



The U.S. EPA estimates that pollutant levels can be 2-5 times higher indoors than outdoors. The problem is compounded by lack of natural ventilation and the fact that Americans spend 85-95% of their time indoors (according to the Surgeon General). Several indoor spaces face challenges when dealing with volatile organic compounds (VOCs) which come from paints, cleaning products, pesticides, building materials, and more; the presence of asbestos (insulation), radon (seepage), and lead (paint, soil) can have detrimental effects on human health, especially for groups at risk.

Organize a Healthy Green Home workshop to help Chicagoans improve indoor air quality, minimize the presence of indoor pollutants, and improve their health. Educate participants about global warming and the effects of air pollution, and let them know how they can make a difference. As part of the workshop, make green cleaning solutions, distribute low-cost radon gas detection kits, and provide links to the Chicago Department of Public Health services. Connect with participants again in a few weeks and ask them to report what changes they have made as a result of your workshop.

**Groups at Risk (Cook County)
American Lung Association's
State of the Air 2011**
www.stateoftheair.org/2011

Total Population: 5,287,037

Impacted Population

Pediatric Asthma: 119,167

Adult Asthma: 360,936

Chronic Bronchitis: 169,759

Emphysema: 80,867

Cardiovascular Disease: 1,400,158

Diabetes: 314,356

Children under 18: 1,283,145

Adults 65 & Over: 621,214

Poverty Estimate: 828,626

Timeline:

- **Project Proposal due online:** 1 week after the Community Organizing class
- **Part I: Preparation:** ~1 month
- **Part II: Workshop:** 3 hrs (1 hr set up; 1½ hr workshop; ½ hr clean up)
- **Part III: Follow Up and Tracking Environmental Benefits (1-2 weeks after the workshop):** 1-2 hrs
- **Part IV: Final Report due online:** 2 weeks after your project is complete

Materials:

- Spray bottles for green cleaning solutions
- Vinegar
- Dish detergent
- Green cleaning solution labels
- Radon gas detection kits
- **Guide to Recycling Household Hazardous Waste**
- **U.S. EPA A Citizen's Guide to Radon**
- **U.S. EPA The Lead-Safe Certified Guide to Renovate Right**
- **U.S. EPA Citizen's Guide to Pest Control and Pesticide Safety**
- **ALA Indoor Air Pollution: An Introduction for Health Professionals**
- Copies of **Clean Air Counts Healthy Cleaning for Your Home**

Part I: Preparation

~1 month

1. **Become an expert.** C3 classes should provide you with a basic background on indoor environmental health issues, but you may want to learn more before you present at your workshop. Read through this guide, including the attached **Guide to Recycling Household Hazardous Waste, Clean Air Counts Healthy Cleaning for Your Home** information sheet, and the various **U.S. EPA Guides**. Also, see below under **Additional Resources** for ideas about where to find more information.
2. **Define your project's vision and goals.** What do you hope to achieve by doing this project? How many community members do you hope will participate? What environmental benefits do you plan to achieve?
3. **Choose a community to serve.** Decide to whom you will present your workshop. Refer to your **Asset Map** for ideas.
4. **Gather a project team.** Refer to the **Building Your Project Team** worksheet in your **Project Development Workbook**.



