A Guide to
Alternatives & Disposal
of Household Chemical Waste

Sponsored by Aurora Water
If you have any questions, please call 303-739-7372 or 303-739-7370.
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General Information

What Are Hazardous Household Products and Why Should I Care?

We like to think of our homes as safe and secure. However, there are dangers in some of the chemical products that we buy. Look under your sink, in your cabinets and storage areas. You will probably see old cans of cleaners, paint, bug spray, and used motor oil. How long has it been since you used them? How will you get rid of them?

Hazardous household products that need to be disposed of have become hazardous wastes. These wastes can pose a risk to our health and environment. Unlike businesses, which are regulated by the Colorado Department of Public Health & Environment (CDPHE) and the Environmental Protection Agency (EPA), households are exempt from regulations that require proper storage and disposal of hazardous waste. However, this exemption does not mean that you do not need to behave responsibly. Household hazardous products are characterized by at least one of the following attributes:

- The waste is reactive; meaning it can cause explosions.
- The waste is corrosive; meaning it can dissolve materials.
- The waste is ignitable; meaning it has the potential to catch fire.
- The waste is toxic; meaning it can be poisonous to living things.

Every year in Aurora, tons of household hazardous waste is discarded in the garbage. This waste ends up in landfills or incinerators. Unknown quantities are dumped on our lawns or into sewers, storm drains and streams. When disposed of improperly, household hazardous waste may come back to harm you, your children, your pets and our environment.

As residents of Aurora, we bear responsibility to dispose of household waste properly in order to protect and preserve our quality of life. In the following pages, you will find instructions on how to safely dispose of many household hazardous wastes. You will learn how to reduce your use of hazardous products by making use of alternatives. Follow these steps and you will be making your home and your neighborhood a cleaner place to live.
Safety Precautions

Always read the label of any household chemical product. If the label says Danger, Warning, Caution, Flammable or Poison, the product is hazardous and must be used strictly according to label instructions. Overuse or improper use of hazardous products greatly increases the risks to human health and the environment.

Storage: Store all hazardous household products in a secure area away from children, pets and potential sources of heat, spark or flames. Store flammable products in tight containers in well-ventilated areas. Store products in their original containers whenever possible. Should it become necessary to store a product in a different container, clearly label the container with the product name and instructions. However, avoid using food containers as it increases the likelihood of the product being used in a harmful way.

Use: Follow label precautions when using hazardous products. Use products in well ventilated areas – work outside or, if you must work indoors, make sure your windows are open and use a fan to create a cross breeze and draw vapors away from you. Do not wear contact lenses while working with hazardous products – lenses can absorb chemical vapors. To protect yourself when using hazardous products, consider wearing goggles, gloves (rubber or latex), a plastic apron and a respirator.

In Case of Spill: Further information on appropriate protective equipment can be obtained from CDPHE (see Page 9). If you have any doubt about a product spilled in your home and the ramifications, call the emergency response number 911 or the Aurora Fire Department’s Hazardous Materials Division 303-627-3130. To report illegal dumping of pollutants into storm drains or waterways call 303-739-6772.
Reducing the Use of Hazardous Household Products can be done in two ways:

- **Choose safer, less-hazardous products**
- **Buy products in smaller quantities**

Not every job can be done with safer products, but most can. By learning some simple techniques, you can eliminate most house and garden pesticides. Some safer products have been around 100 years or more. Borax, baking soda, vinegar, and soap are things your grandparents used for cleaning. Other products are the result of sophisticated research to find less hazardous replacements for toxic products. Often, alternative products can simply be substituted for those you have been using. Some alternatives may require more effort, but they do work, and they may cost less.

Reducing use of hazardous products may also involve changing expectations of what is clean and attractive. Furniture can be handsome in its weathered, lived-in look without polishes and waxes. The garden can be designed with native plants that need less water and no pesticides. The lawn need not look like a putting green. Your home can smell better if you put out flowers, herb, or spices, or simply open the window rather than using synthetic aerosol air fresheners.

There are some products that you may not be able to substitute a less hazardous product for: motor oil, automotive batteries, wood preservatives, and specialty paints are examples. In these cases, the best approach is to conserve and minimize the use of these products. Buy only what you need, use it all up, or give away the excess to someone who will use it. Reuse or recycle products whenever possible.
Disposing of Hazardous Waste

It is important to remember that disposing of household hazardous wastes is not the same as disposing of regular trash - hazardous wastes need to be disposed of separately. Why do you need to worry about how you dispose of your waste? Read on to find out how different disposal methods can damage the earth.

Household trash is disposed of either in landfills or at an incinerator. If you dispose of hazardous waste in a landfill, you may contribute to contaminating groundwater. Groundwater is contaminated when rainwater seeps through the layers of trash in the landfill, picking up contaminants from hazardous household wastes and turning them into leachate. Most landfills are properly lined so that leachate is contained; however, some are not designed for certain hazardous materials. You may think that washing hazardous wastes down the drain to the sewer is acceptable, but it is not. The drains and toilets in our homes enter the sewers. These sewers are connected to sewage treatment plants that process wastes and hazardous materials dumped in the sewer can negatively impact the treatment process.

Storm drains can be found in roads and parking lots, and they are designed to alleviate flooding. Any contamination from yards, soil, sidewalks, streets, and parking lots that are washed into a storm drain could potentially contaminate our water supply.

Before disposing of hazardous household waste, consider the following:

- Can I use up the products, or reuse them?
- Can I give the products to a friend, neighbor or relative?
- Can I donate the products to a local community group, day care center, charity or church?
**Recycling Information**

**RECYCLING OPPORTUNITY**

Many recycling opportunities exist close to home. Locate and use them throughout the year. Consult the yellow pages or any of the resources on page 9 for information.

**CHLOROFLUOROCARBONS**

CFCs were widely used as cooling agents and in aerosol propellants. Their manufacture and use is being phased out because they can destroy the protective ozone layer in the upper atmosphere of the earth. Today, CFCs in air conditioners and refrigerators may not be released into the atmosphere, but must be captured and reclaimed by licensed contractors.

If you have an old refrigerator or air conditioner for disposal, you can contact the Colorado Department of Public Health and Environment at 303-692-3300 or look for appliance recyclers online or in the phone book.

**COMPRESSED GAS CYLINDERS**

Consult a scrap metal dealer or propane listings in the yellow pages to see if there are any recyclers who will take empty gas cylinders.

**20 lbs. gas grill propane tanks**

Various grocery, discount, and hardware stores have a year-round program to trade empty gas grill tanks for full ones. Many Aurora retailers participate in these programs. Call to see if your store is one of them. Many gas and convenience stores also accept propane tanks.

