

Save Money

The bottom line is that being a good steward and going native can save money, both around your home and in the form of tax dollars, if you just change simple behaviors and take advantage of opportunities. It also impacts your largest asset—the value of your home.

Let's look at a typical 2,400 square foot home on a one-half acre lot. The home is occupied by a family of three people. Based on EPA estimates and other sources, you could expect to annually pay between \$5,000 to \$6,500 for water, energy and yard maintenance. A home owner can easily save a thousand dollars a year with very little effort by *Designing With Natives*.

	Typical Home	Designing With Natives	Saving Per Year
Water	\$600-\$750	\$400-\$500	\$200-\$250
Energy	\$2,500-\$3,000	\$1,400-\$1,800	\$1,100-\$1,200
Yard Maintenance	\$1,200-\$2,400	\$1,000-\$1,200	\$550-\$1,025
Total Annual Costs per household	\$4,300-\$6,150	\$4,300-\$6,150	\$1,850-\$2,475

Water

According to the EPA, the average person uses 100 gallons of water a day. While each of us pays a different water rate, typical rates would be between \$0.006 to \$0.0075 per gallon. 100 gallons per day, per person totals 36,500 gallons per year, per person. The average household in Berks County, Pennsylvania, is 2.6 people. 2.6 times 36,500 gallons totals 94,900 gallons per family per year. At \$0.006 to \$0.075 per gallon, the average annual water bill is \$600 to \$750 per year.

- Approximately 30% of the water used in this region is used outdoors. You can significantly reduce your water costs by reducing the size of your lawn.
- Water conservation measures, such as taking shorter showers, fixing leaks, turning off the water while brushing your teeth or running your dishwasher and laundry only with full loads, can reduce your water consumption by nearly half. For families, this will amount to \$300 to \$375 each year. Unused water helps to recharge our groundwater and is insurance against the next drought.

Yard Maintenance Costs

You reduce your cost and footprint with every reduction of one square foot of lawn. When you consider what a lawn costs a family on an annual basis you might be surprised. If you paid for lawn services, the costs would break down as follows, according to The-Lawn-Advisor.com. These costs are based on a one-quarter acre lot.

Table 2. Annual Cost of Lawn Maintenance

Activity	Low	High
Cutting	\$500	\$1,800
Weeding	\$600	\$600
Spring Clean up	\$300	\$300
Fall raking	\$200	\$500
Chemicals	\$500	\$900
Annul Totals	\$2,100	\$4,100

An average family could spend nearly \$3,000 per year on maintenance. If you reduce your frequency and dosage of fertilizer, you can easily save \$350 per year. If you have others cut and weed your lawn and you reduce the size of your lawn by 25% you will save another \$400 to \$500 annually. You will also save another \$100 on water.

Installation and Maintenance Costs

In 2003, three Northern Illinois landscapers estimated installation and maintenance costs for turf-grass and native landscapes. All three concluded that turf grass is more expensive than native landscaping. Variations in conditions from site to site can create exceptions to this scenario. For residential sites that do not require irrigation systems, seeding turf can sometimes be cost-competitive with native landscaping. For large corporate campuses and residential developments with large common areas, native landscaping is more cost effective.

Table 2. First-Year Installation Costs Per Acre <i>(Natural Landscaping for Public Officials: A Sourcebook. Chicago: Northeastern Illinois Planning Commission, 2004)</i>		
Landscape Treatment	Low-End Estimate	High-End Estimate
Turf Grass	\$7,800	\$14,825
Native Landscaping	\$3,400	\$ 5,975

Table 3. 10-Year Average Maintenance Costs Per Acre <i>(Natural Landscaping for Public Officials: A Sourcebook. Chicago: Northeastern Illinois Planning Commission, 2004)</i>		
Landscape Treatment	Low-End Estimate	High-End Estimate
Turf Grass	\$5,550	\$6,471
Native Landscaping	\$1,600	\$ 1,788

How do we keep maintenance and costs as low as possible?

There is the misconception that native landscapes require little or no maintenance. In reality, some native gardens require a lot of maintenance and some don't.

This list describes what makes a native landscape low in cost and maintenance and why:

- Plants that are long-lived do not need replacing.
- Plants that are selected properly for a site will thrive.
- Plants that have few pest problems require no chemicals.
- Plants that are compact and clump-forming work well in small places and don't flop over.
- Plants with rhizomes (underground roots systems) form solid ground-cover and fill large spaces quickly, keep weeds out and require little mulch.
- Plants that do not spread aggressively from seed reduce weeds.
- Plants with clean, dense foliage three to four seasons of the year prevent weeds and require little mulching.

Energy

Using the national "percentage" averages below, a homeowner who spends \$3,000 a year for home energy will pay roughly the following:

- \$1,680 for heating and cooling
- \$698 for appliances and lighting
- \$480 for water heating
- \$150 for refrigeration

You can save up to 15-30% on your heating and air conditioning costs by planting native plants and growing trees to shade and screen your house from the sun and wind. For the average home owner, this will translate into nearly \$500 a year in savings. Energy conservation can reduce costs by up to 50%.

Energy conservation can reduce your heating and cooling, appliance usage and light and refrigeration expenses by up to 50%. This can be worth over a thousand dollars in savings per household each year. Saving energy also prevents air pollution. Did you know that the average house in the United States produces more than 2 tons of carbon each year? This is your carbon footprint. The trees in your yard also sequester and store carbon. A large tree stores 5 tons of carbon over its life. By replanting native trees, you create habitat, reduce runoff and sequester carbon. By planting trees or donating to local tree planting programs you can become carbon neutral.

