



Recycling Plastic Milk Bottles at School

Frequently Asked Questions

Why recycle plastic milk bottles?

Recycling benefits everyone. Students learn to care for the environment and recycling teaches social responsibility; the district may be able to lower their trash-disposal costs; and for each bottle recycled the community saves landfill space. In fact, two million bottles — easily collected in a school year from a district with 30 schools — recycled and diverted from the landfill is equivalent to the space taken up by 1,182 refrigerators. Recycling a ton of plastic bottles saves the equivalent of 3.8 barrels of oil.¹ The natural resin used to make plastic products is mostly derived from petroleum and natural gas; substituting recycled plastic resin to make new products helps save these natural resources. Additionally, the process of making new plastic products requires less than half the energy when recycled plastic resin is used in place of natural resin.

Can paperboard milk cartons be recycled?

It is rare that paperboard cartons can be recycled as few facilities are capable of handling the polycoated layers in the cartons. Therefore, most paper cartons end up in landfills. In contrast, plastic bottles are easy to recycle and the collected material is in high demand. Neither paperboard cartons nor plastic bottles degrade readily in modern sanitary landfills.

How much extra work is involved for staff?

Recycling should not increase the workload of cafeteria or custodial staff. It's the same amount of material, just split between recyclable and non-recyclable waste.

How complicated is the recycling process at the school level?

The process is quite simple. After students and staff receive brief instructions, recycling bins that are visually different from trash bins are placed at the tray service area and lined with 2 mil thickness clear plastic bags. As trays are returned, students, staff, or aides can empty any leftover liquid into a container

before putting the bottle in the bin; or when trays are returned, staff can pull bottles that are not empty and dispose of the liquid at a later time. The full bags of bottles are double-knotted and carried to a special outdoor recycle container rather than to the trash dumpster.

When kitchen and custodial-generated plastic containers and jugs (i.e. mayonnaise and cleaning supplies) and steel cans are also recycled, they are collected in a separate bin and taken to the outdoor recycle container rather than to the trash dumpster. These materials should be empty, but often do not need to be rinsed. Check with your recycling service provider to be sure.

Custodial staff is already very busy; how can I get them "on board?"

In one National Dairy Council® pilot test,² when custodial staff was included on the school recycling planning team and in the decision making process (e.g. placement of recycle bins in the cafeteria,) they provided important insight and suggestions. Custodians who work in the cafeteria during meal times are crucial to the success of recycling programs as they can motivate students at the point of recycling.

I'm concerned about spills and mess and odor associated with recycling; can that be avoided?

Pilot tests^{2,3} in three different school systems did not show spills, mess or odor to be issues. Students are encouraged to drink all their milk to get the nine essential nutrients it provides and for ease of recycling. Those who do not finish all their milk pour the remaining liquid into a separate bucket at the tray service area before recycling their bottles into the special bin. Double-knotting the full bin liners before taking them to the outside recycling container also helps prevent odor.

Do recyclable bottles, cans and containers need to be crushed before recycling?

No. Crushing steel cans will save space, but some recycling service providers may prefer uncrushed cans. Discuss this with your recycling service provider.

What types of beverage containers can be recycled?

Most 8-ounce plastic bottles used in schools for the New Look of School Milk are made from natural high density polyethylene (HDPE) resin, which is the most recycled plastic resin nationally. All plastic beverage bottles (i.e. milk, soda, water, juice) and aluminum cans are usually recycled together. All colors are acceptable. Foiled-covered plastic juice cups and juice "boxes" should not be recycled.

Are caps from plastic bottles recyclable?

Ask your recycling service provider about caps. Generally, it is acceptable to include caps when recycling bottles.

What type of recycling bin should be used in the cafeteria?

The opening should be no larger than about 4 inches in diameter; larger openings invite students to dump non-recyclables in with the bottles. Include simple information to differentiate the bin from a trash

receptacle. "Plastic bottles" is preferable to "plastics"; the more general label may invite plastic food utensils, applesauce cups, plastic foam plates or other items that contaminate the plastics stream and devalue the material collected. For an example of an appropriate bin download the Drink It Then Sink It! Recycling bin fact sheet [<http://www.nutritionexplorations.org/pdf/sfs/RecyclingBinOrderForm.pdf>], or contact your local Dairy Council® representative [<http://www.nutritionexplorations.org/utility/findDC.asp>].

Where should recycling bins be placed?

In the cafeteria, place recycle bins near trash bins in the tray service area so students don't have to go out of their way to recycle.

How much do the full bags of recycled milk bottles weigh?

Only emptied bottles should be collected. A full liner from a 55-gallon recycling bin will weigh no more than about 12 pounds.

What type of outdoor recycling container should be used?

A specially marked container, preferably visually different from the trash dumpster, should be available outside for recyclables. Depending on school size, space and pick up schedule, the container could range from a plastic 95-gallon rolling cart to a metal container up to the same size as the trash dumpster.

Some schools have no outdoor space for a recycling container. Is there a solution?

Schools typically have limited outdoor space for waste containers, but usually can fit in a recycling container. Compacting trash has been a solution for some schools, allowing them to eliminate a trash dumpster. Since plastic bottles and other recyclables can be a substantial part of a school's waste, removing a dumpster and using that space for the recycling container may be an option. Having more frequent trash pick up could require fewer trash dumpsters. Eliminating a parking space may allow room for a recycling container. With careful consideration of servicing schedules, dumpsters and containers may also be stacked one behind the other.

Some schools are using 95-gallon plastic wheeled carts for their plastic milk bottle recycling as they are easy to manipulate and can fit into smaller areas. However a school may require a larger number of carts to provide the same storage capacity as the larger metal outside recycling bin.