**USED MOTOR OIL**

Colorado-recycles.org and the yellow pages lists several automotive store and gas stations that accept used oil at no cost. Contact the business to confirm that they accept waste oil.
Household Chemical Management Program

Household Chemical Roundups (HCR) are events held so residents may safely and properly dispose of unwanted or unusable hazardous household products. Since 1991, Aurora has sponsored these Roundups, providing a safe disposal method for hazardous household wastes. Residents are directed to bring specified household hazardous waste to the city’s Central Facilities, located at 13645 E. Ellsworth for collection and proper disposal. The waste is sorted, classified, and packaged by a hazardous waste disposal company. Recyclable items such as waste oil, auto batteries, and paints are reused and recycled. The disposal firm takes the hazardous waste to a proper disposal facility.

Types of Household Waste Accepted:

- Antifreeze
- Arts and craft paints
- Auto body filler
- Brake fluid
- Batteries
- Car and chrome polish
- Car cleaners
- Carburetor cleaner
- Cardboard
- Caulks
- Glues and cement
- Diesel fuel
- Engine degreaser
- Fertilizers
- Fungicides
- Gasoline
- Herbicides
- Insecticides
- Kerosene
- Lacquers and stains
- Lamp oil
- Latex paint
- Mineral spirit
- Mercury
- Oil-based (alkyd) paints
- Paint removers
- Paint strippers
- Paint thinners
- Turpentine
- Pesticides
- Radiator fluids
- Resins, fiberglass
- and epoxy
- Roach and ant killer
- Rodent poisons
- Rubber cement thinner
- Soil fumigants
- Tires
- Transmission fluid
- Used/unused motor oil
- Varnishes
- Vehicle batteries
- Water-based latex paint
- Weed killers
- Wood preservatives and polishes

FOR MORE INFORMATION,
Please call the Water Department at 303-739-7370
Information

To Get More Information

City of Aurora
Water Department ................................................................. 303-739-7370
Environmental Planning ............................................... 303-739-7250
Household Chemical Roundup/Clean Water Program ....... 303-739-7372
Fire Department Hazardous Materials Division .......... 303-627-3130
To report illegal dumping and discharges into waterways .......... 303-739-6772

Colorado Department of Public Health & Environment
Hazardous Materials Division .............................................. 303-692-3300

Tri-County Health Department Pollution Prevention Program .......... 303-288-6816

Rocky Mountain Poison Center ........................................ 800-332-3073

U.S. Environmental Protection Agency
Information - Region 8 (Colorado) ...................................... 303-312-6312

Information on Waste Disposal at Local Landfills
Tower Road Landfill ......................................................... 303-371-2886
Denver-Arapahoe Disposal .............................................. 303-690-4303
Front Range Landfill ...................................................... 303-828-9400

Recycling Information
Colorado Recycles Web site: www.colorado-recycles.org
Earth 911 Web site: www.earth911.org
Automotive Products

USED MOTOR OIL

Problem - Used motor oil contain toxins. Disposing of motor oil on the ground, into storm drains, sewers, streams or septic tanks can cause contamination of drinking water and waterways. Used oil has been found to cause cancer in laboratory animals. Keep your hands clean by wearing gloves.

Maintenance - Fix your car’s oil leak! People who would never pour oil down a storm drain allow their cars to leak oil onto the street. When it rains, the oil is transported to local streams via the storm drains. Have your oil changed professionally assuring it will be recycled.

Alternatives
Buy refined, recycled oil. Ask your auto supply shop to carry recycled motor oil. This will improve the market for waste oil and recycling opportunities, and will help decrease reliance on virgin oil products. Refined motor oil is of high quality and will match the performance of virgin motor oil. Be advised, however, that many new car warranties do not cover the use of refined oil.

Disposal - NEVER dispose of used motor oil on the ground, in your trash, or in storm drains, sewers, or streams. You may take used oil to some gas stations, auto parts stores or a motor oil recycler. Check the Yellow Pages for a location near you. Call ahead to confirm that they accept used oil. When going to a recycler, transport used oil by placing it in a clean plastic milk bottle or similar container. Never mix other products with the oil because it makes recycling very difficult.

AIR CONDITIONERS

If your car’s air conditioning system needs freon recharge, the system is leaking and needs to be repaired immediately; you are contributing to the depletion of the ozone layer. Find a garage that is certified to operate freon recovery equipment. To prevent leaking systems, use your air conditioning regularly. If you do not, the seals become brittle and may break.
**Automotive Products**

**Alternatives**
All 1995 and newer model cars sold in the United States should be equipped with non-ozone depleting air conditioning systems. Older models may be retrofitted; you should weigh the cost of repairing an old system, upgrading it to a non-freon system or doing away with air conditioning in the car.

**ANTIFREEZE**

**Problem** – Highly toxic ethylene glycol, the main ingredient in antifreeze, has a sweet smell and taste that is attractive to children and pets. A small amount can poison a person or pet. Clean up spills immediately and never leave antifreeze in open, unattended containers. Pouring antifreeze down storm drains delivers the ethylene glycol and metal particles, including lead from your radiator, into our waterways. Remember to store antifreeze in a well-ventilated area away from children and pets.

**Disposal** - NEVER pour antifreeze down storm drains, into streams, or on the ground. Contact your local gas station to see if they will accept used antifreeze for recycling. See page 8 for more information about HCR. If you cannot recycle it, absorb the antifreeze by pouring it into a plastic or plastic-lined container with enough cat box litter, sawdust, or shredded newspaper to fully absorb the liquid. After antifreeze is fully absorbed, put the container into the garbage.

**CAR WASHES**

**Problem** – Chemicals in soaps and detergents used to wash cars are toxic to fish and other aquatic life. If the dirty, soapy water from washing your car goes into storm drains or streams it can harm aquatic life and the river environment.

**Alternatives**
Take your car to a commercial car wash. Their wastewater either goes to a wastewater treatment plant or is recycled at the car wash.
Automotive Products

Consider washing your car with just water, using soaps that biodegrade quickly, or dry wash products. Create your own cleaning mixture with 2 tablespoons of mild dish detergents or 1/4-cup soap flakes in 2 gallons of warm water. For chrome polish, apply a paste of baking soda and water with a sponge. Let the paste set for a few minutes, then rinse, and wipe dry with a soft cloth.

Disposal – Never allow soapy wash water go down storm drains. If you wash your car near a storm drain, use only water.

DEGREASERS

Problem - Auto part degreasers are usually made of solvents that evaporate quickly. The fumes are often toxic and flammable. Use these products outside or in well-ventilated areas with a fan and open windows. Always wear gloves to keep hands clean, and consider use of a respirator.

Other Safety Tips - NEVER smoke while using degreasers. Never use gasoline to clean auto parts; evaporating gas contributes to air pollution and is highly flammable.