Ways to Involve Your Project Team

- Ask your project team to help you brainstorm ideas and create an outline for your workshop. Team members can also help you create, edit, and/or practice your presentation.
 - Make a list of locations where you want to place advertisements for your workshop. Ask your team members to sign up to distribute advertising materials to some of these locations.
 - Workshops need people power to run smoothly. Sign up your team members as workshop volunteers.
 - Two people could help with a registration table making nametags, distributing handouts, and taking registration information. Be sure to make a script for your volunteers to follow so they know exactly what information to collect from your workshop attendees and why that information is collected.
 - A team member could introduce you at the workshop, help set up any AV equipment, pass out materials during your presentation, etc.
 - After the workshop, your project team could help with follow up calls, contacting participants (to make sure you have all the information you want to collect).
 - Let them know the results. Your team will definitely be interested in the success and progress of your project. Keep them informed and involved along the way.
5. **Create a basic outline for your workshop.** With the help of your project team, decide what you will do at your workshop. Here are some examples of previous C3 trainee workshops on air quality and environmental health. Feel free to use their ideas, but be creative and add your own components!
- Indoor air quality: One trainee created a PowerPoint presentation about the importance of clean indoor air. She gave her presentation to members of her local yoga club. After the presentation, she and her participants made green cleaning solutions. (See the attached handouts **Guide for Recycling Household Hazardous Waste** and **Clean Air Counts Healthy Cleaning for Your Home** for more information on these topics.)
 - Indoor environmental health: Host a booth at a local health fair, showing attendees the connection between the environment and our health. Demonstrate how to use a variety of tools to improve the indoor environment and provide a list of resources to services provided by the Chicago Department of Public Health and by other health service providers in the area. (Read through the **U.S. EPA Guides to Lead, Radon, and Pesticides** and the **American Lung Association's Indoor Air Pollution** paper).
- Action components:** Every workshop should inspire participants to action. Here are some ways to get people involved in improving air quality and environmental health:
- Ask participants to think about the value of using natural ingredients to clean their homes. Lead participants in making their own green cleaners.
 - Highlight the free services offered by the Chicago Department of Public Health. Create a sign up sheet for residents to receive free home radon testing and free blood screening for lead.
 - Ask individuals to make a single **pledge** to improve air quality and their health by changing home air conditioner filters, using low VOC products, keeping their homes ventilated, checking the home for potential pollutants like lead, asbestos and radon, and so on. Collect pledges on a sign-in sheet with your participants' names and contact info listed, make pledge cards for participants to take home, or take photos of individuals with their written pledges and follow up by sending them a digital copy.
 - Lead a discussion about additional actions that individuals can take.
6. **Find a location and set up a date and time for your event.** The venue you choose will depend on the community to whom you present your workshop. Make sure to contact the appropriate person at the venue to check availability and reserve a date and time. Confirm logistics (e.g., who will open the building/gate). Possible locations include:



- Neighborhood community center (e.g. gym, art center, library, school, church)
- Alderman's office
- Your office
- Condo association meeting
- Your local Chicago Park District field house (ask C3 Staff to reserve this space)
- Your local Chicago Public Library

7. **Order materials through your liaison.** Refer to your Material Checklist in your Project Proposal.
- Confirm with your C3 liaison final quantities of each material requested and the address where materials should be shipped. Note: Some materials will need to be picked up at the Chicago Center for Green Technology, 445 N. Sacramento Blvd.
 - Remember, materials can take up to 3 weeks to arrive after C3 orders them so **plan ahead!**
8. **Advertise.** Make sure to use the newsletters, listhosts, bulletin boards, etc. that serve your community and/or your venue. You might also advertise using:
- Community newspapers and newsletters
 - Aldermen's newsletters
 - Signs at your location (e.g., community center, office, etc.)
 - Signs/booth at neighborhood events

Make sure to put your contact information on all advertisements. Consider asking people to RSVP so you know in advance how many people to expect.

9. **Prepare for your workshop.** Gather supplies, create handouts and plan your presentation.

Part II: Workshop

3 hours: 1 hour set up, 1½ hour workshop, ½ hour clean up

Put all your planning and preparation to work! Make sure to:

- Get there at least 15 minutes early to set up.
- Have a sign-in sheet ready to go. Let participants know that you will contact them in ~1-2 weeks to track what changes they've made and to see if they have follow-up questions.
- Provide nametags and make sure people introduce themselves.
- Ask for questions and feedback at the end of the workshop.
- Take pictures!

Part III: Follow-Up and Tracking Environmental Benefits (1-2 weeks after the workshop):

~1-2 hours

1. **Follow-up with participants.** A few weeks after your workshop, contact your participants to track environmental benefits. We suggest that you either call or send each participant a short survey. For example, you could ask:
- Whether/how much people are using the green cleaning solutions or radon kits you gave them.
 - If participants had their homes tested for radon or their children screened for elevated lead levels.
 - Whether they switched to natural green cleaning and building materials for their home.
 - If appropriate, whether participants noticed any changes with their health or quality of the air that they are breathing.
 - What other changes participants have made in their lives as a result of your workshop.



2. **Calculate environmental and community benefits.** Based on your workshop and participants' survey responses, estimate the benefits of your project. Be sure to include:
 - How many people participated in your workshop.
 - How many green cleaners you handed out.
 - A description of how much air pollution your project prevented. (e.g., 3 households switched to green cleaning supplies; 20 households had their house tested for radon; 10 participants stopped using pesticides).
 - Any publicity you received (e.g. 1 community-paper write-up about your project).
3. **Compare your results to your project's vision and goals (see Part I, step 2 above).** Did you achieve the results that you hoped for?