How often are outdoor recycling containers emptied?

Depending on the size of the school and the capacity of the outdoor container, they are usually emptied every 5 to 10 school days.

What if a recycling company is concerned about the quality of the materials that will be collected?

After simple instruction to students and staff, the plastic bottles collected in National Dairy Council® pilot tests^{2,3} have been relatively clean and free of contaminants. Someone should oversee recycling at the tray service area until students recycle appropriately.

Do milk bottles have to be rinsed?

No. However, the bottles should be emptied.

Do we have to remove any non-recyclables that get mixed in with the milk bottles?

Contamination lowers the value of collected materials. Make sure students understand that only emptied plastic drink bottles (and aluminum cans) go into the recycle bin and not plastic plates, juice boxes, cups, cereal bowls or silverware. Have someone available at the tray service area to check until students recycle properly.

How do I get started?

Does your district have a recycling coordinator who can help? If some materials are already being recycled, such as mixed paper and cardboard, the recycling service provider may be able to expand their collection to include plastics. "Single stream" recyclers can collect all these materials together. Or your district's trash-hauling company may provide recycling services. Contact your city or county recycling coordinator who may be able to help you with information, contacts and possibly grant monies.

What if there are no recycling companies in my area willing to collect materials?

According to a 2007 survey⁴ of school nutrition directors, the biggest obstacle to recycling plastic milk bottles was finding a recycler willing to collect materials. While momentum is building around plastics recycling, not all recycling companies have built their capacity in this area. Ask a recycling company to do a pilot test with your district. Nonprofit companies, such as Goodwill Industries, may be involved in recycling. Or devise a workable system for taking plastic recyclables to a local drop-off center.

What if there is more than one recycling provider in my area?

Bidding the service can assure the best service and price. Competition is a good thing!

How much does it cost to recycle?

Plastic milk bottles can easily be recycled and can be the one item that makes enough "critical mass" to be worthwhile for a recycling company to work with your district for no or very low cost. Schools pay for trash disposal by the cubic yard. Since milk bottles are bulky, recycling them can reduce trash volume between nine percent and 20 percent according to National Dairy Council® pilot tests.^{2,3} As additional materials are recycled (i.e. steel cans, plastic kitchen jugs and containers, aluminum cans) even more trash is avoided. Having less garbage to pick up can translate into lower waste-hauling costs when contracts are renegotiated.

How do I build support for plastics recycling?

If your district already has a recycling coordinator, that person is a likely ally for plastic bottle recycling. Check to see if the superintendent or certain school board members, principals and teachers have an interest in recycling and will also support the concept.

In addition to being the right thing to do from an environmental and educational standpoint, recycling plastics can save the district money. As a school nutrition professional, you can be a leader in this effort.

Who should be on a district's plastics recycling team?

Representation by various stakeholders in the district and the community is desirable. If the district already has a recycling coordinator, this person should be a leader in your effort to add plastics recycling. Check with your city/county solid waste department to see if they have a recycling coordinator who could work with you. Does your city have a "Keep America Beautiful" affiliate that will support your efforts? Involving the school board, principals, PTA and custodial supervisor are also important. The dairy that supplies your milk and your local Dairy Council® representative can be helpful partners as well.

Can I start a plastics recycling program with just a few schools?

Check with your recycling service provider about the minimum volume of plastic needed to make collection feasible. Determine if they are willing to participate in a pilot test. National Dairy Council® pilot tests^{2,3} have shown significantly greater volume collected in elementary schools. If you need to limit the number of schools, involve elementary schools to keep volume up. Otherwise you may need to rely on volunteers to take materials to a local drop-off center.

How can I build enthusiasm at the school level?

A "kick-off" event can add excitement and provide a focus for media exposure. Create enthusiasm with students and staff by using simple fact sheets and PA announcements. National Dairy Council® pilot tests^{2,3} showed up to 95 percent of milk bottles are recycled at the elementary level, about 65-75 percent at middle school level and 10-15 per cent at the high school level.

Are there materials available to help with education and training?

Yes. Contact your local Dairy Council® representative [<http://www.nutritionexplorations.org/utility/findDC.asp>]. They can provide sample fact sheets, PA announcements, communications templates, instruction posters, recycling bin information and other tools.

How can I estimate the quantity of plastic bottles that will be available for recycling?

The local dairy provider or school nutrition director can provide milk sales by school for a given period through milk delivery records. There are approximately 1,600 eight-ounce milk bottles to a cubic yard.

If available from local beverage companies, get sales data for other beverages packaged in plastic (water, juice drinks, soda.)

There are typically 32 8-ounce plastic milk bottles with caps per pound, or 40 bottles without caps. Other single serve beverages of 16 ounces or more average 16 bottles per pound. According to National Dairy Council® pilot tests^{2,3} on plastic bottle recycling, an average of 7.71 pounds of recyclable materials per student will be collected over a school year.

References:

1. Killinger, Jennifer. "Information Sheet." American Chemistry Council. March 2007
http://americanchemistry.com/s_plastics/sec_content.asp?CID-1102&DID-5007
2. School Recycling Pilot Test conducted by Container Recycling Services on behalf of National Dairy Council®. August 2005.
3. Knox County School District Plastics Recycling Pilot Test, (Knoxville, Tenn.), conducted by National Dairy Council®, November, 2006.
4. Recycling & Waste Management Practices in School Nutrition Programs Survey conducted by the School Nutrition Association, School Nutrition Foundation, and National Dairy Council®, May 2007.