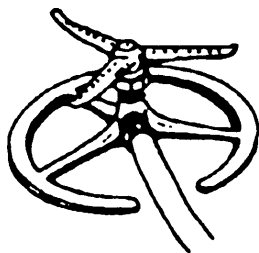
Using a water can is only appropriate for containers, small flower beds, newly planted trees, shrubs, or recently sown flower or vegetable seeds. A small garden will require a great deal of time and patience to hand water properly. Setting plants in a shallow furrow will allow water to soak in where it is needed. Using plastic or organic mulch will keep the soil moist and cool in the heat of summer.



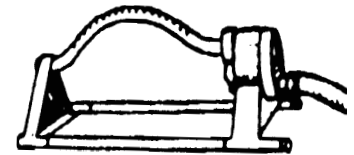
The **lake-friendly gardening** approach to watering is to water only when needed; plant drought-resistant species; and landscape using water conservation principles, including mulching, terracing, and using soil amendments only when needed.

Sprinklers

Keep the water pattern even by moving the sprinkler frequently and overlapping about one-half of each pattern. Place oscillating sprinklers higher than the plants to prevent water from being diverted



by plant leaves. Do not apply water faster than the soil can absorb it. Be sure the sprinkler is not watering the sidewalk, street, or other paved surface.



Soaker hoses

There are a variety of special soaker hoses available. Because they release water slowly, these can reduce runoff and evaporative losses. Generally they do not cost more than normal garden hoses. Made from recycled rubber, soaker hoses



have many pores that allow water to seep slowly into soil without wetting foliage, thus decreasing evaporation as well as the risk of foliage diseases.

Trickle and drip systems

Trickle or drip irrigation is very efficient, because it applies water to each plant's root zone at a rate consistent with its moisture requirements. It can reduce water use by as much as 50 to 80% compared to overhead

irrigation. Another advantage of these systems is that foliage stays dry, reducing the potential for foliage disease problems. Trickle systems are available that are inexpensive and easy to set up. The key components are the drip tape, a filter, and a pressure regulator. Large gardens can be “zoned” to send water to different areas when it is needed.



When to water

It is best to water early in the morning, and then water only when needed. A good rule of thumb in watering plants is to fill the entire root zone and then allow the soil to partially dry out before the next irrigation. The speed of drying depends on the crop, the soil, and the weather.

A small or newly established plant will need watering before very much soil drying takes place—generally within a few days to one week. Because seeds and seedlings should never be allowed to dry, they need more frequent but shallow watering. A vegetable garden should be watered when the soil within 1 inch of the surface feels dry to the touch. When a lawn gets too dry, it shows a loss of resilience; footprints will remain visible in the grass, and its color will change to a grayish hue.

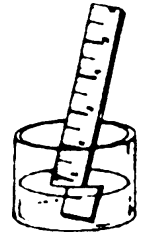
Once plants are established, less frequent, deep watering with dry periods between will encourage deep roots. Do not wait until plants are heavily wilted

to begin irrigation.

Do not rely on automatic timers. If using an automatic system, install a moisture sensor to turn it on and off. Also, do not water on windy days or during the heat of the day, especially with sprinklers, when considerable water may be lost to evaporation. Early morning watering is best for avoiding evaporative losses.

How much water to use

A running hose can deliver several hundred gallons in one hour, depending on water supply. Too much water, especially in poorly drained soils, can be damaging to roots. Apply water only as fast as the soil can absorb it. Turn off water at the first sign of puddling; turn it back on later if water did not penetrate the whole root zone. Faster watering can cause runoff and/or erosion. When sprinkling, set out small containers to measure the amount of water being applied. A lawn can use 1 inch to 1½ inches of water per week during hot, dry weather.



How to reduce the need for water

- Select plants that require less water.
- Add organic matter to the soil to increase the water-holding capacity of sandy soils and allow for better air and water movement in compacted soils.
- Design the landscape considering water conservation—grouping together plants that need similar amounts of irrigation.
- Select a turfgrass that excels in low-water conditions.
- Mulch the tilled areas to help reduce evaporation of water.
- Terrace as required in sloped areas.

Master Gardener Program

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Cornell Cooperative Extension: Clinton County: (518) 561-7450; Essex County: (518) 962-4810

Adapted for local use from *Lake Champlain Gardening Fact Sheets*, produced by Cornell Cooperative Extension with partial funding from the Lake Champlain Basin Program. *Lake-friendly Gardening* factsheets prepared and adapted by Nancy Hulett and the UVM Extension Master Gardeners; Jurij Homziak, Vermont Coordinator for Lake Champlain Sea Grant; Amy D. Ivy, Cornell Extension Educator; and Charles Howard, Cornell Master Gardener. Artwork by Susan Stone. Editing and design by Communication and Technology Resources, University of Vermont Extension.

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Printed on recycled paper

FS 174:6

February 2001

\$0.25

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4C-UGP-2/01