

by James\_Dulley

Dear Jim: I am landscaping close to the house walls and I want it to be efficient (both for water and energy). I don't know whether to use stone/gravel or low-growing ground cover plants. Which is best for me? - Kathy C.

Low-water-usage ground cover plants and boulders are shaded by trees during the summer and help warm the home during winter. Dear Kathy: Proper landscaping can impact the energy efficiency of your home and obviously the amount of water you use for watering. Using either plants or stone and gravel will eliminate the need for running a lawn mower. This saves the expense for oil, gasoline and periodic maintenance. There are advantages and disadvantages to using ground cover plants versus gravel (stone) near your house. Two factors to consider are the exposure and orientation to the sun and whether summer cooling or winter heating bills are your primary concern. You will likely end up with a combination of both which can be attractive and most efficient. Gravel and stone have high thermal mass which means they can hold much heat energy. This is why they are often used in solar homes and greenhouses. During the summer, if they are exposed to the sun during the daytime, they create a heat island. This warm area can continue to radiate heat up to your house walls well into the evening. During the winter, this is a good thing. During the summer, it is not. Use gravel and stone near the house walls where they are exposed to the sun during winter, but shaded by deciduous trees during the summer. I use several large boulders which are shaded by maple trees during summer. Ground cover plants are ideal for areas which are sunny during summer. They do not hold the sun's heat as gravel does and they actually cool the air around them. Their leaves give moisture off to the air, called transpiration, which cools it similarly to how perspiration cools your skin. The air surrounding the plants can be five to ten degrees cooler than the ambient air temperature. This is most effective if you air-condition often so the more humid air does not get indoors. If you rely on ventilation from windows, you will just have to experiment to see if the cooler, but more humid air, improves your comfort. Asphalt driveways and concrete walkways become significant heat islands in the summer sun. In any areas where these are near the house wall, and particularly under windows, plant some taller ground cover. Its height helps block the direct path of radiant heat from the concrete to the windows. Use mulch liberally around the plants. Even dark mulch will not get hot and holds very little heat if it does. The mulch will reduce the need for watering, but allow some moisture to wick through it for a cooling effect. Study the specific characteristics of various plants (height and spread at maturity, texture, flowers, deciduous or evergreen, etc.) so you have some idea how they will look in a year or two. Try to group plants which have similar watering requirements. Dear Jim: Overall, what is the least expensive source for more energy for our country and individual homes? I have heard that wood energy is a good, cheap source and we have a lot of it available. - Colin B. Dear Colin: Wood and other biomass energy are good sources and are less damaging to the environment than fossil fuels. Unfortunately, it is not always as cheap as you might think to convert them into usable energy. The least expensive source of new energy is conservation. Each gallon of gasoline or cubic foot of natural gas we save is identical to drilling and finding more. If we all make some minor life-style changes, the results are enormous. Send inquiries to James Dulley, Bend Weekly, 6906 Royalgreen Dr., Cincinnati, OH 45244.

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