



HIGH FIVE

An award program for Elk River Residents who want to boost home efficiency, save money, and help the planet in the process.

Pilot Program



What is it?

Inside, you will find **39** eco-friendly actions that your household can implement to earn up to **73** points. The more actions you implement, the more points you receive! The more points you receive, the more you will save!

**15
Points**



**25
Points**



**35
Points**



“High Five” households will be recognized on the City website and in the Elk River Star News. In addition, the household that earns the most points in a calendar year will receive the “High Five Household of the Year Award,” and be recognized by the City Council.

The households with the top three amounts of points at the end of the year will receive up to \$100 in utility bill credit or in Chamber Bucks to spend at hundreds of Elk River Area businesses!



How do I do it?

We want to make accomplishing these recommendations as easy as possible. Actions are split into various categories and given a recommended order. For each action, you will find:

- General costs along with benefits and paybacks
- Applicable rebates and where to find them
- Resources and suggestions for implementation
- When to implement the action
- An applicable case study (if available)
- The point value for successful completion of the action



Why do it?

The idea of doing more with less is simply good practice. Save thousands of dollars! Let us reward you for doing something that's good for your home, your family, and good for the planet. It's a win-win-win!

How do I receive credit?

Once you have completed an action, let us know by calling the City of Elk River Environmental Department at 763.635.1000 or email EnergyCity@ElkRiverMN.gov

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WASTE MANAGEMENT

IN THIS SECTION: 13 POINTS



1. Implement Household Recycling
2. Provide Recycling Containers in your Kitchen, Office, Basement, and Garage
3. Recycle 10 Items at a Resale Store or online
4. Remove disposable Items from your Home
5. Receive a waste audit
6. Implement Organics Recycling
7. Work with your Household to ensure that materials are recycled

Implement Household Recycling			
Implement Household Recycling			2 Points
<p><i>You pay less for recycling than you do for trash collection. The more you recycle, the more you save, it's that simple. In addition, the MPCA will be increasing recycling requirements in the future anyway - Get ahead of the curve!</i></p>			
Costs	Payback/Benefits	Rebates	When?
Low to none	Divert recyclables from your trash to downsize your trash cart and save money in disposal costs	None	Now
<p>Resources and Suggestions</p> <p>Get educated. Talk to the city Environmental Department and your hauler to learn about what can and cannot be recycled.</p> <p>Go to www.ElkRiverMN.gov to find a list of sites to take recycled products if you chose not to have curbside service.</p>			
<p>Case Summary</p> <p>Recycling is already included in your trash rate. If you can increase your recycling cart and decrease your trash cart, you can save \$2-\$26 a month instantly. Call Elk River Municipal Utilities for rates and learn how to save money.</p>			
<p>http://www.elkriverutilities.com/pages/single-sort-recycling</p>			

Provide Recycling Containers in your Kitchen, Office, Basement, and Garage**1 Point**

Make recycling as easy as possible. It should be easier to recycle than it is to throw away.

Costs

Any container costs in which to place recyclables; \$0 to \$15 per bin

Payback/Benefits

Substantially increased recycling rates, thus lowering your trash bill

Rebates

Check the Sunday ads for sales on recycling bins

When?

Now
When hosting guests

Resources and Suggestions

When having a party or get-together, make sure that recycling bins are properly labeled.

If you are hosting a large event, recycling bins are available at City Hall free of charge. Contact the Environmental Department to request them.

Case Summary

It's proven that the easier recycling is, the more people will recycle. For instance, when the city switched to Single-Sort Recycling, the overall recycling rate went up by 30%. Convenience plays a huge factor.

<https://www.rethinkrecycling.com/event-planning/resource/10-simple-ways-go-green-house-party>

Recycle 10 Items at a Resale Store or Online**2 Points**

"One man's trash is another man's treasure." The best form of recycling is making this saying come true. If you think that someone else can use the item, donate it or sell it before putting it in the trash.

Costs

None

Payback/Benefits

Avoid sending items to a landfill and paying disposal fees for certain items

Rebates

None available

When?

Any time you have a reusable item

Resources and Suggestions

Host a garage sale, donate the item to a resale store, place the item on Craigslist, Ebay, or Facebook, give it to a friend, or find another way to make sure the item is reused instead of thrown away.

Case Summary

The University of Minnesota started a Free Store for students to donate reusable furniture, clothing, appliances, etc. at the end of the year. In the fall, new students can shop the Free Store for items they need.

The City of Elk River is hosting Fix-It-Clinics where residents can fix household items to avoid landfilling.

http://search.earth911.com/?utm_source=earth911-headerfooter&utm_medium=secondary-nav&utm_campaign=advanced-search

Remove Disposable Items from your Home**2 Points**

You'll never have to throw away another plastic spoon or Styrofoam cup ever again. And better yet, you'll never have to purchase them either.

Costs

Some upfront costs to replace or add re-usable items in lieu of disposables.

Payback/Benefits

Reduced waste production and thus smaller disposal fees
Save money in the long run

Rebates

None available

When?

During parties and get-togethers

Resources and Suggestions

Shop wisely. Use cotton rags instead of paper towels, reusable containers instead of Ziploc bags, a mop and broom instead of Swiffers, China instead of disposable utensils/plates/cups, and rechargeable batteries instead of single use. Calculate how much you spend on disposable products each year at the link below.

Case Summary

A Swiffer and a mop go for about the same price. However, the Swiffer pads are as much as \$65 for just 72 pads. Each Ziploc bag costs around \$0.19 but a set of reusable containers are nearly as cheap and last much longer. Each paper towel amounts to around \$0.05/sheet. Tear up old t-shirts to make reusable rags.

<http://your.kingcounty.gov/solidwaste/EcoConsumer/calculator.asp>

Receive a Waste Assessment of Audit**2 Points**

A professional from the city's Environmental Department or Elk River Municipal Utilities can visit your home free of charge.

Costs

Free

Payback/Benefits

Reduce your waste
Pay less for waste removal

Rebates

None available

When?

An average week for your household

Resources and Suggestions

A city or ERMU employee can visit your home for a waste assessment or audit as a part of Project Conserve. He or she will analyze your waste stream, recommend ways to reduce waste in your household, and help select the best waste options for your family. Professional audits are also available through private contractors.

