



# GO GREENguide



creating a healthy & prosperous living environment for all Fairfield residents through sustainability.

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I am very pleased to present the Household Guide to Sustainability on behalf of the City of Fairfield and the Fairfield Go Green Commission. This practical guide provides you the facts, tips and resources to manage your household in a way that conserves resources, saves money and is good for the environment.

This Guide was made possible by a grant from the Iowa Office of Energy Independence and is a practical application of the The Fairfield Go Green Strategic Plan.

I hope you find it useful and become inspired to do as much as you can in your own home. Working together, we can accomplish the goals we set as a community and inspire other Iowa cities in accomplishing our State's goals of achieving energy independence and a sustainable future.

Ed Malloy, Mayor, City of Fairfield



# energy

Fairfield, like the rest of the country, is facing rising energy costs and increased carbon emissions. Our dependence on fossil fuels is causing energy costs to rise and increasing carbon emissions. Most households can reduce their monthly utility bills by 50% or more by applying many affordable solutions without reducing comfort or quality of life. Furnaces, air conditioning compressors and major appliances over ten years old are probably not very energy efficient. Older furnaces may burn at 50% efficiency while new furnaces can burn at 93% efficiency or greater. Energy leaks through windows, doors and poor insulations can rob a household of hundreds of dollars per year.

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If all households in Fairfield switched out 4 incandescent light bulbs for four Compact Florescent Lights, the energy savings over the life of the new bulbs would be 15.6 million kilowatt-hours. This is enough energy to power 1300 homes for a year, and at current energy costs, would save \$1,872,000.

## resources

### ALLIANT ENERGY

800.255.4268

[www.AlliantEnergy.com](http://www.AlliantEnergy.com)

Fairfield's primary utility company. Energy auditing and other resources for Alliant clients.

### ACCESS ENERGY COOP

866.242.4232

[www.accessenergycoop.com](http://www.accessenergycoop.com)

Energy supplier of the greater Fairfield area. Offers audits, tips and resources online.

### IDEAL ENERGY

641.919.2269

[www.IdealEnergyInc.com](http://www.IdealEnergyInc.com)

Certified Energy Star raters offering professional energy auditing and consulting.

### POWER THINKERS

[www.powerthinkers.com](http://www.powerthinkers.com)

Tips for saving energy from Alliant Energy.

### ENERGY STAR

[www.energystar.gov](http://www.energystar.gov)

Energy guidelines from the EPA. Includes information on rebates and Energy Star construction

### DSIRE

[www.dsireusa.org](http://www.dsireusa.org)

Online resource for available tax credits, rebates, etc.

### ENERGY SAVERS

[www.energysavers.gov](http://www.energysavers.gov)

A great resource from the US Department of Energy. Learn more about solar hot water systems and other ways to save energy around the house.

## how you can help

### \* ENERGY AUDITS

Annual energy audits are the best way to tell where your home is inefficient and how you may save on your utility bill. For example, if your attic insulation is just 5% defective (1/4 inch gap between the insulation and attic floor) it cuts its effectiveness by 50%! Little problems like this make for a hotter house in the summer and a colder house in the winter. New insulation installation will save hundreds of dollars annually, while increasing the comfort of your home. Insulation is generally made to last 50 years. Free audits are available from your utility company and more comprehensive audits are available from local energy auditing experts.

### \* CFL & LED LIGHTING

Alternative lighting options are now available which use 70% less energy than incandescent bulbs. Improved light quality makes CFLs (Compact Florescent Bulbs) or LEDs (Light Emitting Diodes) a worthwhile investment with high payback.

### \* UPGRADE APPLIANCES & MAJOR SYSTEMS

Appliances, heating and cooling units, and hot water heaters now perform to greater energy efficiency standards. Replacing faulty or worn out appliances, heating and air conditioning equipment with energy saving equipment can create a huge savings month after month. Rebates from retailers, the utility company and the federal government help reduce the cost of an upgrade.

### \* SOLAR HOT WATER

Harnessing the sun's energy for your daily hot water supply could greatly reduce the energy demands of your home. For larger families, up to 25% of the home energy cost is in hot water. Solar hot water systems have one of the highest payback periods of any renewable energy system and can often be retrofitted to an existing hot water system.

