

Resident Education and Special Programs

INTRODUCTION

Residential behavior is an important contributor to the environmental impact of a public housing authority (PHA). On an individual level, residents might not feel that they play a significant role in the PHA's environmental performance, but their behavior is a major determinant of the amount of energy and water used overall. Energy costs will be higher if residents leave their lights on while not occupying their unit. In addition, resident behavior can affect the efficiency of key systems; for example, it does not matter how efficient an HVAC system is if residents turn up thermostats to run heat while windows are open. Residential behavior not only affects the living conditions of an individual unit, but also it affects neighboring residents; for example, the attraction of pests or leaks in one apartment may affect another.

The best time to educate residents on steps they can take to decrease their environmental impact is when they first sign their leasing agreement. Residents should also be reminded of positive actions they can take during unit maintenance visits, the yearly unit inspection, and resident association meetings.

This chapter consists of two sections. The first section, on residential education, suggests items to review with residents when they first move in and then again during unit maintenance visits and yearly unit inspections. It identifies five main areas where simple actions by residents can improve the environment:

- Asking for assistance from the maintenance staff
- Reducing energy use

RESIDENT EDUCATION AT-A-GLANCE

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- Reducing water use
- Reducing solid waste
- Purchasing environmentally preferable products.

The second section describes special programs to reduce environmental impacts: programs and initiatives the PHA can implement to encourage residents to act more easily on the information provided to them during the resident education meetings. These programs include:

- Recycling
- Household hazardous waste and electronic waste recycling and safe disposal
- Purchasing assistance
- Landscaping stewardship, community gardening, and composting.

To facilitate these programs, the building manager will need to reach out to residents by hosting periodic meetings and handing out or posting flyers. If there is a residents' association, the manager can also work with this group.

RESIDENT EDUCATION

There are five main areas to discuss with each resident about steps they can take to improve the environment, reduce the costs of utilities, and, in many cases, improve their living conditions.

1. ASK FOR ASSISTANCE. One of the most important messages is to encourage residents to ask for assistance from the maintenance staff. They should seek help if something in their unit is not working properly—for example, a leaking faucet, or refrigerator or window not closing properly. Encourage them to ask for assistance if they are having any pest or mold issues, or if they need help removing an air conditioning unit from a window when the weather gets cold. Getting the residents to ask for assistance will allow for more preventative maintenance of units, a better living environment for the resident, and energy and water savings.

2. REDUCE ENERGY USE. Educate residents on three easy ways they can reduce their energy use.

- **THERMOSTATS.** Show residents how to use the thermostat in their unit to turn the heat down and air conditioning up. Advise residents to keep the thermostat at 78°F or above in the summer and at 68°F or below in the winter and to keep windows and doors closed when the heat or air conditioning is on, as leaving them open wastes energy. In units where residents are responsible for paying for their own utilities, keeping windows and doors closed saves them money; in units where residents do not pay for utilities, urge them to keep windows and doors closed because it helps save energy and is good for the environment.
- **TURN THINGS OFF.** Ask residents to turn off lights and appliances when they are not in use. If residents are responsible for utilities, show how this will save them money.
- **SEASONAL TURNOVER.** Prior to major seasonal changes, hold resident education meetings on how to change over units between seasons. Suggest to residents that they open their windows in the spring and autumn to reduce heating and cooling needs. Ask them to take air conditioning units out from the windows when it gets cold and offer assistance from building staff to remove the units. Provide information about the importance of proper, safe use of space heaters, and the dangers of improper usage.

3. REDUCE WATER USE. Educate residents about ways to reduce their water usage.

- **TURN FIXTURES OFF.** Ask residents to turn off running water when it is not being used. If residents are responsible for utilities, show how this will save them money.
- **MAINTENANCE.** Urge residents to notify maintenance staff about leaking or running faucets, toilets, or other water fixtures that need to be repaired or replaced.
- **LAUNDRY.** Show residents the load size settings on the washing machines and ask them to consolidate loads of laundry as much as possible, which will save time, energy, and money.
- **REPLACEMENTS.** Advise residents that if they are going to purchase their own replacement showerheads or other water fixtures, to get a low-flow water fixture (see Water Fixtures and Conservation chapter for information).