Case Summary

A Waste Audit can help you find ways to reduce disposable products, decrease your garbage bin and rate, and answer any questions your household may have.

Project Conserve has worked to reduce waste being landfilled by 25% with the help of its participants.

<http://www.elkrivernm.gov/index.aspx?NID=756>

Implement Organics Recycling (curbside or backyard)	3 Points
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Organics recycling is the future of recycling, diverting compostable waste from the landfill and turning it into usable soil. It is yet another way to reduce your garbage disposal costs.

Costs	Payback/Benefits	Rebates	When?
Curbside bin = \$50 (one time) Compostable bags = \$3-20 Backyard bin = \$25-200	Organics recycling is not taxed and service is much cheaper than trash	Attend local events and fairs to see if vendors are giving out bags and bins for free	Now

Resources and Suggestions

The average household produces around 35% organic waste. Things like food scraps (vegetable peels, chicken bones, leftovers, fruit skins, egg shells, etc.), yard waste (leaves, tree trimmings, flower stalks, etc.), and soiled paper products (napkins, wet newspaper, pizza boxes, etc.) can all be composted. The compost can be used for flower beds and vegetable gardens.

Case Summary

Over 400 Elk River residents currently opt-in to curbside organics collection.
The service costs \$4/month. By diverting 35% of your current waste into an organics cart, you can significantly downsize your trash cart size, saving \$6/month on average.

<http://www.epa.gov/epawaste/nonhaz/municipal/> <http://www.elkriverutilities.com/pages/organics>

Work with your Household to Ensure that Materials are Recycled	1 Point
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Everyone in your household works intimately with your waste. Make sure that the proper information is shared with everyone.

Costs	Payback/Benefits	Rebates	When?
None	Can potentially find better ways to recycle and reduce waste	None available	Now When hosting guests

Resources and Suggestions

Keep up-to-date with proper disposal guidelines.
Create a game with kids to teach proper disposal.
Contact the city Environmental Department or your hauler to clarify proper disposal.

Additional Suggestion

Randomly perform your own waste audit - Make sure that everyone is disposing of materials in the correct bins and bring it to their attention if you find improper disposal.
See the link below for a list of what can and cannot be recycled in Elk River.

Tips on how to recycle: <http://elkrivernm.gov/index.aspx?nid=664>



ENERGY CONSERVATION AND LIGHTING

IN THIS SECTION: 14 POINTS

1. Unplug equipment and appliances not in use
2. Shut-down all electronic equipment when not in use
3. Completely switch to energy efficient lighting
4. Take the ENERGY STAR™ pledge and join My ENERGY STAR™
5. Receive an energy audit from a certified professional
6. Install occupancy sensors for lighting
7. Install a renewable energy



Unplug Equipment and Appliances that are Not in Use		2 Points	
<i>Phantom Energy: the electric power consumes by electronic equipment and appliances while they are switched off or in a standby mode; also called standby power, vampire energy, phantom load, or leaking electricity.</i>			
Costs None	Payback/Benefits Save 10-20% off of your total bill and energy usage	Rebates None	When? When not in use
Resources and Suggestions Unplug anything not in use. If you don't want to unplug something, try using a SmartStrip which are great for offices and entertainment centers. For example, the TV is plugged into the "Control Outlet" while the DVR, VCR, Sound System, and satellite box are all plugged into the "Accessory Outlets." When the TV turns on, all of the accessory items do as well. When the TV turns off, everything turns off.			
Case Summary The average U.S. household spends \$100/ year, or 10% of a household's total energy usage, to power devices while they are off or in standby mode.			
http://science.howstuffworks.com/environmental/green-tech/sustainable/smart-power-strip.htm			

Shut-Down all Electronic Equipment When Not in Use	1 Points
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Leaving computers, entertainment systems, and appliances turned on when not in use is perhaps the biggest unnecessary drain on a household's overhead costs.

Costs	Payback/Benefits	Rebates	When?
None	Save \$35-\$70 per computer each year "off" versus "on"	None	When not in use

Resources and Suggestions

Shutting down computers and other electronic equipment when not in use not only saves money through reduced energy costs, it also reduces wear and tear on the equipment itself, effectively increasing its usable lifespan.

Borrow, free of charge, an Electricity Usage Meter from the Elk River Public Library or local utility for free to measure how much energy each plug uses.

Case Summary

By using an Electricity Usage Meter to determine energy use of everyday household items, G.E. Miller discovered he could save more than \$75 per year, or 10% of his electric bill, just by turning off certain items not in use. The following year, he saved 22% off his previous year's bill!

<http://20somethingfinance.com/how-much-electricity-costs-appliances-and-how-to-cut-your-usage/>

Completely Switch to Energy Efficient Lighting	2 Points
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Studies show that household lighting costs account for 10% of your energy bill. This is even higher if your household is large, up at night, or if you have limited natural lighting. Upgrading your lighting is often a money-saving action.

Costs	Payback/Benefits	Rebates	When?
\$2-10 per Compact Fluorescent Bulb (CFL) \$4-10 per LED bulb	Paybacks can range from 1 month to 2 years, depending upon the project	Available from your utility Coupons in Sunday Ads	Now or when current bulbs burn out

Resources and Suggestions

LEDs are currently the best bet for your household. They last the longest, have low maintenance costs because they rarely need to be replaced, and have the lowest energy usage. LED s are preferred over CFLs because they do not contain mercury. CFLs are considered hazardous waste and must be disposed of at a hazardous waste facility. The old incandescent light bulbs will be phased out by 2014.

Case Summary

The average American home uses 47 light bulbs. Assuming all bulbs are 60 watt bulbs, the total energy usage is 2,820 watts or \$50.25/month. The same amount of bulbs with the same amount of light using CFLs is only 658 watts or \$11.73/month and for LEDs is 446.5 watts or \$7.97/month. That's a savings of over \$500 a year in energy costs!

Calculate the value of switching to efficient lighting: <http://www.bulbs.com/learning/energycalc.aspx>

Take the ENERGY STAR™ Pledge and Join My ENERGY STAR™	2 Points
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Pledge to take energy saving actions in your home today that will reduce greenhouse gas emissions and help protect our climate for years to come.