Alternatives
Use citrus-based degreaser and hand cleaners. Test product on your skin before using; some people react to citrus-based products. Avoid products that contain methylene chloride, which is known to cause cancer in lab animals. Rub greasy hands with baby oil, clean off with a dry cloth, then wash with soapy water. Steam clean your engine at a car wash equipped with coin operated equipment. Rather than using degreasers to absorb grease and oil spills on concrete surfaces, sprinkle cornmeal, sawdust, fuller earth or cat box litter – allow to sit for several hours, then sweep into a plastic bag and place in trash.

Disposal – NEVER dispose of degreasers down the sewer or storm drains. Use up the product or see if your local service station, auto shop class or neighbor can use up the product.
Automotive Products

OIL FILTERS

**Problem** - used oil filters contain some waste oil. The oil may drain out and cause environmental contamination when disposed of in landfills.

**Alternative**
Purchase a permanent oil filter.

**Disposal** - some local service stations recycle oil filters. If you cannot find one that does, drain filters into the used oil pan for 24 hours and place filter in a plastic bag and put in the trash.

GASOLINE

**Problem** - Gasoline is flammable and toxic, and can be one of the most dangerous products found in the house. If children sniff gasoline, they could develop lung and central nervous system damage. Avoid breathing gas fumes, and never use gasoline to clean auto parts or hands.

**Storage** - If you must store gas, use only containers designed for this and leave a couple of inches for vapor expansion. Store the container in a secure, well-ventilated area, away from sources of heat, sparks, or flames. Keep out of reach of children. If left over 6 months, gas can go stale and should not be used in engines.

**Automobiles** - Sell your car! Walk, bike, carpool, or use public transit. Drive a fuel-efficient car and keep it tuned, plan vehicle trips efficiently. Modify your engine to use propane, methanol natural gas, or electricity. They run cleaner than gasoline.

**Gasoline powered mowers** - Buy a manual mower. There are no fuel costs, pollution, and you get exercise!

**Disposal** - NEVER pour gasoline onto the ground, into storm drains, sewers, or streams. Use up gasoline or give it to someone who will. See page 8 for information on HCR.
Automotive Products

WINDSHIELD WASHER SOLUTION

Problem - commercial products contain alcohol to prevent freezing, and a detergent. The alcohol contributes to air pollution and is poisonous.

Maintenance – NEVER use a vinegar mixture. It may damage the windshield washer pump.

Alternatives
• Use plain water, or water with a touch of liquid soap
• Use a solution of 3:1 (water fluid) of the average ready-to-use commercial windshield solution.

Disposal - Use it up or give it to someone else who can. If you must, pour fluid into a box with enough cat box litter or other materials to absorb all liquid, then dispose of in the trash.

AUTOMOTIVE BATTERIES

Problem – automotive batteries, also known as lead-acid batteries, contain sulfuric acid and lead, both of which are highly toxic. Lead can contaminate groundwater, and acid can burn skin and cause blindness. Be careful not to spill or drain the fluid from the battery. Improper disposal of batteries may contaminate soil with lead. Exposure to lead can result in brain and central nervous system damage in children and kidney damage, anemia, stomach pain and peripheral nervous system damage in adults.

Maintenance - use a paste of baking soda and water to clean away corrosion; after reconnecting the clamps to the terminals, coat with petroleum jelly to prevent future corrosion.

Disposal - it is illegal to dispose of automotive batteries in the trash. Trade in your old battery when purchasing a new one, or turn it in to a local retailer or recycler. Auto supply stores who sells batteries usually will take your old battery when you buy a new one. See page 8 for information on household hazardous waste collections.
Paint Products

PAINT PRODUCTS

Problems - Most household paints are either water-based latex or oil-based. Oil-based paints contain solvents that are flammable. The label on oil-based paints will say, combustible - keep away from heat and flame, clean-up with mineral spirits, contains petroleum distillates, or harmful or fatal if swallowed. Latex paints are safer and require only water clean up.

Safety - Paint in a well-ventilated area or paint outside. The fumes from oil-based paints are toxic and flammable.

Alternatives
Buy only as much paint as you need for the job. Patronize stores that will give you expert help. Many paint stores will take back unopened cans of standard colors. Choose water-based latex paints. Use whitewash for fences and house foundations.

Recipe for whitewash for wood, glass, metal surfaces. Dissolve 15 pounds of salt or 5 pounds of dry calcium chloride in 5 gallons of water. In a separate container, soak 50 pounds of hydrated lime in 6 gallons of water. Combine the mixtures, stir and thin with water until it is the consistency of whole milk. Yields 10 gallons (proportions can be reduced).

Disposal - NEVER pour paint down the storm drains, into streams or onto the ground. If you have leftover paint, find a local theater group, school, neighbor or friend to use it up.

Latex – If you can not give it away or use it up, paint latex on cardboard or let small amounts (less than 1 pint) evaporate outdoors. Latex paint can also be mixed with kitty litter or cement to dry out faster. When the paint is dry, wrap the container in newspaper and dispose of it in the trash.

Oil-based – If you can not give it away or use it up, see page 8 for information on household hazardous waste collections. You may solidify small amounts of oil-based paints. Solidify paint by pouring it into a plastic or plastic-lined container with enough cat box litter, sawdust, or shredded newspaper in order to absorb the paint. After the paint is fully absorbed, put the container, with lid off, into the trash.
Paint Products

PAINT THINNERS

Problem - Paint thinners are necessary when you use oil-based paints. Turpentine and mineral spirits are commonly used in thinning and cleaning up paints and varnishes. Both are flammable and toxic, although mineral spirits are less toxic. Wear a respirator with organic vapor cartridges, goggles, and heavy rubber gloves. Use paint thinners in well-ventilated areas, and take plenty of fresh air breaks. If it gets onto skin, wash off immediately with soap and water. Store thinners in well-ventilated area, away from sources of ignition, children, and pets.

Alternatives
Use latex paint instead of oil-based paints; they require only water for clean up. Avoid using oil-based paints that require solvent thinner for thinning and clean up.

Disposal - NEVER dispose of paint thinner into storm drains, streams, onto the ground, or in the trash. If you have leftover paint thinner, recycle it or find a local school group, church, or neighbor to use it up.

Recycling - Recycle dirty paint thinner for reuse by pouring it into a clearly labeled container with a tight seal. Store for several months until the paint sludge settles on the bottom. Carefully pour the clean solvent off the top or pour through cheesecloth; this solvent can be reused. Solidify the paint sludge by putting it into a plastic or plastic-lined container with enough cat box litter, sawdust, or shredded newspaper to fully absorb the sludge. After sludge is fully absorbed, put the container into the trash.