Landscaping as an Investment in Your Home

Anything a homeowner does to the exterior of a home to improve its appearance has a positive impact on the home's value, according to the experts with the Appraisal Institute. A Michigan University study found that homeowners achieved a 109 per cent return on every landscaping dollar spent – higher than any other home improvement. By spending \$500 to \$3,000 on plants and materials, plus a few hours of time, you can achieve a well-landscaped look without shelling out for professional help. The same Michigan University research found good landscape design – as judged by plant type, size and design sophistication – increased perceived home value by 5.5 – 11 per cent (Behe *et al.*, 2005).

The change in value (from no landscape to well-landscaped) ranged from 5.5 percent (Louisiana) to 11.4 percent (South Carolina). The increase in home value from the least-valued landscape to the most valued landscape in the Michigan study was 12.7 percent. Thus, a home valued at \$150,000 with no landscape (lawn only) could be worth \$8,250 to \$19,050 more with a sophisticated landscape with color and large plants. Interestingly, the multi-state study found that very minimal landscapes (simple design with small plants) detracted from the value of a landscape.

Data from research conducted from 1996-97 in Greenville, S.C., showed that home price premiums increased 6 percent to 7 percent for home landscapes that were upgraded from good to excellent and 4 percent to 5 percent for an upgrade from average to good (Henry, 2000). By combining these data, the value added by a landscape upgrade from average to excellent increases a home value by 10 percent to 12 percent. This finding is consistent with the survey results of Behe *et al.* (2005) and Hardy *et al.* (2000).

Design Sophistication

The Michigan State University study survey respondents ranked a landscape's sophistication as most important when considering the perceived value of a home. While the sophistication of a landscape design is something that is hard to put into words for most consumers, like art, they know it when they see it. The study defines a sophisticated landscape as one that includes a balance of large deciduous trees, evergreen plants, annual color plants and colored hardscape. The latter includes all non-plant features, such as decorative brick, pavers and gravel. The study found that a home valued at \$150,000 with only a lawn can gain \$8,250 to \$19,050 more in value with an upgraded sophisticated landscape.



Figure 1. Design Sophistication Level 1: foundation planting only.



Figure 2. Design Sophistication Level 2: foundation planting with one large, oblong island planting and one or two single specimen or shade trees in the lawn.



Figure 3. Design Sophistication Level 3: a foundation planting with adjoining beds and two or three large island plantings, all incorporating curved bedlines.

What factor was most important?

Survey respondents ranked design sophistication as most important, plant size as next important, and diversity of plant type as least important (Table 1).

Importance rank	Landscape aspect	% of value added to home
1	Design sophistication	42
2	Plant size	36
3	Diversity of plant material type	22

The preferred landscape included a sophisticated design with large deciduous, evergreen, and annual color plants and colored hardscape. These results differ slightly compared to a 1999 Michigan study with an identical methodology (Hardy *et al.*, 2000). In that study, plant size was the factor that most added to a home's value (40.2 percent) and design sophistication was a close second (36.5 percent). As in the previous study, plant type was placed third (23.3 percent). The authors of the seven-state 1999 study hypothesized that the difference between the two studies may relate to survey respondents. The survey in Michigan occurred at a flower show venue whereas the seven-state survey occurred at a home and garden show. Another potential difference was that Michigan respondents may value plant size more than the respondents in the seven-state survey because plants grow more slowly in Michigan compared to the areas of the multi-state survey (Delaware, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, and Texas).

Bigger is Better

As in most things related to real estate, location plays a large role in what types of landscaping are perceived to be more valuable than others. In some areas of the country large trees are more important than the overall sophistication of the landscape design. Researchers think that this preference is limited to areas where trees take longer to grow, such as Michigan, so large trees are more in demand than small trees. Other studies, such as one conducted by the Arbor Day Foundation, claim that trees on the property may add up to 15 percent additional value to a home. As an added bonus, a young healthy tree offers the cooling equivalent of 10 room-size air conditioners running 20 hours a day, according to the U.S. Department of Agriculture.

Diversity of Plants

It's not enough to plant some big trees; the diversity of plant life in the landscape is also important. For the most bang from your landscaping buck, consider following the Michigan State University study findings by planting annual color plants and adding colored hardscape to the yard. Annual plants are those that complete their lives in one season. They can be planted anywhere, but look especially striking in beds, borders and containers. Typically planted in the spring and summer, some annuals to consider include vinca (*Vinca spp.*), zinnia (*Zinnia spp.*) and sweet pea (*Lathyrus odoratus*).

Considerations

Minimalist landscape schemes that contain only small plants actually detract from a home's value, according to the Michigan study. If you're on a tight budget and can't afford an entire landscape makeover, consider adding at least one of the more important aspects of a sophisticated landscape design. Since plant size is second in value to sophisticated design, consider adding at least one tall tree and sprinkling the landscape with splashes of annual color. The Arbor Day Foundation offers a handy calculator on its website that allows users to choose a type and size of tree to determine how much value it will add to the home.

The Appraisal Institute, the nation's largest professional association of real estate appraisers, advises homeowners to properly maintain their landscaping, which can significantly affect property values.

Homeowners should ask themselves the following questions when it comes to the quality of their home's green space:

- Is the landscaping attractive enough to make the prospective buyer walk through the front door? Keep the design contemporary and in line with comparable properties in the area.
- Could the landscaping provide cost savings? Landscaping that requires little or no water to maintain could be desirable depending on the geographic area.
- Is the landscaping energy-efficient for the home overall? For example, it's a good idea to plant trees in a place where they block the sun in locations with year-round hot climates.
- Are the trees planted at a safe distance from the home and are they healthy and well maintained? Weak, old or damaged trees planted too close to a home or building could pose dangers to the home's structure and will need to be removed. Consumers should also be sure

that mulching or beds don't get too close to wood around foundations to avoid wood-destroying organisms.

Literature Cited

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