Costs	Payback/Benefits	Rebates	When?
Free	Depends	Anything that applies to your household will be discussed in My ENERGY STAR™	Now

Resources and Suggestions

My ENERGY STAR™ is a personalized page for saving energy with ENERGY STAR™. The website is a tool for tracking your actions, their impact, and discover special deals. Find resources, ways to save, and get custom recommendations.

Your utility should offer Energy Star Appliance purchase rebates.

Additional Information

While you're there, check out the Home Advisor page. Here you can create a profile of your home's energy efficiency features and get a prioritized list of energy-saving recommendations customized to your home in as little as 5 minutes. It's a free consultation!

<https://www.energystar.gov/campaign/takeThePledge> <https://www.energystar.gov/campaign/myEnergyStar>

Receive an Energy Assessment from a Certified Professional	2 Points
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Energy assessments or audits are a great way to pinpoint and target places to save energy, reduce waste, and increase efficiency. Most target all areas of your consumption, including heating fuel and electric use.

Costs	Payback/Benefits	Rebates	When
Free to \$600+ per audit	Assessments can pinpoint the best places to target your funds to save money over time	No rebate for private contractor	The sooner the better

Resources and Suggestions

These assessments or audits are offered by larger companies such as Elk River Municipal Utilities (ERMU), CenterPoint Energy and Connexus Energy or via independent contractors.

ERMU's Project Conserve helps identify areas on consumption in electricity, water, and waste.

Case Summary

Through Project Conserve, average City of Elk River households save 11.7% in electricity, 11.5% in water, and 5% for heating, amounts to \$209 reduction in each homeowner's annual energy costs.

<http://www.elkrivernm.gov/index.aspx?NID=756>

Install Occupancy Sensors for Lighting

2 Points

Occupancy sensors take the thinking out of switching off lights. Installing them in garages, basements, kitchens, bathrooms, bedrooms, and outdoors can make a huge impact on your lighting costs.

Costs

\$5-\$20 per outlet switch, installed
\$50-\$150 for advanced systems

Payback/Benefits

29% to 60% reduction in lighting energy use per room installed
Payback is from 0.5 to 5 years

Rebates

Available from your utility

When?

For those who can't remember to turn off lights

Resources and Suggestions

Typically used in the business sector, Occupancy/Vacancy Sensors can be used in the home as well. Using motion detectors, lights automatically turn on or off. The most commonly used sensors in a home are for outdoor lighting and garages. Ask your local electrician for a quote or audit for the set-up of occupancy sensors in your home.

Case Summary

A state office building in Connecticut spent \$51,000 to regulate the lighting of the entire building with occupancy sensors. This action reduced energy costs by \$24,000 annually. (www.sensorswitch.com/CaseStudies.aspx)

A 100 watt bulb left on for 10 hours uses 1,000 watts or 1kWh. That's equal to \$.13 cents!

<http://www.doi.gov/greening/energy/occupancy-sensors.cfm>

Install a Renewable Energy

3 Points

Help Minnesota reach its goal of 20% Renewable Energy by 2020 while saving electricity costs in an environmentally friendly manner.

Costs

\$1-5 thousand

Payback/Benefits

3-20 years return rate. Lower energy bill, Federal tax credit, property tax exemption, utility rebates

Rebates and Loans

Available from your electric utility and State and Federal programs
Contact utility for information

When?

When you have the money

Resources and Suggestions

Install equipment or devices that use renewable energy sources to generate electricity including solar electricity (photovoltaic (PV)), wind turbine, solar thermal, geothermal, hydroelectric, and/or biomass.

Make sure you have the space and structural support before considering an installation.

Case Summary

In 2009, Greg and Kathy of Faribault, MN installed a \$41,000 PV system and received \$12,000 back in rebates and tax credits. They save 48% of the energy usage and have a payback of 15-20 years.

<http://www.cleanenergyresourceteams.org/community-projects/case-study/saving-step-step-couple-takes-control-their-home-energy-use>

<http://www.hgtvremodels.com/home-systems/the-true-cost-of-solar-power/index.html>



HEATING, VENTILATION, AND COOLING SYSTEMS

IN THIS SECTION: 11 POINTS

1. Reduce thermostat level
2. Use window coverings to control light
3. Install & program a programmable or smart thermostat
4. Upgrade your home's HVAC system(s) to an energy efficient model
5. Install a heat pump system used to heat or cool



Reduce Thermostat Level		Up to 2 Points	
<p><i>The cheapest heating fuel is the kind that you didn't have to use. Grab a blanket, wear a sweater, make hot tea, get out of the house. Remember, when a lot of people are in the house, they produce a lot of heat themselves.</i></p>			
Costs	Payback/Benefits	Rebates	When?
None	Statistics show a 2-15% savings on heating bills per degree reduction on the thermostat (over 24hrs)	None	Now; especially during a gathering
Resources and Suggestions			
<p>You can earn up to 2 points for implementing this action. 1 Point will be given for every proven 2-degree reduction during the evening and 1/2 point will be given for every proven 2-degree reduction during the daytime. Reducing the thermostat also means that the blower fan will run less if it is on automatic, thus saving electricity.</p>			
Case Summary			
<p>You can easily save energy in the winter by setting the thermostat to 68°F while you're awake and setting it lower while you're asleep or away from home. By turning your thermostat back 10° to 15° for 8 hours, you can save 5% to 15% a year on your heating bill, a savings of as much as 1% for each degree if the setback period is eight hours long. The percentage of savings from setback is greater for buildings in milder climates than for those in more severe climates. In the summer, set it at 78°F.</p>			
<p>http://energy.gov/energysaver/articles/thermostats</p>			

Use Window Coverings to Control the Light

1 Point

An easy way to control heating and cooling in your home. The Department of Energy reports that smart management of window coverings can reduce heat/cooling gain by up to 77 percent in the summer/winter.

Costs

Low to none

Payback/Benefits

Lower heating/cooling costs

Rebates and Loans

None

When?

