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ALABAMA A & M AND AUBURN UNIVERSITIES

## Protecting Water Quality Recycling Household Wastes

**A**s a nation, we are producing an ever-increasing amount of municipal trash. Referred to as the “throwaway society,” we produce almost twice as much solid waste as other developed countries.

Americans generate about 160 million tons of municipal solid wastes annually or enough garbage to fill a convoy of trash trucks reaching halfway from the earth to the moon. This amount is equivalent to about 1,300 pounds of waste per year for every person in the United States, or about 25 pounds per person per week.

This tremendous amount of waste puts a burden on both community landfills and the environment. Recycling can reduce the amount of waste needing to be buried in a landfill or incinerated. Recycling can add to the useful life expectancy of a landfill and may reduce disposal costs. Recycling also puts discarded material to valuable use, cutting down on litter and conserving natural resources.

### What Can Be Recycled?

Seventy to 80 percent of trash in landfills could be recycled. Recyclable materials include aluminum, paper, cardboard, glass, yard wastes, textile rags, other metals, and easily recyclable plastics. Many items can be recycled through companies when there is no organized community collection program.

Recycling is the refining or reprocessing of discarded materials into new products—again and again and again. Different products have different levels of reuse and save different amounts of energy and resources.

**Glass.** Containers made of glass are 100-percent recyclable. They never need to reach a landfill. At least 30 percent of the glass on store shelves is recycled glass. Recycling glass saves 4 to 32 percent of the energy needed to manufacture new glass and produces 20 percent less air pollution.

**Aluminum.** Aluminum may be recycled endlessly. Using recycled instead of raw materials saves 95 percent of the energy to produce new cans and produces less air and water pollution.

**Paper.** As paper is recycled, its quality degrades slightly, and eventually paper may end up in a landfill. But 1 ton of recycled paper saves 17 8-inch trees and 390 gallons of oil. Currently, 35 percent of all newspaper is recycled—one-third of it back into newsprint and two-thirds into tissue paper, paper towels, and packaging.

Office papers are excellent for recycling. High grade computer paper, white copier paper, and letterhead are valuable papers. Colored copier paper is also recyclable. These types of paper account for the majority of waste paper generated through offices.

**Plastics.** Recycling plastic gives it an extra “life,” turning a milk jug into a paint brush handle or a park bench. Plastics recycling is a young industry and only 1 percent is currently recycled. But as processing technologies are developed, plastics recycling is expected to expand.

Recyclable plastics can be identified by looking for the symbols developed by the Society of the Plastics Industry. These symbols are molded to or imprinted as close to the bottom of containers as possible.

**Motor Oil.** Americans throw away or dump as much oil as 30 Valdez spills every year. That’s enough oil to power 11,600 cars for one year. The oil from one change could contaminate a million gallons of fresh water if it is dumped down a storm drain and leaches into groundwater. Used oil is insoluble, persistent, and contains toxic chemicals and heavy metals. It is also slow to degrade. Recycling oil saves the United States 2.3 million barrels of oil per day. One gallon of used oil provides the same amount of lubricating oil as 42 gallons of crude oil.

In Alabama used motor oil can be recycled. The Statewide Oil Acquisition and Reprocessing Program, called SOAR, is under the direction of the Auburn University Department of Chemical Engineering. The waste oil reprocessing lab at Auburn will transport the oil from collection sites to Auburn. Tax incentives are available to marketers and organizations who collect and donate used oil.

Recycled Oil Saves Energy, called project ROSE, is coordinated by the University of Alabama at Tuscaloosa.

**Latex Paint.** Leftover paint from home redecorating projects may be donated to a school, community theater, youth center, or church.

**Tires.** Many scrap tires are being cut up for fuel or mixed with asphalt to extend highway life and soften airport runways.

**Household Batteries.** Some worn-out flashlight and hearing aid batteries contain mercury, cadmium, and lead. One idea is to place boxes at area convenience stores for collecting used batteries.

**Lawn Clippings.** Rather than bagging lawn clippings and putting them in the garbage, think about two ways to recycle them.

Compost the clippings. Blend lawn clippings with other yard and household trash and a small amount of soil. They will easily break down and provide good mulch for shrub beds or gardens.

Use a mulching or recycling blade on mowers and let clippings fall back on the lawn. Shredded clippings will not cause thatch because they rapidly decay when they reach the soil surface. In addition, clippings contain plant foods, so 25 to 30 percent less fertilizer is needed. To correctly recycle clippings, cut them no more than 1 inch in length. This means mowing the lawn every 5 or 6 days in fast growth periods.

### What Else You Can Do: Reduce And Rethink

**Reduce.** Reduce the volume of garbage you generate by making thoughtful choices when you buy products. Make refillable, reusable, and durable merchandise a substitute for disposable and one-use items.

Search out information about products you use every day and stay abreast of recent research. For example, there is considerable debate about the true biodegradability of plastics. Learn the recycling symbols and consider the amount of packaging used in the products you purchase. Think before you buy.

You can further reduce the volume of your garbage by providing your own reusable grocery bags, using both sides of paper, buying products with reduced packaging when safe to do so, buying products in recyclable packaging, repairing existing items, not buying products if they are not needed, and minimizing the amount of toxic substances used.

**Rethink.** Become informed and consider all waste disposal options available. Find out all you can about the local solid waste issues in your community and examine several viewpoints.

Find out how waste is managed where you live. What waste products are used or produced by large industries in your area? How are toxic substances used, handled, or stored? Is there a special program for the disposal of household products such as solvents, empty paint cans, or pesticide containers? Are septic tank ordinances adequate to protect groundwater?

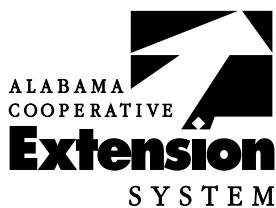
If you use your own property for solid waste disposal, consider the effect that your own solid waste management could have on the quality of your drinking water. Evaluate the location of your landfill in terms of potential groundwater quality effects. A map identifying the landfill or garbage sites and location of nearby wells might be one way to begin evaluating this potential problem.

### Conclusion

Recycling requires a conscious effort to change the way we live. But becoming waste wise can pay off. Through reducing waste and recycling materials, we can preserve our resources and have a cleaner, healthier environment.

### Reference

Neimeyer, Shirley, et. al. 1990. Household Waste Management. G90-959. Nebraska Cooperative Extension Service. University of Nebraska. Lincoln, NB.



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**For more information,** call your county Extension office. Look in your telephone directory under your county's name to find the number.

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