### \* PHANTOM ENERGY + HOME MONITORING

Appliances and electronics left plugged in when not in use needlessly consume power and can cost you up to 10% on your energy bill. Stop phantom energy by unplugging electronics when not in use and consider investing in smart power strips for your bigger electronics such as home entertainment systems. Consider monitoring your home energy use, which will help you identify which appliances and electronics use phantom energy.

more tips & resources online at: [www.fairfieldgogreen.com](http://www.fairfieldgogreen.com)



# water

## how you can help

### SAVING WATER OUTDOORS

- \* Harvest your own water by installing a rain catchment system for outdoor watering. Chances are you will collect more than you need and save on your water bill.
- \* Don't water if rain is in the forecast. Water during the coolest part of the day to avoid excess evaporation and let the water sink in slowly. Water applied too fast runs off into storm sewers.

### SAVING WATER IN THE BATHROOM

- \* Did you know that 2/3 of the water used in an average home is used in the bathroom? To put an end to excess water use, don't leave water running while brushing your teeth or shaving.
- \* Shorter, cooler showers save money and energy. Consider using reduced-flow devices for showerheads and low flow valves for faucets. These devices aerate the water, while maintaining a good pressure.
- \* Always be aware of how your toilet is operating so leaks don't slip by you. 2-7 gallons of water are used every time a toilet is flushed. If you are in the market for a new toilet, opt for a dual flush, which conserves water.

### SAVING WATER WHILE DOING LAUNDRY

- \* About 90% of the energy used for washing clothes in a conventional top-load washer is for heating the water. Washing with cold water uses less energy.
- \* Only wash full loads and use the quick wash or efficiency setting if available.
- \* When it is time to replace your washing machine buy a model that is Energy Star rated and more water efficient.

### SAVING WATER IN THE KITCHEN

- \* Installing aerators on faucets can reduce water flow rates by up to 50%.
- \* Dishwashers tend to use less water than washing by hand. Make sure the dishwasher is fully loaded before turning it on. When it is time to replace your dishwasher, buy a model that is Energy-start rated and more water efficient.
- \* Use composting methods (see recycling page 5) instead of a water guzzling garbage disposal.

In the United States alone, 80 to 100 gallons of water is used per person every day. This is the highest personal water consumption rate in the world, and is becoming increasingly costly. The good news? There are many ways to save water, and they all start with you.

The average person in Fairfield uses 1,496.12 gallons of water per month. With a few small and simple changes, you can help reduce your water use, leaving more water in the aquifers, rivers, lakes and other sources. Better water use habits will also result in a lower water bill, which benefits you financially. Who wouldn't want lower bills? Read on to learn how to start saving.

If all households in Fairfield installed water efficient appliances, we would save about 60 million gallons per year. This is roughly equivalent to 2 minutes' worth of flow over Niagara Falls and can save \$360,000 in water utility bills.

## resources

### FAIRFIELD WATERWORKS

118 S. Main Street  
641.472.5343  
Responsible for the maintenance and customer service needs of the water supply for Fairfield.

### UNITED STATES GEOLOGICAL SURVEY

[www.ga.water.usgs.gov/edu](http://www.ga.water.usgs.gov/edu)  
Calculate your water usage online and learn ways to reduce!

### WATER USE IT WISELY

[www.wateruseitwisely.com](http://www.wateruseitwisely.com)  
100's of tips for saving water, plus a DIY home water audit and monthly planner.

### BUILD IT SOLAR

[www.BuildItSolar.com](http://www.BuildItSolar.com)  
Online DIY resource for home rain catchment systems and much more.

### IOWA DNR

[www.iowadnr.gov](http://www.iowadnr.gov)  
Learn about Iowa's bodies of water and water quality.



# food

In Fairfield we are fortunate to have access to a thriving local food movement. Buying locally grown food means more money for the local economy. According to a study by the New Economics Foundation, a dollar spent locally generates nearly twice as much income for the local economy. When businesses, including food supply, are not owned locally money leaves the community in every transaction.

Most foods travel 1,600 miles before reaching their destination. Very little of what we spend on food actually ends up in the pocket of the farmers. Most of it is spent on transportation, fuel, packaging and marketing costs.

Purchasing food grown in the Fairfield area helps support our farmers, promotes more productive land usage and preserves our natural food heritage. Local foods are less susceptible to harmful contamination and are ripe and fresh.

Plus, it's a delight knowing the story and history of your food and supporting a family farm. Whether it is a farmer bringing your favorite crisp apples to market or the baker who gets up early every morning to make fresh bread, knowing part of the narrative about your food adds greatly to the enjoyment of a meal.

A recent study by the Leopold Center showed that purchasing local produce, in farmers markets or in the supermarket, is actually less expensive than non-local produce – so why not support your local farmers!?