On sunny days

Resources and Suggestions

The sun carries an amazing amount of heat. Use it to your advantage:

Awnings: Choose light colors that reflect light and those that can retract in the winter to allow more light. West-facing windows are the most important.

Curtains and Drapes: On summer days, keep curtains closed, especially on windows with direct light. Medium colored curtains with a white plastic back reduce heat gain by 33%.

Shades: Simple and effective, close shades in the summer to prevent light. In the winter, you can close them to seal the cool air out or open them to let the sunlight in. Quilted roller shades and Roman shades are most effective.

Blinds: The horizontal slats are difficult to control but can reduce heat gain by 45%. Adjust to deflect light onto ceiling.

Reflective Films: Reflect light in West-facing windows to keep heat out during summer.

<http://www.consumerreports.org/cro/news/2013/07/how-to-use-your-shades-blinds-and-curtains-to-beat-the-heat/index.htm>

Install and program a Programmable or Smart Thermostat

2 Points

A programmable or smart thermostat is the best way to control the temperature of your home. By programming your thermostat you can have your heating/cooling fit to your schedule and save the most money possible.

Costs

\$50 to \$300

Payback/Benefits

Lower heating bill by 5-33%

Rebates

None available

When?

When time and money allows

Resources and Suggestions

There are numerous models of programmable thermostats to choose from, consult your HVAC contractor or heating utility to ask which model will work best with your system. Remember to program the thermostat so that it automatically adjusts the indoor air temperature. Use different temperatures for occupied and unoccupied times.

Bonus Suggestions

Savings have been found to range from 5% to 33% depending upon setbacks and if the thermostat is programmed correctly.

Consumer Reports® recommends the Lux TX9600TS or Honeywell® RTH9590WF.

Learn how to install one: www.cleanenergyresourceteams.org/files/CERTsCaseStudy_ThermostatInstall.pdf

Upgrade your Home's HVAC Systems to an Efficient Model**3 Points**

Heating, ventilation, and cooling systems make up a large bulk of your energy costs. However, a system that is old or operating inefficiently can brake your back... and the bank.

Costs	Payback/Benefits	Rebates	When?
Any costs for installation/removal of the old and new systems; \$6k to \$10k+	Payback can be 5-10 years or less 10% energy savings	Available from your electric utility for electric heat/cooling and from your gas utility for gas heating.	When you need a new unit

Resources and Suggestions

www.energystar.gov has information regarding energy efficient heating and cooling systems.

Make sure to have a contractor properly size your heating/cooling system for your home to ensure that you aren't buying too big or too small of a system.

When to Upgrade

Your heat pump or air conditioner is more than 10 years old; your furnace or boiler is more than 15 years old; your equipment needs frequent repairs and your energy bills are going up; some rooms in your home are too hot or too cold; no one is home for long periods of the day and you do not have a programmable thermostat; your home has humidity problems; your home has excessive dust; your heating or cooling system is noisy.

http://www.energystar.gov/index.cfm?c=heat_cool.pr_checklist_consumers

Install a Heat Pump System used to Heat and Cool**3 Points**

Use the earth's renewable energy. Like your refrigerator, heat pumps use electricity to move heat from a cool space to a warm space, making the cool space cooler and the warm space warmer.

Costs	Payback/Benefits	Rebates and Loans	When?
\$2,000 to \$8,000	30-40% reduction in electricity bill Good dehumidifier Low operating costs	Up to \$2000 available from your electric utility Federal tax credits	When money allows

Resources and Suggestions

Geothermal uses the solar energy stored in the ground to heat and cool your building.

For more information about geothermal, visit <http://minnesotageothermalheatpumpassociation.com/>. This site will also help you find a professional contractor in the area.

Case Summary

In 2009, Greg and Kathy of Faribault, MN installed a Ground Source Heat Pump for \$21,000 but made \$8,000 back in rebates and tax credits. They save 65% in heating costs and have a payback of 8-10 years. <http://www.cleanenergyresourceteams.org/community-projects/case-study/saving-step-step-couple-takes-control-their-home-energy-use>

<http://energy.gov/energysaver/articles/heat-pump-systems>



WATER CONSERVATION

IN THIS SECTION: 8 POINTS

1. Optimize & reduce watering schedules
2. Displace water in your toilet tanks
3. Install water efficient aerators and showerheads
4. Run dishwashers and laundry machines at full capacity
5. If you have green space, use natural landscape techniques



Optimize and Reduce Watering Schedules			
Optimize and Reduce Watering Schedules			2 Points
<p><i>Excessive summer sprinkling can cause your water bill to skyrocket. Watering restrictions are in place by the city anyway. Experiment with your landscape to find out how much watering you truly need to do.</i></p>			
Costs	Payback/Benefits	Rebates	When?
None	Reduced water usage Save on your water bill Reduced mowing, maintenance	Rebates available from your water utility for up to \$250 for installing smart irrigation systems	If you notice a high water bill
Resources and Suggestions			
Adjust your sprinklers so that only your landscape is watered and not the building, sidewalk, or street. Head over to Elk River Utilities and pick up a soil moisture meter, a simple device that tells you how much to water. Call ERMU at 763-441-2020 to have a water audit conducted for your home.			
Case Summary			
In 2010, an Elk River household reduced their water irrigation usage 57% by receiving a water audit from ERMU and installing a smart irrigation system. The cost savings paid for the irrigation systems in under two years. In the summer of 2010, the home save hundreds of gallons of water and kept their grass just as green.			
http://www.home-water-works.org/landscape-irrigation/irrigation		http://www.elkriverutilities.com/pages/smart-irrigation	

Displace Water in your Toilet Tanks

1 Point

Water is perhaps our most precious resource, and it's certainly the most taken for granted. By displacing water in your toilet tanks, less water will be used to flush. A toilet can use up to 7 gallons of water per flush - 12,775 gallons per year!

Costs

\$0-15 per toilet

Payback/Benefits

Reduced water usage
Save money on water/sewer bill

Rebates

None available

When?

Now

Resources and Suggestions

To cut down on water waste, put two inches of sand or gravel inside each of two plastic bottles. Fill the bottles with water, screw the lids on, and put them in your toilet tank, safely away from the operating mechanisms. Or, buy a Tank [Bank](#) or Drop-A Brick. This can save minimally 10 gallons per day!