Part IV: Turn in Final Report

Within 2 weeks of project completion

As soon as you've calculated the environmental benefits, please fill out your **Final Report** online. Corresponding materials such as digital photographs, outreach flyers or posters, press releases, or news clippings should be emailed to conservation@cityofchicago.org.

Additional Resources

Indoor Air Quality

- EPA's website on Indoor Air Quality: www.epa.gov/iaq. Tons of facts about indoor air pollution.
- American Lung Association's website on Indoor Air Quality: www.lungusa.org/healthy-air/home. Everything you need to know about preventing indoor air pollution.
- Clean Air Counts: www.cleanaircounts.org. A local initiative; you can become a member and track how much pollution you prevent by making small changes in your life. CAC also has tips about preventing indoor air pollution and saving energy.
- Partners for Clean Air: www.cleantheair.org.
- Air Now (Daily AQI info): www.airnow.gov.

Environmental Health

- The Chicago Department of Public Health's environmental health website (http://www.cityofchicago.org/city/en/depts/cdph/provdrs/enviro_health.html) includes information about lead poisoning prevention, food safety, radon inspections and links to local clinics.
- EPA's website on Air Quality: <http://www.epa.gov/ebtpages/air.html>. A good place to start research on air pollutants, sources of air pollution, and other relevant information.
- Respiratory Health Association: www.lungchicago.org.

Climate change:

- Pew Center on Global Climate Change: <http://www.pewclimate.org/>. An informative, reliable source for climate change information.
- *An Inconvenient Truth* website: <http://www.climatecrisis.net/>. Reduces global warming down to the facts you need to know.
- "How to Talk to a Climate Skeptic:" <http://gristmill.grist.org/skeptics>. A comprehensive series of articles from Grist, the environmental news and commentary website.

Guide to Recycling Household Hazardous Waste (HHW)

Chicago Department of Environment

List of Common HHW Products and Safety Tips

Cleaning Products

- Oven cleaners
- Drain cleaners
- Wood and metal cleaners and polishes
- Toilet cleaners
- Tub, tile, shower cleaners
- Bleach (laundry)

Lawn and Garden Products

- Herbicides
- Insecticides
- Fungicides/wood preservatives

Indoor Pesticides

- Ant sprays and baits
- Cockroach sprays and baits
- Flea repellents and shampoos
- Bug sprays
- Houseplant insecticides
- Moth repellents
- Mouse and rat poisons and baits

Automotive Products

- Motor oil
- Fuel additives
- Carburetor and fuel injection cleaners
- Air conditioning refrigerants
- Starter fluids
- Automotive batteries
- Transmission and brake fluid
- Antifreeze

Miscellaneous

- Batteries
- Mercury thermostats or thermometers
- Fluorescent light bulbs
- Driveway sealer

Workshop/Painting Supplies

- Adhesives and glues
- Furniture strippers
- Oil or enamel based paint
- Stains and finishes
- Paint thinners and turpentine
- Paint strippers and removers
- Photographic chemicals
- Fixatives and other solvents

Tip #1 Use and store products containing hazardous substances carefully to prevent any accidents at home. Never store hazardous products in food containers. Do not mix products from the different groups shown above. Keep products containing hazardous materials in their original containers and never remove the labels. Corroding containers, however, should be repackaged and clearly labeled. This will prevent accidental ingestion and also can help protect sanitation workers.

Tip #2 When leftovers remain, never mix household hazardous waste with other products. Incompatibilities may react, ignite, or explode; contaminated household hazardous waste may become unrecyclable.

Personal Protective Clothing and Other Items for Safely Handling HHW

- Safety glasses
- Gloves – rubber, leather – wear rubber gloves under leather gloves. Many of the containers are sharp and therefore the leather gloves will provide protection. The rubber gloves will prevent chemicals from contacting skin.
- Long-sleeve shirt and long pants
- Soap & water – for cleaning after collecting, or for washing off chemicals
- Fire extinguisher

Where to Recycle Household Hazardous Waste

City of Chicago Household Chemical and Computer Recycling Center

The Household Chemical and Computer Recycling Center is the city's first permanent hazardous waste recycling facility. In addition to responsibly disposing of hazardous products from landfills, the center will train ex-offenders in electronics recycling. Many of the electronics will be taken apart and recycled, while newer computers will be refurbished through the program and made available to local schools, churches, non-profit groups and low-income families.