CHEMICAL PAINT STRIPPERS

Problem – Solvents used to strip paint may cause serious health effects if they come in contact with the skin or eyes or are inhaled. The most dangerous solvents are halogenated, and are often found in paint strippers, spot removers, and degreasers. Avoid strippers containing the chemical methylene chloride, trichlorethylene (TCE), benzene, 1,1,1-trichloroethane (TCA), xylene, or toluene.
Paint Products

NEVER eat or drink around solvents. The fumes can be absorbed by food or utensils and you may ingest them. Never smoke when using solvents, and never use them near sources of ignition (some, not all, may be flammable). Read the label carefully, and follow all precautions. Use heavy rubber or nitrile gloves, goggles, and a respirator with organic vapor cartridges. Work in well-ventilated areas or outside when possible. Do not use solvents on hot, high humidity days.

Alternatives
Use water-soluble paint strippers; they contain less-hazardous ingredients.

Disposal – NEVER dispose of strippers into the storm drains, streams, onto the ground or in the trash. If you have leftover paint stripper, find a local group, school or friend to use it up. See page 8 for information on household hazardous waste collections. Small amounts (less than one cup) can be solidified by pouring it into a plastic or plastic-lined container with enough cat box litter, sawdust, or shredded newspaper to fully absorb the stripper. After stripper is fully absorbed, put the container into the trash. For other paint strippers, store until a household chemical roundup.

LEAD-BASED PAINT

Problem - Homes built before 1978 are likely to have surfaces painted with lead-based paints. If paint chips or is stripped from these surfaces, you and your family can be exposed to lead. The dust and chips from lead-based paint are dangerous when swallowed or inhaled. Lead is especially dangerous to small children and pregnant women. Hire a professional to remove any lead-based paint from your home. For more information on health effects call the Childhood Lead Poisoning Prevention Program at 303-692-2700.

Alternatives
Lead-based paints are no longer available for use for household painting. Rather than stripping old lead-based paint, use sealant and apply to old paint and cracks to contain the lead.
Paint Products

SPRAY PAINT

Problem - Spray paints are contained in aerosol cans. These pressurized containers contain paint and propellants (usually petroleum distillates). Aerosols are easily inhaled since the particles are very small. Ozone depleting propellants are no longer used in aerosol products, but many aerosol propellants contribute to air pollution. In laboratory studies, some propellants have been found to harm the heart and central nervous system. Aerosol cans are hazardous until they are completely empty, so it is best to use up the product. Never heat aerosol cans; they can explode with the force of a bomb. Never smoke while using aerosols.

Alternatives
Use a paintbrush or a manual spray paint gun.

Disposal - Use up the entire product as intended or give to someone who will. If you must dispose of a partially used can, discharge the contents into a deep cardboard box outdoors, allow to dry and discard. Empty aerosol cans can be disposed of in the trash.

WOOD PRESERVATIVES

Problem - Wood preservatives generally combine a solvent and a pesticide. These mixtures are highly toxic and some are flammable. Do not use old products that contain pentachlorophenol (PCP), creosote, tributyltin oxide, chromated copper arsenate, or folpet. Do not burn wood treated with wood preservatives because it releases toxic chemicals into the air.

Alternatives
Water based preservatives that seal wood and protect it from water rot and insects are available. Use types of wood, like cedar, that are naturally resistant to insects and wood rot. Use wood substitutes, like plastic lumber, in areas where insects and wood rot are problems. Use a water sealer or polyurethane to prevent wood rot. Buy pressure-treated lumber to which preservatives have already been applied. This eliminates the need to handle wood preservatives and reduces exposure to hazardous chemicals.
Paint Products

**Disposal** – NEVER dispose of wood preservatives in the sewer, storm drain, onto the ground or in the trash. Use up the product as intended or give to someone who can. See Page 8 for more information about household hazardous waste collections.

**WOOD STAINS AND FINISHES**

**Problem** - Wood stains and finishes are usually oil-based, but water-based products are now available. Oil-based stains contain solvents that are flammable. The labels of oil-based stains will say, combustible - keep away from heat and flame, clean up with mineral spirits, contain petroleum distillate, or harmful or fatal if swallowed. Water-based stains are safer and require only water for clean up.

**Safety** - When using oil-based stain, paint in a well-ventilated area, or paint outside. The fumes from oil base stains are toxic and flammable.

**Alternatives**
Buy only as much stain, as you need for a job. Patronize stores that give you expert help. Many paint stores will take back unopened cans of standard products. Use water-based stains. Use finishes derived from natural sources, such as kukui oil, shellac, tung oil, and linseed oil.

**Disposal** – NEVER dispose of stains and finishes into the storm drains, sewer, streams, onto the ground, or directly into the trash.

**Water-based** – If you can’t give it away or use it up, paint the water-based stain on cardboard or let small amounts (less than 1 pint) evaporate outdoors. When the stain is dry, wrap the container in newspaper and dispose of it in the trash.

**Oil-based** – If you cannot give it away or use up, see page 8 for more information about household hazardous waste collections. If no program is available, you may solidify small amounts of oil-based stains by pouring it into a plastic container with enough cat box litter, sawdust, or shredded newspaper to fully absorb it. After stain in fully absorbed, put the container into the trash.
STORAGE CLOSET - HOUSEHOLD BATTERIES

Problem - Some dry cell batteries contain toxic metals such as mercury, cadmium, and lead. These metals are contained within the battery casing and pose no risk while in use. It is when batteries are discarded that the release of these toxic metals in landfills or incinerators becomes a concern.

Alternatives
Buy solar-powered devices like calculators and radios. Nickel hydride batteries are environmentally safer. They contain no mercury, no lead, no cadmium, and are rechargeable with a solar battery charger requiring no electricity. Use rechargeable nickel-cadmium (ni-cad) batteries. They hold a charge only one-third as long as an alkaline battery but can be recharged approximately 1,000 times, saving you money. Buy low or no mercury brands of standard alkaline batteries. Use for low frequency situations like smoke alarms.

Recycle - Call 1-877-2-RECYCLE or www.rbrc.org for a rechargeable battery recycle drop-off location near you. Household batteries may be accepted through certain household waste collection programs. Please call 303-739-7372 for program availability.

LIGHT BULBS

Problem - Typical household light bulbs used for table lamps and ceiling fixtures pose no health risk. However, if you have fluorescent light bulbs or tubes, they may contain mercury vapors. Exposed vapors can be harmful if you breathe them in.

Alternatives
Switch your light bulbs to energy-efficient bulbs. Compact fluorescent bulbs are available from stores. There are many designs now on the market that will fit any household need from table lamps to ceiling fixtures to replacing your old tube fluorescent bulbs (be sure to ask if you need to buy a separate ballast for these lamps). Unlike their predecessors, these bulbs do not flicker and provide adequate light for household needs.
These bulbs also reflect the true colors of objects rather than the yellowish tint of the old incandescent bulb. Florescent bulbs are cooler than incandescent so they will not add to heat in your home. While these bulbs cost more than incandescent, they will last much longer and cut your energy bill. They will save you money!