Additional Suggestion

Be sure a least 3 gallons of water remain in the tank so it will flush properly.

For new installations, consider buying "low flush" toilets, which use 1-2 gallons per flush instead of 3-7 gallons. This is a 70% savings and will cut indoor water use by 30%.

<http://www.fastcoexist.com/3036517/this-15-rubber-bricks-save-water-every-time-a-californian-flushes-the-toilet>

Install Water Efficient Aerators and Showerheads

2 Points

Reduce the flow of water and cash currently going down the drain.

Costs

Low up-front costs

\$0.99-5 per aerator

\$10-40 per showerhead

Payback/Benefits

Reduced water usage up to 50%

Save money on water/sewer bill

Save money on heating costs

Rebates

None available

When?

Now to soon

Resources and Suggestions

Most water efficient aerators run 0.5 to 1.5 gallons per minute. You can check your current faucets by looking for the flow rate on the side of the current aerator/faucet head. If it's not listed, you can use a flow meter bag courtesy of Elk River Municipal Utilities to check. Aerators are easily installed by screwing them on to the threads at the head of the faucet. Low flow Shower heads offer than same amount of pressure but use 50% less water.

The Savings Math

If you can achieve a savings per faucet of 1 gallons per minute by reduced flow, and the faucet runs an estimated 15 minutes per day, you save 300 gallons of water per month. If the water is heated, you save even more money by reduced use of natural gas. Water efficient or low-flow faucets and showerheads are cheap, and the savings can really add up.

<http://energy.gov/energysaver/articles/reduce-hot-water-use-energy-savings>

Run Dishwashers and Laundry Machines at Full Capacity

1 Point

*This is very simple. Only run your dishwasher with full loads. Don't run it more than you need to.***Costs**

None

Payback/Benefits

Reduced water usage
 Save money on water/sewer bill
 Save money on heating costs

Rebates

Up to \$65 for a laundry machine with a water use factor of 5.5 gallons or less.

When?

Every time you wash

Resources and Suggestions

Use “creative sorting” to pack in as many plates, pots, bowls, cups, and utensils as possible. If you have only a few dishes, select a short cycle. No award points are available for washing dishes by hand as studies show it to use more water and heating fuel.

Laundry machines should be at full capacity as well. You can wash clothes in cold water to save even more energy.

Case Summary

When purchasing new appliances, be sure to look for the ENERGY STAR™ rating to get the most energy efficient models available.

For added energy savings, select the air dry mode on the dishwasher and air dry cloths on a clothes line or rack.

<http://energy.gov/energysaver/articles/reduce-hot-water-use-energy-savings>

If you have Green Space, use Natural Landscape Techniques

2 Points

Natural landscaping means using MN native vegetation. This vegetation is much cheaper and easier to maintain, meaning that you can spend more time focusing on your household and not on your lawn care.

Costs

Low to medium upfront costs for planting and seeding

Payback/Benefits

Cheaper to install, requires less fertilization, requires much less maintenance, requires no watering

Help

Assistance may be available through the Soil and Water Conservation District or non-profits

When?

If you have landscaping needs

Resources and Suggestions

The Sherburne County Soil and Water Conservation District (SWCD) can advise you on the best types of grass and other plants to use on your property. Their services are free, and you can contact them online at www.sherburneswcd.org or by phone at 763.241.1170 (ext. 4). Other non-profits may be available to help. The MN Department of Natural Resources also have information on their website.

Bonus Suggestion

A “no-mow” lawn mix of varied fescues is a great alternative to the traditional Kentucky Blue Grass. It requires almost zero mowing or maintenance and gives a good look to your lawn.

Native plants help our native animals and insects. You will be sure to see more wildlife in your yard!

<http://www.dnr.state.mn.us/gardens/nativeplants/index.html>



HOUSEHOLD INITIATIVES

IN THIS SECTION: 3 POINTS

1. Set your printer to duplex printing
2. Take your lunch to work/school at least once a week
3. Plan out errands and carpool



Set your Printer to Duplex Printing		1 Point	
<p><i>One click of the mouse on your computer reduces your paper use by 50%. If your situation allows you to print double-sided, there's no reason not to.</i></p>			
Costs	Payback/Benefits	Rebates	When?
None	50% reduced need to purchase printer paper	None available	Now
Resources and Suggestions			
<p>If you are unsure of how to set your printer to double sided, visit the link below.</p> <p>One ream of paper uses 6% of a full grown tree.</p> <p>The average cost of a waste page is \$0.06.</p>			
Additional Information			
<p>The U.S. Pulp and Paper Industry is the second largest consumer of energy and uses more water to produce a ton of product than any other industry.</p> <p>1 Ton of copy paper uses 11,134 kWh (or enough power for an average household for 10 months)!</p>			
<p>http://www.google.com/url?sa=t&rct=j&q=&esrc=s&frm=1&source=web&cd=8&ved=0CFEQFjAH&url=http%3A%2F%2Fwww.epa.gov/paper/paper.htm</p>			

Take Your Lunch to Work/School at Least Once a Week

1 Point

Taking lunch from home saves you money on driving and food expenses. Plus, you have an excuse to get everyone to eat those leftovers you have been wanting to get rid of!

Costs	Payback/Benefits	Rebates	When?
None	Get to know your coworkers and classmates better Drive less, Save money on food, Create waste-free lunches	None	At least once a week

Resources and Suggestions

Find co-workers and classmates that bring their lunches. They will have good ideas about what to bring for lunch and how to package it so it won't make a mess.

Driving to a fast-food restaurant every day for lunch really adds to your mileage. Not to mention, fast-food isn't usually the healthiest of choices. Save money on food you already have at home and create less waste.

Additional Suggestions

Go waste-free! Purchase reusable lunch bags/boxes and food containers. Take it a step further and find plastic-free containers. Don't forget to compost any left over food scraps instead of throwing them in the trash or down the garbage disposal.

<http://www.thekitchn.com/our-best-tips-tricks-ideas-for-eating-at-work-167400>

Plan out Errands and Carpool

1 Point

We understand that people have busy schedules and that scheduling trips or carpooling is not always possible. But when it is possible, these are great ways to save money and reduce transportation pollution.

