

Proper weed management is essential to protecting our local environment and connecting waterways. Improper weed management can negatively impact our wetlands and adjacent waterways as herbicides wash off landscapes (a type of pollution known as urban runoff) into our adjacent streets, gutters or storm drains. Instead of reaching for conventional herbicide products to control and suppress weeds, consider using the alternative methods and less toxic products as described on this flier.

Using Mulch to Control Weeds

The key to controlling weeds is to keep them from flowering and producing seeds. In general, weed seeds germinate in bare soil with lots of light; this is one of many reasons why mulching is a good idea. Mulch is a protective layer of materials, used to suppress weed growth, that is spread over the top of soil. Mulch comes in two different types: organic and inorganic.

Organic mulches are made of plant materials such as grass clippings, straw, bark, wood chips, etc. Organic mulch can improve soil health. As the mulch slowly decomposes, it provides organic matter as a source of nutrients for plants and microbes. Additionally, organic mulches provide an ideal environment for beneficial soil organisms, including earthworms, which help keep the soil aerated, increase the infiltration, water-holding capacity of the soil and improve root growth of desirable plants.

Inorganic mulches include materials such as stones, landscape fabrics, rock and plastic. They are suitable in certain landscapes where soil health, improvement or restoration is not desired. Rock and gravel mulch can also increase the heat in the soil and may kill plant roots on hot days. If you are considering using an inorganic mulch, keep in mind that due to its persistence, it may be difficult to remove if you decide to redesign your garden in the future.

Benefits of Mulch

- Protects the soil from erosion and reduces compaction from the impact of heavy rains
- Conserves moisture which reduces the need for frequent watering and maintains a more even soil temperature
- Suppresses and prevents weed growth

Sheet Mulching

This method of weed control adds organic matter to your soil while suppressing weeds or killing turfgrass. Sheet mulching involves covering the ground with layers of cardboard or newspaper to exclude all light sources. Ensure the edges overlap so that weeds cannot grow through the cardboard. Wet the cardboard thoroughly, then cover with 2 to 3 inches of compost, then at least 4 inches of organic mulch, like wood chips.

Reminders

- Mulch chip size and depth should be considered for controlling problematic weed species.
- Replenish and fluff-rake (turn over) the mulch as needed to prevent the establishment of new seedlings.
- Avoid using plastic underneath any kind of mulch. A sheet of plastic will cause the soil to hold too much moisture and inhibit oxygen exchange, resulting in rotting roots and tree trunks.



Soil Solarization

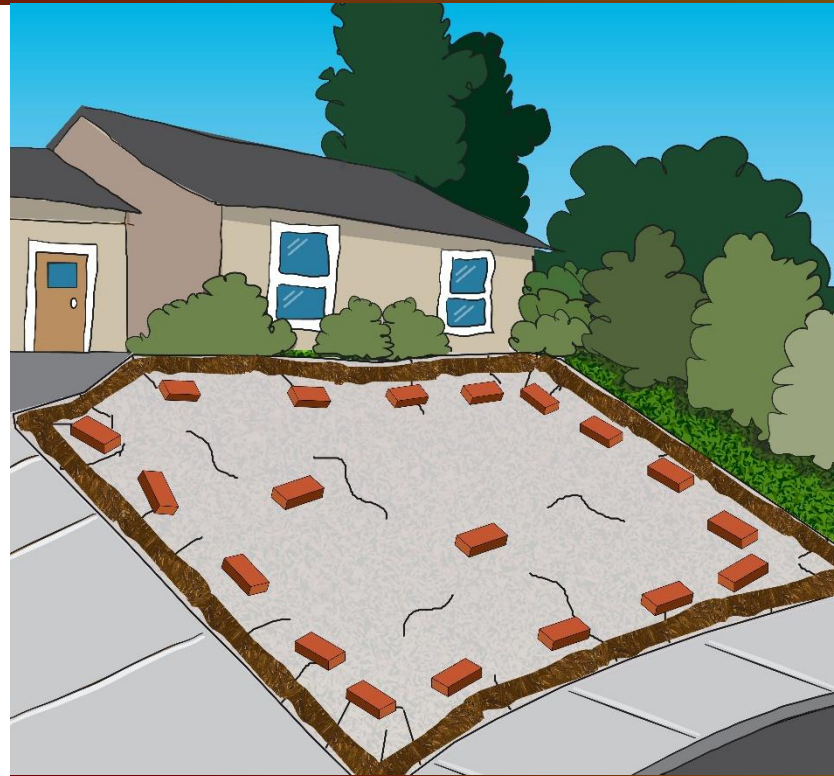
Soil solarization is a chemical-free method used to control weeds and soilborne pests. UV-resistant plastic sheets are placed over moistened soil in an area expected to receive the maximum amount of direct sunlight. The summer months of June through September typically yield the best results for soil solarization. The plastic sheets allow the sun's heat to become trapped in the soil, heating the top layer of the soil and killing most weed seeds. When done properly, the soil can reach a temperature of up to 160 degrees on the surface and up to 100 degrees 3 inches deep.

How to Solarize Your Soil

1. Till the area to be treated. The soil should be uniform and free from large clumps in order to enhance the heat conduction through the soil.
2. Rake and level the surface of the soil. This will allow the UV resistant plastic to be placed evenly and in close contact with the soil.
3. Water the soil well. Wet soil conducts heat better than dry soil. In moist soils, pest organisms are more active and more susceptible to the lethal effects of heat.
4. Lay out enough clear, UV-resistant plastic over the top of the soil. Anchor the plastic sheet down with rocks, bricks or sandbags and dig a trench around the plastic so the sides of the plastic can be pulled tight and covered with the soil in the trench. This will help to prevent heat from escaping and to keep the plastic from blowing away.
5. Leave the plastic covering on for at least four to six weeks. Inspect and repair tears in the liner periodically for best results.

Benefits of Soil Solarization

Solarization is an ecologically effective method home gardeners may explore to reduce or eliminate soilborne garden pests. Solarization may lead to healthier and more productive gardens by improving soil health and increasing the amount of available nitrogen and other essential nutrients in the soil.



Less-Toxic Herbicides

There are some chemicals with low toxicity that can be used to control weeds. Products containing common acids, oils or detergents will kill the above-ground parts of weeds, but will leave roots that may sprout again. These contact herbicides are most effective on young plants. Killing older annual weeds or tough perennials may require several applications. Always use herbicides with caution. When spraying any kind of herbicide, protect your garden plants from coming into contact with the spray. Do not spray on windy days and keep people and pets away from the area until the herbicide has dried.



Weed Removal

Weeds are easiest to pull—with a weeding tool or by hand—when plants are young and the soil is moist. Try to remove weeds before they flower to limit their ability to spread and cause disturbance to the soil. Be sure to get the root of the plant to prevent weeds from resprouting. If the weed doesn't reproduce from plant fragments, tubers or bulbs and hasn't flowered, you may put them in your backyard compost bin. **All other weeds** should be placed in your organics cart so they can be composted at a facility that can destroy the seeds and prevent them from spreading.

Proper mowing can help manage weeds. Keeping a lawn slightly taller, rather than cutting the grass very short, will help suppress and prevent weed growth by outcompeting and shading weeds out. Reduce the spread of weeds by mowing or cutting weeds down with garden equipment before they produce flowers or go to seed.



Updated 1/2026