**Disposal** – Typical light bulbs may be disposed of in the regular trash. Fluorescent tubes may be accepted through certain household waste collection programs. Please call 303-739-7372 for program availability.

**BARBECUE LIGHTER FLUID**

**Problem** - Lighter fluid adds to air pollution when burned.

**Alternatives**
Use an electric metal charcoal starter. A typical one is 10" tall, hollow, metal cylinder with holes, and a handle, available in most supermarkets and hardware stores. EcoStarts™ made from wood scraps and old candles is a healthier way to avoid using lighter fluid.

**Disposal** - Never dispose of lighter fluid in the sewer system, in storm drains, in streams or onto the ground. See page 8 for information about the HCR.

**SMOKE DETECTORS**

**Problem** - Some battery-powered (ionization-type) smoke alarms are made with radioactive material.

**Alternative**
Choose photoelectric detectors.

**Disposal** - Most manufacturers will accept used smoke alarms, and will dispose of the radioactive material properly. Look on the back of your smoke alarm for the manufacturer and send it back to them.
AEROSOL CANS

Problems - Many household products are packaged in aerosol containers. Examples include disinfectants, furniture polishes, hair sprays, paints, oven cleaners, pesticides, room deodorizers, and tub tile cleaners. These pressurized containers contain the product and propellants (usually petroleum distillates). Aerosols are easily inhaled since the particles are very small. Aerosol cans are hazardous until they are completely empty so it is best to use up the product. Never heat aerosol cans; they can explode with the force of a bomb. Never smoke while using aerosols.

Alternatives
Aerosol sprays are often no more effective than using liquid products in non-aerosol containers. Purchase products in pump spray, roll-on, liquid, or non-aerosol spray.

Disposal - Never let an aerosol can become heated, store in direct sunlight, car trunks, or near furnaces, stoves and ovens-this can result in the product exploding. If an aerosol can is completely empty, dispose of it in the trash. If there are non-pesticide ingredients in the can, it is best to completely use the product. If you must dispose of a partially used can, discharge the contents of the container into a deep cardboard box outdoors and allow to dry. When the can is completely empty, throw it and the cardboard box in the trash.

COOKING OIL

Problem - Used-cooking oil poured down the drain contributes to sewer line back-ups. The oil builds up on the sewer pipe walls and decreases the flow to the sewage treatment plant. The sewer line may become clogged and an overflow may result.

Alternative
Use pump spray oils – the less oil you use, the better for your health!

Disposal – Pour your used oils into glass containers, seal tightly. Dispose of in the trash when full.
REFRIGERATOR

Problem - Freon is used to keep your refrigerator cold. If your refrigerator is not cooling, the system may be leaking and needs to be repaired immediately.

Alternatives
Look for new refrigerators that do not use freon as a coolant. Ask the salesperson for more information about these.

Disposal - You should not have to dispose of freon. If you are having your freon recharged, ask the service personnel if they are certified to use freon recovery equipment. If you need to dispose of your refrigerator, call the CDPHE at 303-692-3300 or look online or in the phonebook for an appliance recycler.

THERMOMETERS

Problem - Many thermometers contain mercury which is a highly toxic material. You can be poisoned by absorbing it through the skin or inhaling it. Be very careful not to break mercury thermometers, and store them in a safe place out of reach of children.

Alternatives
Choose an electric or red liquid thermometer.

Disposal - If a thermometer breaks, use a wooden toothpick or a piece of cardboard to push the mercury droplets together into a covered container. After mercury has been collected, contact a dentist’s office to see if they can take it, or see information about the HCR on page 8.
Common Household Cleaners

COMMON HOUSEHOLD CLEANERS

Problem - Surface cleaners include a wide range of products in the home and a wide range of environmental and health risks. Keep all products out of the reach of children and pets. Do not mix products as these mixtures could emit deadly gases. Read and follow labels carefully!

SURFACES

Alternatives
Weak acids like vinegar and lemon juice are good at cutting grease. Find a combination that works for you. Mix 1 quart hot water, 1-tsp. vegetable oil-based soap/detergent, 1-tsp. borax, and 2-tsp. vinegar. Vinegar acts as a mild acid to cut grease; borax is used as a water softener to prevent soapy deposits.
Common Household Cleaners

ENVIRONMENTALLY SAFER CLEANERS

It is much better to buy vegetable or citrus-based soaps instead of petroleum-based soaps and detergents. There are several cleaners you can buy that will give you good results rather than buying a toxic cleaner. Many of these can be found in your grocery, drug, health food or environmental product store. Some brand names include:

- EarthRite™
- EarthWise™
- Ecolo™
- Ecover CitraSolv™
- Granny’s Old Fashioned™
- Orange Muscle™
- Simple Green™
- Dr. Bonner’s™

DISHES

Alternatives
Hand washing – use vegetable oil-based soaps. Use liquid soap such as Castile, or rub a damp dishcloth over a bar of soap. Look for naturally derived or glycerin-based soaps.

Dishwasher – choose a detergent with low phosphate content (read labels). Sprinkle a handful of baking soda over the dishes instead of filing the open dispenser with detergent. In soft water, use 50% borax, and 50% washing soda, add additional borax for harder water.

Camping – NEVER wash with soap directly in a lake or stream. The chemicals in soap are toxic to fish and other aquatic life. Wash in buckets or pots, and use soap that biodegrades quickly. Drain wash water onto the ground well away from the edge of the water.
Common Household Cleaners

DISINFECTANTS

Alternatives
Soap and hot water is sufficient for most of your household cleaning needs. Keep surfaces dry; bacteria, viruses, mildew, and mold generally cannot live without moisture.

DRAIN OPENERS

Alternatives
Put a strainer in all drains.

Pour boiling water down the drain once a week to keep it unclogged. Mix one handful of baking soda and 1/2 cup vinegar. Pour down drain and cover, sealing in the carbon dioxide gas bubbles as they agitate the clog. Let sit 15 minutes. Rinse with 2 quarts boiling water. Follow with plunger. Use metal snake to unclog stubborn drains.

Roots in drains - Do not use copper sulfate-based root control products for drains blocked by roots. They release copper into the streams and are toxic to aquatic life. Have drains cleared by a professional who uses mechanical root removal techniques or non-metallic herbicides.

GLASS CLEANERS

Alternatives
First, remove the wax build up often deposited by commercial glass cleaners. Clean glass with rubbing alcohol. After this is done once, it will not be necessary to repeat. Use gloves and work with good ventilation; alcohol is flammable.

Clean glass with a mixture of one part white vinegar and one part warm water.