Costs	Payback/Benefits	Rebates	When?
None	Save money on driving Less CO ² emissions More time for other things	None	When time allows

Resources and Suggestions

Starting your car after it's been sitting for more than an hour pollutes up to 5x more than when the engine was warm. Combining errands into one trip is more effective and reduces air pollution. By bundling your trips, you will be driving less throughout the week, leaving more time on your hands, causing less traffic congestion for others, and limiting air pollution for everyone.

Bonus Suggestions

Run errands with a friend or neighbor to make even more of an effect.

Use a GPS to find the more direct route and plan out your errands so that you do not need to backtrack.

<http://makeanimpact.c2es.org/tips/move/driving/bundle-errands>



PURCHASING

IN THIS SECTION: 10 POINTS

1. Use reusable shopping bags
2. Only purchase paper products with at least 30% recycled content
3. Commit to purchasing green gifts or making your own
4. Take part in a rebate program from a Utility
5. Purchase an eco-friendly vehicle when replacing your vehicle



Use Reusable Shopping Bags		1 points	
<i>Plastic bags are convenient but they are detrimental to the environment. Purchasing a few reusable bags have numerous benefits.</i>			
Costs	Payback/Benefits	Rebates	When?
\$0.99-5 per reusable bag	More durable than plastic bags Less landfill waste Less petroleum use	Receive \$0.05 per bag at many retailers	Next time you are at the store
Resources and Suggestions			
Plastic bags are rarely recycled. In fact, they cannot be recycled in your recycling bin as they get caught in the recycling plant's machines. They can only be recycled at specific "Plastic Bag Recycling" locations at grocery and retail stores. Plastic bags are made from petroleum, a fossil fuel that takes millions of years to form. Reusable bags are usually made of cotton or canvas.			
Additional Information			
Plastic bags take 15-1000 years to decompose. They blow in the wind and get caught in trees and blown into water. 1 million birds and sea animals die from ingesting plastic bags each year. The petroleum used to produce 14 plastic bags can drive a car one mile. All of these negative effects of plastic bags have led many retailers, cities, and even states to ban the bags all together. Getting used to reusable bags now will put you ahead of the curve later.			
http://www.huffingtonpost.com/2012/04/06/reusable-grocery-bags_n_1409065.html			

Only purchase Paper Products with at Least 30% Recycled Content	1 Point (+1 for 100%)
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Complete paper recycling full circle by purchasing paper products with at least 30% recycled content.

Costs	Payback/Benefits	Rebates	When?
Small increase in paper costs or no difference depending upon where you purchase it	Save trees	None available	Next paper purchase and all subsequent

Resources and Suggestions

All that is required is a little attention to detail when purchasing your paper. If you commit to purchasing only 100% recycled content paper you will receive a bonus point for this action.

The high the recycled content, the less trees you will be using.

Additional Information

You can find recycled content paper in copy paper, lined paper, notebooks, folders, paper towels, napkins, toilet paper, bags, wrapping paper, cards, envelopes, calendars, boxes, and other products.

http://www.epa.gov/osw/conserves/materials/paper/resources/buy_recycled.htm

Commit to Purchasing Green Gifts or Making Your Own	2 Points
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Everyone loves presents! Try finding gifts that are sustainable or even make your own. There are many resources online for DIY projects and guides for buying green gifts.

Costs	Payback/Benefits	Rebates	When?
Varies depending upon product	Provide a market for recycled items, save energy on making new products, encourage small business	None Look for coupons online	When purchasing gifts

Resources and Suggestions

Use the online gift guides for ideas. Many retailers now offer a section of “green” products.

Look online for DIY gifts to find meaningful gift ideas for friends and family. When possible, use recycled material you have on hand. When purchasing supplies, remember to look for recycled content and other “green” products.

Additional Suggestions

Consider a philanthropic gift such as a donation to a non-profit in someone’s name.

Look for the “Fair Trade” logo on products. This means that the people making the products were paid a fair wage for their work.

<http://www.treehugger.com/giftguide/>

Take Part in a Rebate Program from your Utility**2 Point**

Utilities offer residential rebates to homeowners that take action to reduce their energy usage. That's right, you get paid to save on energy costs.

Costs	Payback/Benefits	Rebates	When?
Any costs to implement energy-saving upgrades not covered by the rebate	Save money on energy bill Payback depends on upgrade	Rebates are available in small or large amounts for various upgrades	When you need an upgrade

Resources and Suggestions

Contact Elk River Municipal Utilities at 763.441.2020 and ask about all of the programs, services, and rebates available. You can also check online at <http://www.elkriverutilities.com/pages/conservation1>.
Connexus customers: check out www.connexusenergy.com/residential/rebates/ or call 763.323.2650 for a list of rebates and to contact your account representative.

Extra Savings

Receive \$60 from ERMU for an Air Conditioner Tune-Up. A tune-up can increase your A/C's efficiency by up to 15%, which will help use energy resources more wisely.
Save up to \$630 on an ENERGY STAR™ Appliance purchase rebate through your utility as well.

Purchase an Eco-friendly Vehicle when Replacing Your Vehicle**3 Points**

You pay for much more than the vehicle when purchasing a new vehicle. With gasoline costs on the rise and destined to rise much higher, it is wise to purchase a vehicle with high fuel efficiency.

Costs	Payback/Benefits	Tax Credits	When?
The vehicle must be rated at least 35mpg combined by the EPA or use alternative fuels	Reduced fuel costs Reduced vehicle emissions	Tax credits are available for hybrid and plug-in vehicles at \$2,500 to \$7,500 dollars	When money allows; if you have a long commute

Resources and Suggestions

Go to <http://www.fueleconomy.gov/feg/taxcenter.shtml> to learn about specific rebate options.

Case Summary

Paul Wicklund of Brooklyn Park commutes to Chaska for work. At 60-70 miles of driving every day, he was paying \$60-\$75 per week in gas. Since purchasing a Nissan Leaf Electric Vehicle, he has only spent \$1.88/week on fuel costs (at an off-peak electric charge of 0.03 cents per kWh). Read his and other stories [here](#).



