



Dear Readers,

We welcome you to the first issue of the Wagner & Company newsletter. In this and future issues we intend to provide you with valuable information, trends, and ideas relating to landscaping in Southwest Montana.

This past year has been very exciting for us. We have undertaken a number of key brand and businesses initiatives in order to realign our business with our company strengths: innovative landscape design,

planning, and construction. Our talented staff is dedicated to providing dynamic landscape and hardscape designs that are environmentally friendly with eye-popping curb appeal.



If your project requires innovative ideas and solutions, we would welcome the chance to show you why we are one of the very best landscape companies in

Montana.

—Dusty Wagner, *President*

## New Business Initiatives



**New Brand Identity**  
We have changed our look with a new logo as shown on our masthead.

**New Website**  
We have completely redesigned our web site to better present our services and showcase some of our recent work in a case study format. We will continue to update latest projects throughout the year.

**Big Sky Journal**  
Wagner & Co. was featured in the 2013 Home Edition (Western Focus). Hope you enjoy the article!

# Landscaping Can Save Energy

**H**ere in Montana it is not surprising to see a day where the temperature range (low/high) is between 50-70 degrees. Our winter lows can be -30°F while our summer highs can reach over 100°F—that is a swing of over 130 degrees in a season.

The temperature swings and our notorious winds can really spike our energy bills—cooling during the summer and heating our homes/businesses during the winter months.

Did you know that with proper landscaping design and construction you can save energy and money? We've all heard about insulation, weather stripping, and caulking as ways to save energy, but here's an idea you may not have come across: using landscaping to help conserve energy. It's not really a new idea; folks living on the plains have used trees as windbreaks, but now this design is expanding into more populated areas. Since fall and spring are the best times to plant, you can never start planning



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too soon. Here are some ideas on how to use landscaping to save energy around your home or business:

The key to saving energy is planting trees—properly positioned, trees can save the average household from 15% to 35% annually in energy costs—that's thousands of dollars you'll save on air conditioning costs as trees grow to provide abundant shade.

## **How Trees Cool Your Home, Business and Community**

Trees have been used for years to give us shade and cool our homes or businesses. With their two important cool-

ing effects, trees help increase energy efficiency of homes and buildings and reduce energy costs.

Trees cool the air by absorbing water through the roots and evaporating it through leaf pores. This process—evapotranspiration—can result in reducing peak summer temperatures by 2 to 9 degrees F.

Trees provide shade that reduces solar radiation that heats up our homes and businesses. Shaded walls may be 9 to 36 degrees F cooler than unshaded surfaces. Cooler walls also decrease the amount of heat that permeates buildings, lowering the need for air conditioning. And cooler surface temperatures also reduce the amount of heat in the surrounding air, and, as a result decrease the heat island effects.

## **What are Heat Islands?**

As urban and suburban areas replace the natural land cover surface with roads, buildings, and parking lots, the surrounding areas become hotter than our rural countryside. This affect is called "heat islands" the manmade heating of the earth surface. Reducing trees and vegetation also reduces their natural cooling effects, air is trapped by the tall buildings and narrow streets thus reducing air flow and increasing the trapped heat. This factor is exacerbated when you add vehicles, factories, and air conditioners.

Urban areas without adequate tree cover can become "heat islands," which significantly increase temperatures—in some cases as much as 2 to 10 degrees F warmer than nearby rural areas. These elevated temperatures can impact communities by increasing peak energy demand, air conditioning costs, air pollution levels, water usage, and heat-related illnesses.

## **What to Plant, Where to Plant**

Planting the right tree in the right place is the key to energy conservation all year-round. Sounds simple, but many landscapers don't apply the basic knowledge to their design, planning, and construction. Selecting trees that will effectively shade your home or business required consideration of the size, shape, and density of the trees, and the location

of the moving shadows that the trees will cast. Careful selection of trees will create the right amount of shade in the right areas to effectively lower energy use and costs.

- To block solar heat in the summer, plant deciduous trees on the east/west sides of buildings. In winter, their bare branches allow sunshine to warm the house.
- Plant shade trees over patio and driveways.
- Air conditioning units operating in the shade use 10% less energy, but don't block air flow.
- Plant deciduous trees with high, spreading crowns (ash, linden, and maple) to provide maximum summertime roof shade.
- Select species with lower profiles to provide shade from lower sun angles.
- To provide continuous shade or to block heavy winds use dense evergreen trees and shrubs. Position these windbreaks upwind of the prevailing wind direction—preventing cold winds from directly blowing on your house walls and helping keep warm inside.