The facility accepts the following materials for recycling or safe disposal: antifreeze, used motor oil, old gasoline, oil-based paints, paint thinners, aerosol paints, herbicides, insecticides, pesticides, lawn chemicals, solvents, drain cleaners, cleaning products, pool chemicals, hobby chemicals, mercury, fluorescent lamps and bulbs, computers and cell phones. People can also use the Paint Exchange Room to swap old paints with one another for free.

These materials are accepted during the facility's hours of operation: Tuesdays from 7 a.m. to noon; Thursdays from 2 p.m. to 7 p.m., and the first Saturday of every month from 8 a.m. to 3 p.m. Drop off household chemicals and electronics at: **Household Chemical and Computer Recycling Center**, 1150 N. North Branch St. on Goose Island

Recycle Batteries

Participate in the City's household battery recycling program at all Chicago Public Libraries and Walgreens stores. By recycling your batteries you will help keep these materials out of the waste stream and the battery components will be reclaimed for reuse. All common dry cell batteries can be recycled, including alkaline, rechargeable, and other common types. Wet cell batteries, like car batteries, cannot be recycled through this program. Funding for the City of Chicago's battery recycling program has been provided in part through a grant from the Illinois Department of Commerce and Economic Opportunity. Drop off batteries at **Chicago Public Libraries** and **Walgreens Stores**

This recycling program includes most disposal and rechargeable batteries used in the home, including:

- Alkaline Batteries, these are the typical disposable batteries, Duracell, Energizer, Ever Ready
- Lithium Batteries, these are typically found in cameras
- All Button Type Batteries, often found in watches and smaller electronic devices

Recycle Corks

Yemm & Hart Ltd. recycles cork stoppers. The company reprocesses the corks into a block that is sliced into thin sheets that will be offered for sale, made into tack boards, award plaques, coasters, and more. If the company gets enough corks, they may begin to produce recycled cork floor tiles. Plastic stoppers cannot be recycled through this program. Collect and mail your cork stoppers *prepaid* (paid by sender) to Yemm & Hart via UPS or USPS: **Wine Cork Recycling, Yemm & Hart Ltd**, 425 North Chamber Drive, Fredericktown, MO, 63645.

Visit <http://www.yemmhart.com/news+/winecorkrecycling.htm> for more information.

Recycle Cell Phones

There are more than 150 million cellular users in the United States alone. It is estimated that by 2005 there will be over 700 million retired phones in the U.S. Seventy-five percent of these out-of-use phones will be in people's drawers at home or at work. The balance is going to landfills or is recycled. The EPA estimates that this quantity of cell phones is equal to about 250,000 tons of toxic materials.

ECO-CELL is an organization that takes used cell phones, accessories and cell phone batteries and recycles them using the best demonstrated technologies for recycling e-waste. Approximately 80% of the phones collected will be refurbished and reused by first-time users abroad or by selected local organizations, such as Hospital patients for emergency 911 calls. All unusable cell phones and accessories will be recycled under strict EPA guidelines by certified recyclers.

ECO-CELL pays non-profits to collect cell phones as a fundraiser. Select organizations will receive dollars from ECO-CELL for the phones to aid in their fundraising as an added benefit. To learn more about ECO-CELL and participating local charities, visit <http://www.eco-cell.org/>. You can also drop off cell phones at the city's new **Household Chemical and Computer Recycling Center** at 1150 N. North Branch Street on Goose Island.

Recycle CD-ROMS

Plastics Recycling Inc, located in Indianapolis, grinds the CDs down and reuses the plastic for automotive parts and the spindles for adding machine rolls. The firm is capable of handling large quantities, so please share the information with colleagues, friends and family. CDs must be sent without sleeves or cases. Send CDs to: **Plastics Recycling Inc. (Allen Shaw)**, 2015 S. Pennsylvania, Indianapolis, IN 46625, 317-780-6100.

Recycle Floppy Disks & Videocassettes

Alternative Community Training (ACT) is a non-profit organization whose mission is to provide personalized support to individuals with disabilities as they become full and valued members of the community. The company employs over fifty five disabled employees who erase and then package floppy disks and videocassettes every day. By donating these items, you not only dispose of unwanted materials, but also support the training and development of these individuals. For more information see <http://www.actrecycling.org/donations/> Mail floppy disks and videocassettes to: **Alternative Community Training**, 2200 Burlington, Columbia, Missouri 65202

Recycle Tyvek® Envelopes

Turn any Tyvek® envelope inside out, so the unprinted white surface shows on the outside. Stuff the inside-out Tyvek® envelope with other used Tyvek® envelopes for recycling. For small quantities (less than 25 envelopes/month), address and mail the envelope to: **Tyvek Recycle, Attn: Shirley B. Wright**, 8401 Fort Darling Rd, Richmond, VA 23237. See http://www2.dupont.com/Tyvek_Envelopes/en_US/tech_info/tech_environ.html to find out how to recycle larger quantities.