## resources

### FAIRFIELD FARMERS MARKET

Howard Park , corner of N. Main and Grimes (4 blocks North of the square)  
(May-October)  
Wednesdays, 3pm to 6pm,  
Saturdays, 8am to 1pm

### AMERICAN COMMUNITY GARDEN ASSOCIATION

[www.communitygarden.org](http://www.communitygarden.org)  
An excellent online resource dedicated to community gardens.

### SUSTAINABLE TABLE

[www.sustainabletable.org](http://www.sustainabletable.org)  
An great educational resource on sustainable and local food-related issues.

### LOCAL HARVEST

[www.localharvest.org](http://www.localharvest.org)  
Extensive information pertaining to local food, including CSAs and Farmers Markets.

### HOMETOWN HARVEST

[www.hometownharvestseiowa.org](http://www.hometownharvestseiowa.org)  
Southeast Iowa's resource for finding Buy Fresh/Buy Local food, along with current information regarding educational programs for gardening and farming programs.

## how you can help

### \* SHOP AT FARMERS MARKETS

Farmers Markets are one of the oldest forms of direct marketing by small farmers. Meats, cheese, baked goods, fruits, veggies, flowers, plants and handicrafts can all be purchased during Fairfield's seasonal Farmers Market. Much of the produce is certified organic, as are some of the baked goods. Make a day of the market, and plan on enjoying breakfast or lunch from one of the many food vendors.

### \* JOIN A CSA (COMMUNITY SUPPORTED AGRICULTURE)

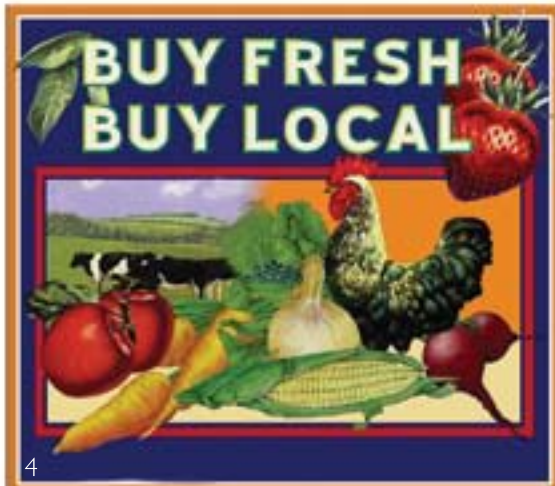
Community Supported Agriculture allows farmers to offer shares of their farm and yield to the public. Often, these shares are called subscriptions or memberships. The consumer purchases a share of the farm for a given time and can stop by the farm or a designated pickup location to pick up their share of that week's harvest.

### \* GROW FOOD IN YOUR BACKYARD/COMMUNITY GARDEN

Backyard gardening can be fun for people of all ages, and can teach young children the importance of understanding how food is grown. Even the smallest amount of yard space can yield vegetables, depending on the amount of sunlight the area gets. Not enough space in your yard? Consider starting or joining a community garden with like-minded neighbors.

### BUY LOCAL FOOD

\* Know what you are buying! Keep your eyes open for local food labels in stores so you can know where your food is coming from. Support restaurants in town that buy produce grown locally.



more tips & resources online at: [www.fairfieldgogreen.com](http://www.fairfieldgogreen.com)



# recycling + waste reduction

## Saving our natural resources & reducing toxicity of waste.

Every year, Americans generate millions of tons of waste that ends up in landfills or pollutes our natural environment. Surprisingly, our waste consists largely of items that can be recycled. The City of Fairfield is challenging residents to conserve natural resources by reducing, reusing, and recycling both at home and at work. There are two basic approaches to dealing with waste: reducing the overall amount and toxicity of products consumed, and recycling products that are no longer in use. The bottom line: Less consumption means less trash, more recycling results in better land use.

The average family can reduce their contribution to the landfill by 500 pounds annually simply by composting their kitchen scraps.

## resources

### WASTE MANAGEMENT (WM)

641.472.2952

[www.WM.com](http://www.WM.com)

Provides recycling & trash removal services within the City of Fairfield. Composting bags available for yard waste.

### THINK GREEN BY WM

[www.thinkgreen.com](http://www.thinkgreen.com)

Provides case studies on recycling, info on properly disposing of hazardous waste, and a list of what can be recycled through Fairfield's municipal program.