4. REDUCE SOLID WASTE. Educate residents on how to increase the amount of goods they recycle and to properly dispose of products that contain hazardous materials.

- **RECYCLING.** Urge residents to recycle as much material as possible, as this diverts material from landfills and can be used to create other goods. Explain what items can be recycled, typically glass, aluminum, and plastic. (See section below for information on how to create a recycling program and a full list of items that are recyclable.) Show residents examples of different plastics and what their resin code symbols look like to educate them on which items they can recycle, and explain the need to rinse food containers before recycling. Post flyers near recycling bins identifying which items can be recycled, including which types of plastics.
- **HOUSEHOLD HAZARDOUS WASTES AND ELECTRONIC WASTE.** Explain what hazardous materials are and how to properly dispose of them. Hazardous materials include batteries, paint, compact fluorescent lights, mercury thermometers, and electronics. Urge residents not to put these items in the regular trash. (See section below and Recycling chapter for information on how to create a household hazardous and electronic waste program and a list of items that are considered hazardous.)

5. PURCHASE ENVIRONMENTALLY PREFERABLE PRODUCTS. Educate residents about the benefits of buying environmentally preferable products and how to identify them.



- **SMALL APPLIANCES AND ELECTRONICS.** Advise residents to buy ENERGY STAR and EPEAT labeled small appliances and electronics. These labels can be found on thousands of small appliances and electronics, including televisions and computers. The ENERGY STAR label signifies that the product is a leader in energy efficiency in its product category and the EPEAT label signifies that they have met requirements for energy efficiency, reduced hazardous materials, and have “take-back” programs.

- **LIGHT BULBS.** Advise residents to contact PHA staff to replace spent or broken light bulbs. Request that if they buy light bulbs on their own to select compact fluorescent lamps (CFLs). These lamps may have higher up-front costs, but use less energy and will last longer. More information from the EPA on the benefits of CFLs can be found here: <http://www.epa.gov/cfl/>. Beginning January 1, 2012 the sale of incandescent bulbs will begin to be phased out in the United States.



- **PAPER PRODUCTS.** Advise residents to purchase paper products with the highest recycled content they can find. Numerous labels on paper products tell the recycled content of a product. These labels include EcoLogo, Forest Stewardship Council (FSC), Green Seal, and Sustainable Forestry Initiative® (SFI).

- **PERSONAL CARE, CLEANING, AND LAUNDRY CARE PRODUCTS.** Advise residents to buy products that have one of three ecolabels: Design for the Environment (DfE), EcoLogo, or Green Seal. Products that have these labels have been formulated to be safer for human and environmental health and can be found on hundreds of products.
- **GENERAL TERMS AND STATEMENTS TO LOOK FOR.** Many products are marketed as environmentally friendly. If residents cannot find products with labels that indicate any of the programs described above, they can look for specific terms and statements that include “made with recycled content,” “reduced toxicity and/or hazardous material,” and “manufactured with renewable energy.”



SPECIAL PROGRAMS TO REDUCE ENVIRONMENTAL IMPACTS

The PHA can implement programs and initiatives to encourage residents to act on the information provided to them during the resident education meetings. These programs include recycling, household hazardous waste and electronic waste recycling and safe disposal, purchasing assistance, and landscaping programs. To facilitate the programs, the building manager will need to reach out to residents directly by hosting periodic resident meetings and handing out or posting flyers. If there is a residents’ association, the manager can also work with this group.

Recycling Programs

Recycling is one of the easiest and most effective actions residents can take to decrease their environmental impacts. This program is described here and in the Recycling and Special Waste Programs chapter of this manual. Creating a successful recycling program is simple and includes six key steps:

1. Check with local waste haulers and recyclers to determine what materials can be picked up for recycling, and if aluminum, paper, and other materials can be collected together (co-mingled) or need to be sorted.
2. Create clearly marked recycling stations that are accessible to residents.
3. Place flyers or signs near recycling stations that state which items can be recycled and, if sorting is needed, which items go in each bin.