This information is brought to you by Clean Air Counts. We are a Chicago regional initiative of the Metropolitan Mayors Caucus, the U.S. EPA, the City of Chicago, and the Illinois EPA. We seek to improve air quality in the Chicago area by helping households and businesses to reduce their emissions of smog-forming pollutants. By using the non-toxic cleaning products described in this article, you can help reduce smog! For more information on Clean Air Counts, please see www.cleanaircounts.org.

Healthy Cleaning for your Home

Many common cleaning products contain hazardous chemicals and volatile organic compounds (VOCs), which pollute the air. Using air-friendly cleaning products helps protect the health of your family by reducing or eliminating their exposure to the chemicals released by most cleaning products. Air-friendly cleaning products tend to be multi-purpose, so a single air-friendly cleaning product can replace several specialized traditional products.

I. The best solution is to make your own cleaning products from natural materials. Not only is this a healthier, safer solution but it can save you money.

Basic All-Purpose Cleaner Formula

½ teaspoon baking soda (for example; Arm & Hammer)
or 2 teaspoons borax (for example; 20 Mule Team Borax)
½ teaspoon liquid soap or detergent
2 cups hot water
spray bottle

Combine everything in a spray bottle. Shake to blend. You can make a soft scrub paste by substituting water for more soap.

Window Cleaner

½ teaspoon liquid soap or detergent
¼ cup vinegar
2 cups of water

Combine everything in a spray bottle. Shake to Blend.

Toilet Bowl Cleaners

Spray straight white distilled vinegar on the toilet bowl rim.

OR

Pour 1 cup of borax into the toilet bowl at night before you go to sleep. The next morning clean out the toilet bowl with a brush.

Furniture Polish

Any vegetable oil, lemon oil, etc. (2 parts oil, 1 part lemon juice works great!)

Room Freshener

Baking Soda - Set around in small bowls to absorb odors; also cleans sinks, great for laundry, etc.

Reducing the Smell of Vinegar By Chicago Conservation Corps

Non-toxic cleaning products are healthy and environmentally friendly, but tend to smell strongly of vinegar. Here are some ideas for reducing the smell. Trial and error will help you determine which options are right for you.

- Use apple cider vinegar instead of white vinegar (the two types work equally well, but apple cider vinegar has a milder scent).
- Add lemon juice or tea tree oil, which smells like mint.
- Recipes that include baking soda tend to smell less

Get Rid of Pests/Weeds

Flea Killer (Borax)

Sprinkle borax on dog beds, carpets, and other areas where you suspect that fleas are hatching. (Note that very high doses would need to be ingested to harm a pet or human).

Mold Inhibitor (Borax and water)

Make a thick borax and water paste. Smear it on the moldy area. Let set until dry (Overnight or longer). Sweep up the powder, and rinse off the rest.

Mice Deterrent (Borax)

Sprinkle borax on the floor along the walls (mice like to run along the side of walls).

Poison Ivy Killer (Vinegar)

Spray straight white distilled vinegar on poison ivy.

II. If you don't want to make your own cleaning products, you can try these brands that have little or no VOCs:

- Soft Scrub (not with bleach)
- Seventh Generation
- Murphy's Oil Soap
- Earth Friendly Products (makers of Orange Plus, Window Kleener, etc.)
- Plunger or drain snake
- Method (at Target stores)
- Bon Ami
- Bio Kleen

III. When shopping for cleaners, read the labels and try to avoid:

VOC-Based Solvents - Benzene, Toluene, Xylene, Trichloroethane, Petroleum Distillates & Surfactants, such as Nonylphenol Ethoxylate, Phenolic Compounds, Glycol Ethers (Ethylene Glycol & Butoxy Ethanol), and Isopropyl Alcohol, though not as toxic.

CHLORINE BLEACH OR SODIUM HYPOCHLORITE- Preferable substitute: Sodium Percarbonate

PHOSPHATES- No more than 0.5%

EDTA & NTA- Acids used to soften water & increase cleaning power