When planting trees you need to consider how large they will grow and how close to your home or business they should be planted.

Slow-growing trees provide the best long-term solution since they develop large, strong root systems that help them stand up to strong winds. Slow-growing trees can also be more drought-resistant than fast-growing trees.

Use plant species that are adapted to the local climate. Native species are best, as they require little maintenance once established and avoid the dangers of invasive species.

### The Benefits of Trees

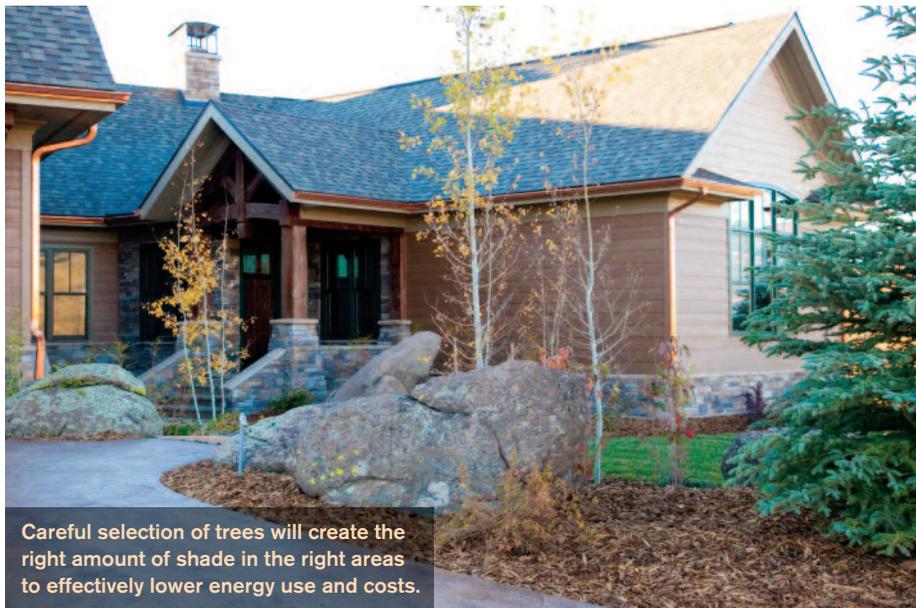
Planting trees, shrubs, and ground-cover is easy and will provide you many benefits, such as:

- Trees add beauty and enjoyment to our physical surroundings.
- Trees create a calming effect.

- Trees give off oxygen.
- Trees clean our air—absorbing carbon dioxide and removing other common pollutants from the air, including nitrogen oxide, sulfur oxides, particulate matter, and ground-level ozone.
- Trees attract birds and other wildlife.
- Trees improve water quality.
- Trees increase property value—the sale price of a landscaped home is, on average, between 5 and 20 percent higher than a home without landscaping.
- Trees help reduce global warming.
- Trees control noise pollution.
- Trees build stronger neighborhoods and reduce crime—trees increase relaxation and reduce aggression.

By planting the right trees in the right places, you can do more than reduce your energy costs each summer: properly planting trees around your home will help conserve energy—both for your family as well as the community.

To learn more about our design and planning techniques, please call us today! We would welcome the opportunity to bid on your project. □





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## Did you know?

- ▶ If you plant a tree today on the west side of your home, in 5 years your energy bills should be 3% less. In 15 years the savings will be nearly 12%.  
Dr. E. Greg McPherson, Center for Urban Forest Research
- ▶ Healthy, mature trees add an average of 10% to a property's value.  
USDA Forest Service
- ▶ Landscaping, especially with trees, can increase property values as much as 20%.  
Management Information Services/ICMA
- ▶ In one study, 83% of realtors believe that mature trees have a strong or moderate impact on the salability of homes listed for under \$150,000; on homes over \$250,000, this perception increases to 98%.  
Arbor National Mortgage & American Forests
- ▶ Trees properly placed around buildings can reduce air conditioning needs by 30% and can save 20-50% in energy used for heating.  
USDA Forest Service



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