4. Hand out flyers to inform residents of the program, which items can be recycled, and how to sort items, if required. Invite them to an informational meeting and provide an incentive to residents to attend (such as a micro-fiber towel, reusable bag, or stainless steel water bottle).
5. Track recycling results and effectiveness of the program, as well as any problems regarding separation or collection of potential recyclable content.
6. Offer incentives for volunteers to sign up as captains to assist the elderly with recycling, aid other residents who have questions, and help monitor the program.

Items that can be readily recycled in most jurisdictions include:

- Clear, green, and brown glass bottles and jars
- Aluminum cans
- White office paper (e.g., copier, bond, computer)
- Mixed office paper (e.g., ledger paper, folders, pamphlets, brochures, envelopes)
- Mail (e.g. advertisements/direct mailings, catalogues)
- Newspaper
- Cardboard
- Telephone books, magazines, and other books
- Plastics (typically only those with PETE and HDPE symbols).

Recycling plastic can be tricky and confusing, as not all plastic can be recycled. It is important to sort plastics because the waste stream can be ruined if plastics that are not recyclable are mixed in with those that are. Plastic is identified by the resin code symbol found on the bottom of each item. These symbols show a triangle with a number of 1 through 7 inside, and are the best way to determine if an item can be recycled and which bin to place it in. Find out from your local waste and recycling hauler which plastics items they accept and then educate residents to look for the resin code symbols. Place pictures of the symbols above the appropriate bins. The resin code symbols are as follows:

Resin Code Symbol	 PETE	 HDPE	 V	 LDPE	 PP	 PS	 OTHER
Types of products made from this material	Soda and water bottles, medicine containers	Milk and water bottles, laundry detergent bottles, toys	Pipe, meat wrap, cooking oil bottles	Wrapping films, grocery bags	Syrup bottles, yogurt tubs, diapers	Coffee cups, clamshell food packaging	PLA, mixed source

It is important to enlist residents to sort recyclables. Make clear which items can be recycled and where they should be placed. Recyclables that contain foods such as soda or soup should be rinsed out prior to being placed in collection bins to minimize the potential for attracting pests (e.g., ants and cockroaches). It is important that facility management and staff support the recycling efforts and address residents who frequently contaminate the recycling bins with non-recyclable items.

Additional resources:

- Marian County (Oregon) Recycling Posters: <http://www.co.marion.or.us/PW/ES/wastereduction/education/resourcelibrary/>
- CalRecycle: <http://www.calrecycle.ca.gov/Gallery/>

Household Hazardous Waste and Electronic Waste Program

The amount of household hazardous waste (HHW) and unwanted electronic equipment (e-waste) items is growing in the United States. Throwing these items into the trash, pouring them down the drain, or getting rid of them in other improper ways pollutes the environment and poses a threat to human and pet health, as well as PHA staff and public works employees who might accidentally handle improperly disposed items. This program is described here and in the Recycling and Special Waste Programs chapter. The following steps can be taken to implement an effective HHW and e-waste program:

1. Check with local waste haulers and the municipality to determine if there is hazardous waste pick-up or where hazardous items can be taken.
2. Create a monthly or quarterly hazardous and e-waste collection day for the PHA by either having a local waste hauler come and collect items or by bringing items from the PHA to a local hazardous and e-waste collection area.
3. Inform residents which items are hazardous and how to properly dispose of them (i.e., do not pour down drain or throw away with regular trash) by handing out flyers. Invite residents to an informational meeting and provide an incentive to encourage residents to attend.
4. Notify residents when household hazardous and e-waste collections days are scheduled, so that they can hold onto items until that time.
5. Offer incentives for volunteers to sign up as captains to assist the elderly with hazardous waste, aid other residents who have questions, and help monitor that hazardous waste is disposed of correctly.