### EARTH MACHINE

[www.earthmachine.com](http://www.earthmachine.com)

The Official City of Fairfield approved backyard composting unit! Available from Ideal Energy at [www.IdealEnergyInc.com](http://www.IdealEnergyInc.com)

### EARTH 911

[www.Earth911.org](http://www.Earth911.org)

Online resource with information on recycling resources in your area, along with tips for recycling & disposing hazardous waste properly.

### ENVIRONMENTAL PROTECTION AGENCY

[www.epa.gov/epawaste](http://www.epa.gov/epawaste)

Extensive online resource for disposing toxic waste properly and more info about recycling.

### HABITAT FOR HUMANITY

[www.habitat.org](http://www.habitat.org)

641.470.2711

Donate building materials in decent condition for reuse community in housing projects.

### FAIRFIELD FREecycle ON FACEBOOK

[www.facebook.com/group.php?gid=85823588043](http://www.facebook.com/group.php?gid=85823588043)

Swap items you don't want for something you need, with a fellow Fairfieldian!

## how you can help

### \*REDUCE

**MINIMIZE WASTE:** Look for products with less packaging, or recyclable packaging. Purchase products that will last, and take good care of them. When ordering food, avoid any unnecessary plastic utensils, straws, etc. Ask your favorite local restaurant to consider biodegradable takeout boxes, if they are not already using them. Carry a mug with you wherever you go for take-out beverages. Take reusable bags to the grocery store.

### \*REUSE

**REUSABLES:** Switch from disposable to reusable products: rechargeable batteries, reusable lunch boxes, reusable water bottles, etc.

**BUY/SELL/DONATE USED ITEMS:** Before you recycle or dispose of anything consider whether it has life left in it. Buy and sell your items online, in a local second hand store, or donate them. Use the "Fairfield Freecycle" page on Facebook to find a home for items you no longer need (Details in the resource section). Building materials may be donated to our local Habitat for Humanity.

### \*RECYCLE

**COMPOST:** Lawn trimmings can be composted in your own backyard or using the Waste Management system. Call Waste Management for a composting bag, which can be filled and picked up with your weekly trash pickup. We recommend composting kitchen scraps, etc in a neighbor-friendly way, using the Earth Machine, a City approved composting unit (Details in the resource section).

**RECYCLE:** Starting in November, 2010, Residents in Fairfield will receive a change in their recycling program (single-stream). These changes include: a 96 gallon wheeled container (at no cost), pick-up service every-other week on current collection day (containers will be marked with pickup dates), inclusion of all types of mixed paper, cardboard, phone books, magazines, plastics: #1-#7 (including necked plastic bottles and containers), inclusion of aerosol cans, and glass of all types and colors. Benefits of the new system include diverting potentially 22 tons monthly waste from SEMCO Landfill, increase in recycling pounds per home/month by 41%, glass bottle-to-glass bottle recycling, high recovery rate/low residual rate in recycling facility, smaller carbon foot print. Questions? Call WM at : 641-472-2952

more tips & resources online at: [www.fairfieldgogreen.com](http://www.fairfieldgogreen.com)



# land

## how you can help

### \*KEEPING YOUR YARD HEALTHY

Minimize the use of fertilizers and pesticides on your lawn, which get carried into storm water when it rains. Use a mulching mower and cut your grass high, about 3-4 inches. Your grass clippings can supply most of the nutrients that your lawn requires. Taller grass retains moisture and creates a natural shade barrier preventing many weeds from germinating. Compost or properly dispose of yard trimmings, which can clog storm drains and prevent the passage of water. If you service your vehicles at home, prevent motor oil spills, which also can end up in the storm drains. Prevent hazardous materials from entering the storm drains by reducing the use of toxic household cleaners used.

### \*RAIN WATER MANAGEMENT

The best way to deal with rainwater in your own yard is to use it! Rain catchment systems to save water in large barrels, for watering during drier weeks. Rainscaping practices such as rain gardens, bioswales, native landscaping, permeable pavement and green roofs all infiltrate or capture urban storm water which helps to reduce runoff, while improving water quality in Iowa streams and lakes.