MISCELLANEOUS

IN THIS SECTION: 14 POINTS

1. Bike or walk to an errand at least once a week
2. Use green cleaning products/ limit their use
3. Plant one new tree this year
4. Plant a rain garden
5. Attend an Energy City event
6. Alter your driving habits
7. Any other approved action



Bike or Walk to At Least One Errand At Least Once a Week			
Bike or Walk to At Least One Errand At Least Once a Week			1 Points
<p><i>Improve your fitness while also improving the environment by choosing a weekly time to avoid using a vehicle to travel. Many businesses have bike racks available for your convenience.</i></p>			
Costs	Payback/Benefits	Rebates	When?
Free	Save on gas and car maintenance Improve your health Improve air quality	None	When time allows
Resources and Suggestions			
<p>When you have a few extra minutes to spare and don't plan on making any purchases, a bike ride or walk to the store will provide you with some fresh air. You will notice things about your community that you have never noticed from a car.</p>			
Additional Information			
<p>On average, bicycle commuters lose 13 pounds in the first year of cycling alone.</p> <p>During high traffic times, biking or walking may end up being faster.</p> <p>Google maps has the option of creating a route specifically for biking or walking and shows you how long it will take.</p>			
<p>http://www.forbes.com/sites/tanyamohn/2012/05/20/bicyclists-in-the-united-states-save-at-least-4-6-billion-a-year-by-riding-instead-of-driving-ased-on-friday-to-coincide-with-national-bike-to-work-day-part-of-national-bike-month-which-occurs-each/</p>			

Use Green Cleaning Products/Limit Chemical Use**2 Points**

You will find that you do not need 30+ chemicals to clean your house. Green cleaning products are often cheaper and healthier for your household.

Costs	Payback/Benefits	Rebates	When?
Low to none	Healthier home environment Reduced costs for chemicals	None	Next time you purchase products

Resources and Suggestions

Green cleaning products are widely available and work the same as normal cleaning products. Without the use of chemicals, there will be fewer fumes in your home, a lower risk of inhaling carcinogenic chemicals, fewer chemical burns and poisonings, and lower asthma rates.

Additional Suggestion

You can even make your own products from vinegar, baking soda, water, and other household items. Sometimes, they even work better than products you can buy! Follow the link for recipes:
<http://www.keeperofthehome.org/2013/06/homemade-all-natural-cleaning-recipes.html>

http://www.ewg.org/guides/cleaners/content/cleaners_and_health

Plant at least One Tree this Year**2 Points**

There are numerous reasons to plant trees! Trees are removed for our environment daily - Do your part to replace them for future generations

Costs	Payback/Benefits	Assistance	When?
\$5 for a sapling, up to \$300 for a full grown tree.	A lot!	Sherburne County Soil and Water Conservation District can create a custom tree planting plan	Any with parking lot

Resources and Suggestions

Provide oxygen, combat greenhouse gases, clean the air, cool the city, conserve energy, save water, prevent water pollution, prevent soil erosion, provide food, create a playground, provide habitat space, create a fence, etc.

If you can't plant a tree in your yard, donate one to someone else or sponsor a donation online.

Additional Information

Become a member of the Arbor Day Foundation for as little as \$10 and either receive the gift of planting ten trees in our Nation's forests or receive 10 trees to plant in your yard.

Visit <http://shop.arborday.org/content.aspx?page=memberships> for more information and resources on trees.

<http://www.treepeople.org/top-22-benefits-trees>

Plant a Rain Garden**2 Points**

Rain gardens effectively reduce the space that you need to water. They also capture stormwater runoff and prevent it from running into lakes, rivers, and streams.

Costs

Low to medium upfront costs for planting and seeding

Payback/Benefits

Reduces your watering area, collects stormwater runoff, requires limited maintenance

Assistance

The Sherburne County Soil and Water Conservation District can help you with your design

When?

Early spring, summer, or fall

Resources and Suggestions

The Sherburne County Soil and Water Conservation District can advise you on what are the best types of plants to use for your rain garden. They can also help you with designing and selecting a location. Their services are free, and you can contact them online at www.sherburneswcd.org/ or by phone at 763.241.1170 (ext. 4).

Check out Metro Blooms for workshops and other resources.

Case Summary

Great River Energy planted numerous rain gardens at its LEED-Platinum headquarters in Maple Grove. These rain gardens help reduce their irrigation usage by 66% when compared to other similarly sized buildings and landscapes. Plants native to Minnesota and the region, including prairie grasses and fruit trees that need little irrigation, surround the building. When irrigation is needed, captured rainwater is used, not drinking water.

<http://metroblooms.org/what-is-a-raingarden.php>

Attend an Energy City Event**2 Points**

Elk River Energy City offers various events throughout the year tailored to local businesses. These events focus on how businesses can save money and become stewards of the environment through efficiency.

Costs

None

Payback/Benefits

Network with other homeowners
Learn about free services
Gain insights on saving money

Rebates

None

When?

Check the city's calendar for events

Resources and Suggestions

The City of Elk River has an Energy City Education series geared specifically to area businesses and homeowners covering topics ranging from waste stream reduction, recycling, green building practices, and energy efficiency financing. We also will put you in touch with free services that will analyze your business practices and root out inefficiencies. You may also sign up for a free tour of Energy City demonstration sites.

Contact Info

Call the City of Elk River Environmental Department at 763.635.1000 or email EnergyCity@ElkRiverMN.gov to learn more about future events and opportunities.

www.ElkRiverMN.gov/EnergyCity

Alter Your Driving Habits**2 Points**

Boost the overall fuel efficiency of your car by as much as 30% but making some simple changes to your driving habits and maintenance routine.

Costs	Payback/Benefits	Rebates	When?
Occasional maintenance costs	30% more fuel efficiency Longer vehicle life-span Fewer greenhouse gas emissions	None	Now

Resources and Suggestions

Avoid aggressive driving (hard acceleration and breaking). Aggressive driving only reduces travel time for 4% but can cost you 40% of your fuel efficiency. Use your car's "Eco Mode" if you have one.

Drive at the speed limit. Improve your gas mileage by 20% compared to a 10 MPH increase in speed.