Clean windows with a small amount of dish washing liquid in one gallon of water. Use a quality squeegee; this is the pro’s secret to clean windows.
Common Household Cleaners

OVEN CLEANERS

Alternatives
Protect oven floor from spills with aluminum foil. Periodically scrub the oven with baking soda and water. Mix 2-tablespoon liquid dish soap, 2-tsp. borax, 2 cups warm water. Apply and let sit for 20 minutes, then scrub with steel wool and non-chlorine scouring powder. Rub very dirty areas with a stick of pumice. Pour lots of salt on fresh spills and scrape them off after the oven cools. Use a non-caustic oven cleaner. Note: Do not use abrasive cleaners on self-cleaning ovens.

MILDEW REMOVERS

Alternatives
Wash bath and sink grout often so mold cannot be established. Always air out damp areas. Seal grout after cleaning by painting grout with a water sealer. To inhibit mold and mildew, wash area with 1/2-cup borax and 1 gallon hot water

Keep a small squeegee in the shower to dry the walls and prevent mildew. Scrub mildew spots with borax and water mix and a nylon scouring pad. If plaster wall is penetrated by mold, leave a borax/water paste on the wall for a couple of days. Vacuum off. If the problem is not severe, scrub mildew with vinegar and salt paste.

To clean mildew from a plastic shower curtain, try the following: clean with 1/2 cup borax and 1 gallon of water, or clean with vinegar full strength, then rinse, or machine wash plastic curtain with a towel. Add 1-cup vinegar to rinse cycle.
Common Household Cleaners

RUG, CARPET AND UPHOLSTERY

Alternatives
Vacuum regularly to keep dirt from being ground in. Clean up spills immediately. Pour club soda on a spill and blot. Use a non-aerosol, soap-based cleaner and mix 1-tsp. vegetable oil-based soap/detergent, and 1-tsp. borax and 2-tablespoons of vinegar.

NOTE: Vinegar is used here as mild acid to cut grease; borax is used as a water softener and is especially good in areas with hard water to prevent soapy deposits.

TOILET BOWL

Alternatives
Clean and deodorize with 1/2-cup borax and one gallon water. Pour 1-cup borax, let set over night. Coat stains with paste of lemon juice and borax. Let sit about 20 minutes and scrub with bowl brush. Clean frequently with a solution of baking soda and water; sprinkle baking soda around the rim.

TUB AND SINK

Alternatives
Use baking soda as a scouring cleanser. Use non-chlorinated cleansers, which tend to be very effective and do not dissolve as fast as baking soda. To remove mineral deposits around faucets, cover deposits with strips of paper towel soaked in vinegar. Let set for one hour and clean.
Laundry

Problem - Laundry products are often non-biodegradable detergents made from petroleum. Even phosphate-free, biodegradable detergents can contribute to water pollution. Bleach is a reactive and irritating substance. If combined with ammonia, a toxic gas is formed. Dry cleaning uses harsh chemicals and ozone-damaging CFCs which are harmful to the environment and can weaken natural or synthetic fibers. Remove the plastic bags from dry cleaning clothes and air them out before hanging in your closet. This will limit your exposure to perchloroethylene, the solvent used in dry cleaning. Spot and stain removers are often harsh solvents that are flammable and toxic. These products may come in aerosols, which adds to the risk of inhaling them.

Disposal - NEVER dispose of laundry products in storm drains, streams, or onto the ground. Use them up according to directions or give to someone who can. If products are normally flushed down the drain after use, pour small amounts in your drain while flushing with plenty of water. Do not throw away aerosol cans if the ingredients are still in the can. If you cannot use the product, discharge the contents into a deep cardboard box outdoors. Dispose of the empty can and box in trash. Spot and stain removers can contain hazardous substances.

If you cannot use them up according to the directions, see page 8 for information on HCR.
Laundry

WHITENING ALTERNATIVES
Use non-chlorine dry bleach or washing soda to whiten clothes. Use a hydrogen peroxide-based liquid. If you use chlorine bleach, use half the recommended amount and add 1/4 to 1/2-cup baking soda per load.

DRY CLEANING ALTERNATIVES
Many clothing items can be safely hand-washed in cold water. Washables knits, woolens, and silk fabrics require the use of a gentle cleaning product with a low detergent level. Buy clothes that do not require dry cleaning. Ask questions about cleaning options when you buy clothes.

FABRIC SOFTENER ALTERNATIVES
To freshen and soften natural fiber clothing, add 1-cup vinegar or 1/4 cup baking soda during final rinse. To reduce static cling in synthetics, line dry clothes, or remove clothes from the dryer while they are still slightly damp and line dry.

SPOT & STAIN REMOVER ALTERNATIVES
Make a paste of borax, washing soda, or baking soda. Rub into stain with toothbrush. Launder as usual.

Use borax for acid stains; add one tablespoon of borax to one pint warm water. Soak washable fabrics in solution for 10 to 15 minutes.

Glycerin works for any color or fabric by softening the stain, making removal easier. Dilute one part glycerin to one part water. Work into fabric. Allow setting for one hour. Remove by sponging with warm water.

Act as soon as a stain occurs. For non-greasy stains, rinse or sponge with cold water. Leave washable items to soak until you can treat them (never soak wool, silk, or fabrics with flame resistant finishes). Always test any removal treatment on an inconspicuous area of the fabric before beginning treatment of stained portion. Work on stain from its outer edges toward the middle to prevent the stain from spreading or leaving a ring. Use a pad of white absorbent cloth to dab stain-removing solutions. Lift stains off fabric by dabbing rather than rubbing. Treat surface stains from the underside of fabric.
RECIPES TO CLEAN SPOTS FROM CLOTHES

**Blood** - Immediately clean stain with club soda, or sponge with cold water. Mix 1/4-cup borax in 2 cups water and sponge with cold water and rinse; repeat as necessary, or dampen with hydrogen peroxide.

**Chocolate and Coffee** - Soak in cold water, rub with soap and a borax solution, rinse, and then launder. If necessary, rub with a borax/water paste or dab stain with glycerin solution; allow to set for 10 minutes; wash at recommended temperature for fabric.

**Fruit** - Soak in cold water for 30 minutes. Rub soap into remaining stain, then wash or bleach with lemon juice and sunlight. Alternatively, soak in vinegar.

**Grease** - Apply paste of cornstarch and water. Brush off when dry. Alternate treatments include, 1) cover spot with baking soda or corn meal, let it absorb the grease and brush off; 2) scrub spot with toothpaste; 3) treat stain with eucalyptus oil, then wash or sponge clean. For a grease spot on suede, sponge with a cloth dipped in white vinegar; let dry, brush off.

**Ink** – Saturate stain with milk. Alternatively, sponge stain with alcohol or apply cream of tartar and lemon juice paste, set for 1 hour, scrub, and launder. Alternatively, use hair spray from a pump bottle, scrub and launder.

**Lipstick** - Rub with cold cream or shortening to dissolve color, rinse area with solution of washing soda and warm water to remove grease, then wash in soapy water.