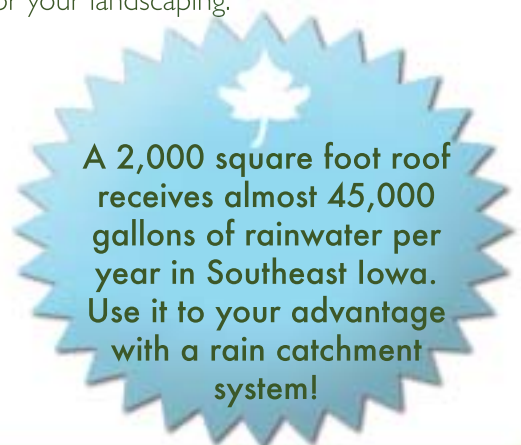
### \*ECO PAVING

A permeable paving system allows water to soak through the paving material to the ground below. This diverts water from the storm drains, minimizing environmental pollutants. Permeable pavers come in a variety of designs and colors for driveways, patios, and walkways.

### \*GET INVOLVED!

There are many local organizations dedicated to preserving our natural resources such as the Sierra Club or Jefferson County Trails Association. Volunteer locally to help out!

Keeping the natural environment around us clean and healthy starts in our own back yard. The next time it rains, notice where the water is going. Rather than seeping into the soil, water flows off roads and roofs picking up oil, grease, pesticides and fertilizers from lawns. This polluted water then heads into storm drains and is discharged downstream stream, causing erosion and pollution. The solution to the problem can be a money-saver for you. Harvesting rainwater from your roof for gardening can reduce your summer water bill and provide a constant source of water for your landscaping.



## resources

**IOWA NATURAL RESOURCE CONSERVATION**  
[www.ia.nrcs.usda.gov/features/raingardens.html](http://www.ia.nrcs.usda.gov/features/raingardens.html)  
A great how-to for designing rain gardens using local species.

**IOWA DNR**  
[www.iowadnr.gov](http://www.iowadnr.gov)  
Learn more about land and water related issues from the Iowa Department of Natural Resources.

**PATHFINDERS CONSERVATION + DEVELOPMENT**  
641.472.6177  
[www.pathfinderscd.org](http://www.pathfinderscd.org)  
Local non-profit focused on small business development, watershed protection, trail formation, etc.

**LEOPOLD SIERRA CLUB**  
[www.iowa.sierraclub.org/leog](http://www.iowa.sierraclub.org/leog)  
Get involved with the local Sierra club, conservation issues, etc.

**RAINSCAPING IOWA**  
[www.rainscaping.org](http://www.rainscaping.org)  
A state-wide educational campaign promoting urban storm water management practices.



If 1/2 of the vehicle owners in Fairfield chose to walk or ride a bike as a method of local transportation, it would prevent over 5.5 million pounds of CO2 from entering our atmosphere annually.

## resources

### JEFFERSON COUNTY TRAIL SYSTEM

[www.jeffersoncountytrails.org](http://www.jeffersoncountytrails.org)

17 of miles of trails in the Fairfield area. Plan a scenic route to work.

### FAIRFIELD BIKE BLOG

[www.bikefairfieldiowa.blogspot.com](http://www.bikefairfieldiowa.blogspot.com)

Gives you a range of bicycling choices.

### AJ'S BICYCLE SHOP

123 North Court Street

641.472.1719

Bicycles, parts & repairs.

### WAL-MART

1800 West Burlington Ave

641.472.6858

Bicycles & parts.

### MAHARISHI UNIVERSITY OF MANAGEMENT

Highway 1 North

641.472.7000

Rent a bicycle with the yellow bike program through the Recreation Department, or check out the student's latest research and development projects in the Sustainable Living Department.

### BIODIESEL COMMUNITY

[www.biodieselcommunity.org](http://www.biodieselcommunity.org)

Everything you need to know to get started on your own home biofuel operation!

# transportation

It is no secret that transportation is among the top contributors to environmental pollution. Cars and SUV's alone use 40% of the oil that is used daily in the United States. Did you know that for every gallon of gasoline used 20 pounds of carbon are released into our atmosphere? Reducing CO2 emissions within the City of Fairfield ultimately provides all residents with a healthier living environment and saves on household transportation costs.

The average person in Fairfield lives within five miles of their place of work, making it easy to consider alternative means of transportation. With recent resurfacing and lane reduction, more space is available to cyclists for easy & safe transit.

## how you can help

### \* ALTERNATIVE TRANSPORTATION

Carpooling is a great alternative to local, daily transportation. Also, consider walking or biking to work. Making this a habit could save you about \$200 per year in fuel costs and you will enjoy health benefits and improved well being. If you're planning on biking in and around Fairfield, it's important to know the rules and regulations that bicycles must follow. A copy of the regulations is available in the resources section of the Go Green website at [www.fairfieldgogreen.com](http://www.fairfieldgogreen.com)

### \* JEFFERSON COUNTY TRAIL SYSTEM

Plan a scenic route to work! Explore Fairfield's expanding recreational trail system. When complete, a 33-mile trail system will connect parks, lakes and a state preserve. Pass through prairies, woodlands, wetlands, old railroad corridors, over major bridges and more.