Household Hazardous Waste items include:

- Acids
- Aerosols
- Antifreeze
- Asbestos tile
- Batteries
- Cleaning chemicals
- Drain openers
- Fluorescent light bulbs
- Furniture stripper
- Stains
- Varnish
- Fertilizer
- Lighter fluid
- Mercury thermometers and mercury-containing devices
- Moth balls
- Motor oil
- Paint
- Pesticides and poisons
- Roofing tar
- Solvents/thinners
- Transmission fluids
- Windshield wiper and brake fluids
- Wood preservatives

E-waste items include:

- Audio/visual equipment
- Audio cassettes
- Camcorders
- CD Rom drives and CDs/DVDs
- Cell phones
- Computers and monitors
- Connectors, cords, and wires
- Copy machines
- Fax machines
- Floppy drives
- Hard drives
- Memory chips
- Network/video/sound cards
- Pagers
- Power supplies
- Printers
- Scrap computer plastic

- Scrap computer metal
- Tape drives
- TVs
- VCRs
- VCR tapes
- Video games and software

Purchasing Assistance Program

Purchasing environmentally preferable products is another way that residents can decrease their environmental impact. The PHA should consider creating a purchasing assistance program to buy items in bulk and sell them to residents. A purchasing assistance program would allow residents to purchase items at lower cost than if they were to buy individual items at a store, and it would make it easier for the residents to purchase environmentally preferable products, as these products are not always readily available. (See the chapter on Purchasing for more information.)

Compact fluorescent lamps (CFLs) are a great example of products to buy under this kind of program. The initial higher cost of CFLs is one of the main reasons consumers do not buy them. Purchasing CFLs in bulk, at a lower per unit cost, and passing these savings on to residents, would make them more attractive to residents. Encouraging residents to use CFLs would also bring cost savings to the housing authority through reduced energy costs. When residents buy CFLs from the PHA, staff can use the opportunity to remind residents about proper disposal and what to do if there is breakage. (See the Lighting chapter for more information on CFLs and their safe disposal. Information from the EPA can also be found at <http://www.epa.gov/cflcleanup>.)

The following steps can be taken to implement a purchasing assistance program:

1. Identify products to include in the program, such as CFLs, cleaning products, personal care products, and laundry products. The products offered should be environmentally preferable options. However, make sure the products are effective and meet resident needs. Start the program with one or two items residents are most likely to purchase. It may make sense to host a meeting or information session to provide information on the products that could be provided under this new program and what the costs of the environmentally preferable products would be.
2. The program can be offered on a continuous basis, allowing residents to purchase products any time from the PHA, or monthly in which residents would place orders for products.

3. Notify residents of the purchasing program, what is available, and its benefits (i.e., cost savings, health and environmental benefits) through flyers, posting notices, and/or meetings.
4. Educate residents on the proper use and disposal of the products. If possible, create a take-back system for products purchased through the program. For example, collect spent/broken CFLs to ensure proper disposal.
5. Track the number of products of each type that are purchased through the program. Request feedback from residents on the quality and cost of the products offered and suggestions for additional products to be available.

Landscaping Stewardship, Community Gardening, and Composting Programs

Education and stewardship are the keys to success and acceptance of native plantings (see Landscaping chapter). Education, both formal and informal, helps people understand the changes actively taking place around them and how they can help care for, as well as become ingrained in, the process of bettering the environment.

EDUCATION: Native landscapes require maintenance and project management, especially in the initial installation. Formal education by attending native-plant seminars and workshops should be a requirement for maintenance workers and allows them to participate in the greening of America.

STEWARDSHIP: Through stewardship, an individual or group cares about and safeguards the environment to create a healthier place. Stewardship actively engages citizens by providing opportunities to allow them to participate in bettering the environment. One option would be to offer reduced rent to a tenant from every building who would be assigned to maintain the new plantings to supplement the watering and weeding as necessary.