**Oil** - Rub white chalk into stain before laundering. Alternatively, rub spot with toothpaste.

**Perspiration** - Sponge stain with a weak solution of white vinegar or lemon juice and water.

**Tea** - Stretch fabric over a basin and pour boiling water over stain; wash as usual.

**Wine** - Blot with paper towels to absorb wine. Then apply club soda, rubbing alcohol, or borax to blot out the stain.
Polishes

POLISHES

Problem - Floor cleaners and wood polishes contain phenol, which causes cancer in animals. Ingestion of as little as one thimbleful of phenol can cause symptoms ranging from circulatory collapse to death. Wood polish may also cause severe skin irritation. Residual vapors contaminate your home long after application. Furniture polishes contain petroleum distillates, which are flammable and very dangerous if swallowed. Avoid contact with skin, and work in well-ventilated areas. Metal polishes give off fumes from phosphoric and sulfuric acids and ammonia, which pollute the air in your home.

Disposal - Furniture, metal and wood polishes are very toxic to aquatic life. Do not pour these products in streams, storm drains, in your sewer system, or onto the ground. Use up the products according to the directions or find someone who can. See page 8 about the HCR.

FLOORS & WOOD

Alternatives
For vinyl tile and linoleum, mix 1/4 cup white vinegar, 1/4 cup washing soda and one gallon water.

For scuffmarks, scrub with toothpaste. For wood floors damp mop with a mild vegetable oil soap and dry immediately. Polish finished wood with butcher’s wax once or twice a year. For painted or varnished wood floors, mix 1 tsp. soap and one gallon hot water. Rinse with clear water, dry immediately.

For polyurethane-sealed wood floors, mix 1/4 cup white vinegar, 1-gallon water and dry immediately.

FURNITURE

Alternatives
Polish unvarnished wood with almond, walnut or olive oil. Work it in well and wipe off excess. Oily surfaces attract dirt and insects.
Yard and Garden

YARD AND GARDEN

Pesticides

Problem - Pesticides are chemicals that are intended to kill unwanted animals, plants, or microorganisms. These products may also be toxic to humans and pets. Pesticides include commonly recognized insecticides and herbicides, and products such as wood preservatives, flea rinses and insect repellents. It is extremely important to read the pesticide label before using the products. Always keep pesticides out of reach of children and pets and away from heat.

Pesticide Labeling - Federal law requires that most hazardous household products, and in particular, pesticides, include specific information about the product on their labels. Product labels tend to advertise their virtues rather than emphasize product safety. The consumer must know what to look for and how to read the fine print on a label to ensure they use a product safely - for themselves and for the environment. Pesticide labels must legally include the following information: child and pet hazard warnings, net contents, directions for use, warning statements, misuse statement, and registration numbers.

Every pesticide must be registered with the U.S. Environmental Protection Agency (EPA). Labels must contain the registration number (EPA re. no.) In addition, an established number (code for manufacturer) (EPA Est.). If either one of these numbers is not listed on the label, do not buy the product. It means the product is not registered with EPA or is mislabeled.

The relative toxicity (lethal dose) of a pesticide is defined by the signal word on the label. The signal word describes toxicity of only active ingredients. Inert ingredients may also be hazardous, and may include petroleum distillates that cause health problems as well. The signal words and precautionary statements provide useful information on how to use the product and what to do if the product is ingested.

DANGER/POISON - highly toxic, the most hazardous rating

WARNING - moderately toxic

CAUTION - slightly toxic, consuming more than one ounce may kill an average adult
Yard and Garden

Alternatives
Keep homes and yard clear of food sources and decaying plants. Take trash out regularly and caulk access points to your house. Keep plants healthy by fertilizing, cultivating and watering them. Rotate the garden plot. Pick off insects by hand. Plant marigolds to ward off insects. Use mechanical traps or sticky paper.

Less toxic products to consider:
- Dehydrating dusts (e.g., diatomaceous earth and silica gel)
- Insecticide soaps
- Biological pesticides (e.g., Bacillus thuringiensis)

For severe infestations, use less toxic insecticides (e.g., pyrethrin) or “insect growth regulators”. Buy the lowest toxicity product available. Gauge toxicity of a pesticide by the signal words on the label (caution being the least toxic, danger being the most).

Ants - Inside House
- Pour a line of cream tartar, red chili powder, paprika, or dried peppermint at point of entry.
- Caulk openings into the house; petroleum jelly in cracks or duct tape can be a temporary fix. Apply diatomaceous earth or silica gel into cracks, and apply at entry points that cannot be caulked. Apply boric acid into cracks where ants emerge. (Boric acid is a poison, so be sure it is inaccessible to pets and children.)

Ants - Outside the House
- Ants may be beneficial in the garden. They attack termites and eat flea eggs, so limit your control effort to problem areas. However, ants will protect aphids from their natural enemies and carry aphids to other plants. To prevent ants from climbing to where aphids are, apply a sticky adhesive material to a band of nursery tape, tin foil, or plastic wrapped around the base of the plants. Apply tape several inches above the ground.
Yard and Garden

Plant onions and beans close together to repel ants. (Place baits in problem areas.) Look for boric acid baits or hydramethylnon baits, which are less toxic than arsenic. If a nest is a problem because it is near your house, destroy it with boiling water, insecticide soap, a pyrethrin solution or diatomaceous earth.

Caterpillars
- Hand pick.
- Apply products containing bacillus thuringiensis, an effective and popular product. This must be applied to the leaves when the caterpillars are eating. It is safe to mammals and other insects, but will kill caterpillars. Be sure to target only the pest-infested plants.

Mosquitoes
- Screen windows and doors, remove all standing water near house; this is critical.
- Stock ornamental ponds with mosquito eating fish. If your pond is attracting mosquitoes, siphon out water.
- Use bacillus thuringiensis israelensis (a non-toxic biological control in ponds). It kills the larvae in the water.

Repellents
- Use citronella oil as insect repellents.
- Do not wear strong smelling products like lotions, deodorants, hair spray, or suntan oils; they attract mosquitoes. Apply the more toxic mosquito repellents to clothing, not to skin.
- Note: For more information on mosquito abatement call the State Department of Health.

Moths
Mothballs contain hazardous substances; consider using the following alternatives in your home:
- Destroy all stages of clothes moths by cleaning garments before storing. Store clothes in well-sealed containers.
- Hang clothes in the sunlight and beat them to dislodge moth larvae and eggs before storing. Vacuum closets thoroughly.
- Put cedar wood in your closet to repel moths.
Yard and Garden

Aphids
• Crush dense colonies at plant tips with fingers. Spray off with a strong stream of water (be careful not to harm or break plants). Mix 1 tablespoon dish soap, one cup vegetable oil. Add one tablespoon of this mix to one cup water and spray on aphids. Try the solution on a few leaves first. Oil may harm vegetable plants in the cabbage family. Use a slow-release fertilizer like fish emulsion. Do not fertilize plants with high nitrogen fertilizer in early spring. Aphids love the fast, new growth. Spray with insecticide soap.
• Try releasing ladybugs into your yard and garden. Ladybugs are capable of consuming up to 50 to 60 aphids per day and will also eat a variety of other soft bodies insects and larvae.