### \* ALTERNATIVE FUELS

Consider using alternative fuels. Biofuels are better for the environment because they are made from renewable resources and have lower carbon emissions. Looking for a fun weekend project? Biodiesel can be made in your own backyard using waste oils! Check out the biodiesel website in our resource section for step-by-step instructions.

### \* MAINTAIN YOUR VEHICLE

Properly inflating your tires can improve your fuel efficiency up to 3.5%. If you were to get just one extra mile per gallon, that would save you 65 gallons a year. Be sure to check the air levels when you refuel. Also, get the most out of your vehicle by performing proper maintenance and keeping it clean. This extends your vehicle's life and performance.

### \* HYBRID + ECONOMY VEHICLES

In the market for a new car? A 13mpg SUV in one year wastes more energy than leaving a refrigerator open for six years, a bathroom light burning for 30 years, or a color TV turned on for 28 years. Skip the SUV and go for an economy car or a hybrid. The savings in fuel costs have significant impacts on your wallet and the environment. There are major technological advancements made every year in the areas of hybrid and electric vehicles. Car companies now make hybrid-electric and flex fuel vehicles which both get much better gas mileage.

more tips & resources online at: [www.fairfieldgogreen.com](http://www.fairfieldgogreen.com)

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GO GREEN GUIDE  
fairfield, iowa



# resources

## IOWA ENERGY CENTER

[www.energy.iastate.edu/homeseries](http://www.energy.iastate.edu/homeseries)

Home Series Booklets from the Iowa Energy Center and on-line. There are four books available: Water Heating, Major Home Appliances, Home Heating and Cooling, Home Tightening, Insulation and Ventilation.

## GREEN HOME GUIDE

[www.greenhomeguide.com](http://www.greenhomeguide.com)

For those looking for advice on how to green their existing home, the USGBC has created the Green Home Guide with searchable content on more sustainable upgrades, from outlets to countertops.

## ENERGY STAR

[www.energystar.gov](http://www.energystar.gov)

Energy Star is a tool to help you build or upgrade your home. The website has a searchable database for appliances, electronics, lights, heater and air conditioners, by model or energy efficiency.

## GREEN BUILDING ADVISOR

[www.greenbuildingadvisor.com](http://www.greenbuildingadvisor.com)

Resource for building, designing, and remodeling green homes. Strategies for building projects, green product reviews, and more.

## LEED BUILDING CERTIFICATION

[www.usgb.org](http://www.usgb.org)

Green building certification for residential, commercial and industrial applications.



# new construction + renovations

Considering a renovation project or building a new home? With advance planning and design, it is now possible to create a home that uses 80% less energy than the typical older home. The key is understanding and considering every aspect of efficiency including design, materials and appliances. The result? A home that is smart, comfortable and efficient can save you money on utility bills for years to come!

## how you can help

### \* HIGH PERFORMANCE DESIGN

The most important method to consider in designing a new building project or undertaking a renovation is high performance design. This means that measures will be taken during the design process to minimize initial use of materials and ongoing resource consumption in the future. A little advance planning can mean less energy and water bills for years to come. For the best advice on your particular project, consult an expert or follow the links in the resource section.

### \* CHOOSING LOCAL + GREEN MATERIALS

When choosing materials for your building project, consider the lifespan of the product, the contents, and the overall performance of the material. In many cases, you will find that spending more up-front saves money for years to come. For better indoor air quality, use low or no volatile organic compound (VOC) paints and non-toxic materials. When undertaking a building project, shop local first! Choosing to purchase your building materials from a local vendor helps support the Fairfield economy.

### \* APPLIANCES AND MAJOR SYSTEMS

In order to maintain efficient electricity use in your home, it is essential to have properly designed heating and air-conditioning systems and highly efficient appliances. The Energy Star program makes it easy to choose new energy efficient appliances. When upgrading heating and cooling systems, be sure that your system is properly sized to fit the home. Seek the advice of a building professional about energy efficient options for heating and cooling, including solar hot water and geothermal systems.

### \* FINANCING YOUR PROJECT

Many loan and rebate programs are in place that can help you upgrade your current home, or begin construction on a new one. Contact your local financial institution and utility company for the most current financing, loan and rebate options.