Stewardship also involves the community. Involve a local church group, college sorority or fraternity, or other organization in projects and let them adopt a garden plot or an area of the landscape, such as a rain garden, to plant and maintain. Post information about the project to strengthen community pride. Allow volunteers to get the landscape certified by environmental groups such as the National Wildlife Federation.

INDOOR PLANTS act as air filters and are effective in removing carbon dioxide and harmful pollutants from the home. In the past 25 years, asthma rates have risen to epidemic levels. While research is determining the many factors involved, such as herbicides used in landscapes, second-hand smoke, building

materials, and molds, indoor plants help provide better air quality in the home. Easy-growing plants, such as the peace lily, spider plant, and pathos, are inexpensive and useful in filtering out unsafe gases from cleaning products, drywall, and paints.

Community Gardens

Community gardens are an allotment of space or a plot of land divided into gardens to be shared by the inhabitants of the development. Community gardens greatly improve the quality of life for residents by supplying a sense of community through social interaction with other residents, exercise for gardening participants, and healthy produce. Gardens also provide a refuge from the hectic pace and noisy deluge of urban life.

Steps to begin a community garden include the following:

- **ORGANIZE A COMMITTEE OF VOLUNTEERS** to plan and manage the garden. The committee must come to a consensus regarding decisions about the use of chemicals, use of tools, weeding tasks, plot rotation, and what is to be planted for an exchange of produce, if desired. The committee members can also be drawn from outside the building, which invests the community in the garden.
- **INVITE HORTICULTURAL SPEAKERS** from local colleges, garden clubs, master gardeners (for a list, visit http://www.ahs.org/master_gardeners/), or native plant societies (see Landscaping chapter) to visit the community garden to provide information and discuss concerns with residents.
- **LOCATE THE GARDEN NEAR A WATER SOURCE OR RAIN BARREL;** most vegetables need a great deal of water to produce during the growing season. Have an initial soil test performed, including a test for unsafe levels of lead or other heavy metals, before selecting a site for any vegetable garden. The ideal pH for growing vegetables is between 6.5 and 6.8. Vegetable plants deplete the soil of nutrients to produce more vegetables. Soil tests are helpful to ensure proper nutrients are available. A soil test should be repeated every two years in a community garden.

Community Composting

Backyard composting is a technique that residents can use to turn their food scraps and yard trimmings into valuable soil amendment and organic matter to add to the community garden. Composting is ideal for food scraps from fruits and vegetables, coffee grounds, tea bags, leaves, grass clippings, and even shredded newspaper. Composting options, such as vermicomposting in which worms eat the food scraps, take up very little space, can be done year-round, and could be an ideal program for multi-family housing complexes.

Follow these steps to implement backyard composting:

1. Check on local and state regulations for composting in urban areas, as some communities require rodent-proof bins.
2. Identify a well-drained area in the building complex, preferably near the community garden, away from the residential areas in case of fruit flies or ants, and easy to clean and maintain. Compost bins or piles are usually a cubic yard (3' x 3' x 3') and additional room for turning works best. Larger piles require careful maintenance and can ignite if they become too dry or too tall.
3. A number of sources can provide detailed information, including your local solid waste agency, gardening clubs, or the Internet. Specially designed bins are not required but are convenient and provide containment, especially in an urban environment. Each program provider can describe how best to monitor and maintain the compost pile, what materials can and cannot be composted, and how to resolve problems such as odor management and control of insects and rodents.
4. Provide residents and maintenance staff instructions on what materials can and cannot be recycled, composting locations, and how to properly maintain the composting area. For example: Do not compost meat scraps, fatty foods, dead animals, pet manure, diseased plant material, or noxious weeds.

Additional resources:

- EPA composting guide: <http://www.epa.gov/osw/conservation/rrr/greenscapes/pubs/compost-guide.pdf>
- USDA Alternative Farming Systems Information Center composting: http://afsic.nal.usda.gov/nal_display/index.php?info_center=2&tax_level=2&tax_subject=293&topic_id=1403