Snails and Slugs
• Snails and slugs breed in shady, cool, moist spots in the garden: agapanthus, lilies, ice plant, woodpile, or empty flowerpots provide good homes for slugs and snails. Change these environments to discourage breeding. Hand pick. It is the safest and surest method. Use traps or barriers (see below). Snails are active at night, so check traps two hours after sunset or early morning with flashlight. Kill snails by smashing or drowning in soapy water and then bury. If infestation is severe, judicious use of metaldehyde snail bait may be needed. Place bait inside flattened tin cans in the garden where snail damage is worst. The bait can attract and poison dogs, and it is toxic to birds. Place bait carefully.
• Traps: Prop up overturned clay pots, boards, or black plastic sheeting. Sink shallow pans, filled with stale beer, in the ground with the rim even to ground level. Remove dead snails and slugs regularly. Yeast in the beer attracts them.

Barriers: Copper stripping (2” or more) mounted around raised planting beds keeps snails and slugs out of the protected area since they will not cross the copper. Be sure to capture snails and slugs already in the area.

Termites
• Prevention: Subterranean termites need water, so keep water away from the perimeter of the house. Keep area under and around the house free of decaying wood. Wood should not be in direct contact with soil.
• Build with borate-treated wood. Watch for and destroy termite-built earthen tubes (pencil width) in basement and foundation area. These are
Yard and Garden

a sure sign you have subterranean termites. Treatment - hire a professional pest-control company who uses some of the following less toxic techniques: sand barrier around the house, heat or cold treatment for dry wood termites, silica gel (dust) applied in attic, and less toxic pesticides like pyrethroids and methoprene.

Roaches

- Close openings into the house, such as gaps around pipes and electrical work, door molding, cracks in walls, with caulking or screen weather-stripping. Seal all food containers. Clean dishes nightly, or leave them in soapy water. Do not leave pet food out overnight.

Place bay leaves in the pantry, cupboards, and on shelves to repel cockroaches. Use non-toxic roach traps to monitor the change in population. Apply boric acid dust into cracks and places where roaches hide, like under the refrigerator. Apply only in out-of-the-way places where pets and children cannot touch it; it is a poison! Roaches will avoid piles of boric acid, so use a fine dusting.

Disposal: Use up all pesticide containers according to label instructions. Empty plastic and glass pesticides container should be triple-rinsed before being thrown away. The rinse water can be a pesticide. The empty container should then be wrapped in newspaper and discarded with household trash. Unusable pesticides products should be taken to a household hazardous waste collection for disposal (see page 8).

PET CARE

Problem - It is important to note that fleas may never be completely eradicated from your pets, your home, or your yard, as long as you have pets. Avoid using conventional flea collars because they expose your pets to constant low levels of toxins. If you must use them, limit use to periods of serious infestation. If you use pesticide products, be sure to check wind conditions before you apply a spray product on your pet to avoid exposing others to the product.
Yard and Garden

Carefully read and understand the whole pesticide label before you use the product. The key is to control infestations through a combination of the following alternatives. Recommendations listed below may change according to the age and health of your pet. Consult with your veterinarian before trying any of these suggestions or to get additional ideas for non-toxic controls.

In the House
Vacuum house frequently (everyday at the beginning of your flea program), seal and dispose of the vacuum bag outside the home and away from pets. Leave vacuum bag in the sun for a day to kill fleas. (The bag will keep fleas from escaping into your yard from the trash.) Clean pet bedding regularly. Steam clean the carpet; this kills adult fleas, larvae, and some eggs. The heat will trigger some of the eggs to hatch, so be prepared to vacuum soon after steam cleaning. Apply a dusting of silica gel to pet bedding, under furniture, and around the foundation of house. This dehydrates the adults. Use methoprene, an Insect Growth Regulator (IGR). IGRs interrupt the reproductive cycle of fleas. It prevents the flea larvae from maturing, and it exposing your pet to much lower toxicity levels than conventional pesticides. Avoid buying IGRs mixed with toxic insecticides. Pyrethrin and methoprene is a less toxic combination. Pyrethrin-based flea products are reported to be the least toxic of the most commonly used flea control products. Be aware, however, that some animals are harmed by even these compounds. Common forms found, in order from less toxic to more toxic are: pyrethrums, pyrethrum alone or with inert materials, and pyrethrum with piperonal butoxide and inert materials.

On your Pet
Use a flea comb specially designed to remove fleas from your pets (works well for cats who hate baths); drop fleas into soapy water. Ask your veterinarian about the new anti-flea pill you can give to your dog or cat.

Disposal
Never pour pesticides or herbicides into storm drains, sewers or streams. Use up the product according to the label or give it to someone who will. See page 8 for information on acceptance at the HCR.
Yard and Garden

Wash pets with a mixture of mild soap and water. While not proven, many pet owners find it helpful to feed pets vitamin B supplements. Alternatively, sprinkle pet’s food with brewer’s yeast (nutritional yeast). Alternatively, mix raw garlic into pet’s food. This may make the pet less attractive to fleas. Experiment with natural flea repellents such as eucalyptus, citronella, cedar-wood, pennyroyal, and black walnut leaves. Herbal repellents are not registered as pesticides, but some pet owners swear by them. Find them in essential oil flea dips or herbal flea collars. Herbal repellents are most useful once the flea population is under control.

Wash pet with insecticide flea soap, a pyrethrum/methoprene flea shampoo, or citrus oil shampoo or dip containing limonene or linalool. Begin regular baths when pets are young so they get used to it. Use pyrethrum powders on pets. Avoid getting powder into pet’s eyes, nostrils, or mouth. When cats clean themselves, they will ingest some, so do not over-apply.

SWIMMING POOLS

**Problem** - It is important to control the growth of algae and bacteria in pools that might cause odors or infections in swimmers. Pool chemicals are necessary to keep pools sanitary for swimming. These chemicals are essentially pesticides, and safe use of these products according to label instructions is very important. Avoid copper-based algacides. Chlorine is usually adequate.

**Alternative**
Consider a chlorine generator for your pool. The generator lets you store and use salt instead of toxic chlorine.

**Disposal**
Never pour pool chemicals on the ground or into storm drains, sewers or streams. Use up the product according to the label or give it to someone who will. See page 8 for information on acceptance at the HCR.
This booklet is produced by the City of Aurora Water Department.

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