Avoid idling. If you are stopped for more than 30 seconds, turn off the engine to save fuel. An idle car gets 0 MPG.

Properly inflate tires. Poorly inflated tires can use 6% of fuel consumption. Check the pressure at least once a month and fill up when needed. Find a gas station with free air.

Use the cruise control. Maintaining a steady speed helps fuel efficiency. (But avoid it in hilly terrain).

Service regularly. An unserviced engine can use up to 50% more fuel and produce 50% more emissions.

http://eartheasy.com/move_fuel_efficient_driving.html

Any Other Approved Action**1-3 Points**

There are many innovative ways that homeowners can boost efficiency and become more environmentally friendly. We haven't thought of them all...

Costs	Payback/Benefits	Rebates	When?
Various	Various	Check with your local utility	Whenever!

Resources and Suggestions

You know your own household better than anyone. If you see potential for an increase in efficiency that will have a positive impact on the environment, let us know!

Case Summary

None available.

Checklist

Write your points in the box to keep track

Waste Management

- Implement household recycling
- Provide recycling containers in your kitchen, office, basement, and garage
- Recycle 10 items at a resale store or online
- Remove disposable items from your home
- Receive a waste audit
- Implement organics recycling
- Work with your household to ensure that materials are recycled

Electricity Conservation and Lighting

- Unplug equipment and appliances not in use
- Shut-down all electronic equipment when not in use
- Completely switch to energy efficient lighting
- Take the ENERGY STAR™ pledge and join My ENERGY STAR™
- Receive an energy audit from a certified professional
- Install occupancy sensors for lighting
- Install a renewable energy

Heating, Ventilation, and Cooling Systems

- Reduce thermostat level
- Use window coverings to control light
- Install & program a programmable or smart thermostat
- Upgrade your home's HVAC system
- Install a heat pump system to heat or cool

Water Conservation

- Optimize & reduce watering schedules
- Displace water in your toilets
- Install water efficient aerators and showerheads
- Run dishwashers and laundry machines at full capacity
- If you have green space, use natural landscape techniques

Household Initiatives

- Set your printer to duplex printing
- Take your lunch to school/work at least once a week
- Plan out errands and carpool

Purchasing

- Use reusable shopping bags
- Only purchase paper with at least 30% recycled content
- Commit to purchasing green gifts or making your own
- Take part in a rebate program from a Utility
- Purchase an eco-friendly vehicle when replacing your vehicle

Miscellaneous

- Bike or walk to an errand at least once a week
- Use green cleaning products/ limit their use
- Plant one tree this year
- Plant a rain garden
- Attend an Energy City event
- Alter your driving habits
- Any other approved action

Upon completion of an action, report it via email to EngeryCity@ElkRiverMN.gov, use the online form, or call the City of Elk River Environmental Department at 763.635.1000. Be prepared to provide information about the how the action was achieved and any associated successes. Your points and High Five level will be tracked in a confidential database. Plaques and stickers are granted when you reach a new level of High Five.



Resources

Elk River Municipal Utilities (ERMU): The mission of the ERMU is to provide our customers with safe, reliable, cost effective and quality long term electric and water utility service. To communicate and educate our customers in use of utility services, programs, policies, and future plans. These products and services will be provided in an environmentally and financially responsible manner. Find rebates, services, and conservation strategies.

763.441.2020 www.elkriverutilities.com/pages/residential

Project Conserve: Project Conserve is a FREE outreach and education program designed to teach participants simple ways to conserve natural resources. Participants save money on their heating, electrical and water bills, reduce waste, save on transportation, and live a more sustainable lifestyle. Project Conserve is a one-of-a-kind program available to residents living in or near Elk River.

763.441.2020 elkrivermn.gov/index.aspx?NID=756

Recycling Association of Minnesota (RAM):

RAM promotes resource conservation through waste prevention, reuse, recycling, composting, and purchasing practices using the most cost effective and environmentally sound methods available in Minnesota and offer recycling opportunities, education, and free signs.

651.641.4589 www.recycleminnesota.org

ENERGY STAR™: A program of the Environmental Protection Agency, EnergyStar certifies products that use less energy than their counterparts. These products can save your household money in the long run.

www.energystar.gov

The City of Elk River: The purpose of city staff is to serve your needs. City environmental specialists are ready to work with your household to increase efficiency and lower costs.

763.635.1000 www.elkrivermn.gov

Sherburne County Soil and Water

Conservation District: Specializing in water conservation and the preservation of our native soils and plants, the SWCD is ready to answer any questions you have regarding your green space and reducing your water use.

763.241.1170 (Ext. 4). www.sherburneswcd.org

Do It Green Minnesota: Works to educate and motivate Minnesotans to live greener through their resource center, business directory, online articles, and Green Gifts Fair and Earth Day Events.

612.345.7973 www.doitgreen.org

Minnesota Renewable Energy Society: Member-run non profit that works with volunteers to educate citizens through events and programs including tours, site assessments, classes, and free monthly speakers.

612.308.4757 www.mmrenewables.org

Will Steger Foundation: Educates, inspires, and empowers people to engage in solutions to climate change.

612.278.7147 www.willstegerfoundation.org

Earth911®: Access to recycling guides and eco-product guides, environmental news, community forum. Click on the “Recycle Search” on the top left to find out how to recycle anything and everything in your area!

www.earth911.com

Other Resources: Your garbage hauler or utility may have conservation programs or rebates to offer you. If you are curious whether a rebate is available for one of the actions in this packet, call them and ask.

Connexus Energy: 763.323.2650

CenterPoint Energy: 612.321.4939

Randy's Sanitation: 763.972.3335

Allied Waste: 952.941.5174



This program is meant to be a partnership between the City of Elk River and its residents. Thus, we want your feedback! If you find any problems with the information presented in this packet, please contact the City of Elk River Environmental Department at 763.635.1000. Please feel free to contact us with any comments, questions, ideas, or stories as well. Thank you!

As a part of this program, participants agree to the possibility of a walkthrough assessment in order to determine compliance with the program. This ensures the opportunity to receive incentives as a part of this program.

Disclaimer: This resource is for educational purposes. The City of Elk River does not endorse any product, business, organization, or service.

