

Greening Your Office and Saving Money



Fact Sheet



Starting an Office Waste Reduction and Recycling Program

Whether you realize it or not, your company produces waste. And waste is a

waste of time, money, resources and productivity. What you send out the door as waste is less money in your company's pockets. Since most businesses have an office and some companies only exist as offices, this fact sheet was developed to help you reduce and recycle waste at the office level.

Starting a "Green" Office Program

Do you want to introduce a "Green" Office Program into your office? Here are some steps that you can take:

- Discuss your ideas with top-level management in order to obtain support for your efforts and to include their ideas in the implementation process.
- Identify a "Green Office Champion." This should be someone who has an interest in reducing waste and recycling in the office. The champion may want to get a team of individuals together to help support a program and be available to respond to employee questions. Some responsibilities of the champion and team could be to:
 - ~ Set up a communication system to let staff know about the program and how they

can participate. Company-wide Email is a great, no-waste way to inform and get feedback from staff.

- ~ Conduct a waste audit. This will tell you what and how much waste your company is generating.



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- + Identify materials being disposed in high volume. They could be recycled or reduced – saving your company disposal costs.
- ~ Identify waste reduction opportunities and goals based on the waste audit. Track disposal expenses and waste volumes. You should be able to reduce the size of the garbage dumpster being used and frequency of the dumpster pick up by implementing waste reduction strategies.
- ~ Use a materials exchange to reduce purchasing costs and generate revenues. An overstock in one office or company could be a usable product in another.

Keys to a Successful Recycling Program

Using the information from your waste audit, prioritize what materials make the most sense to recycle. Consider quantity, storage, effort required to collect, and cost savings or revenue from sale. Several resources that can help you find recyclers and markets for your material are the "Michigan Recycled Materials Market Directory" at www.michigan.gov/deqrmmd and your local recycling coordinator. A clickable map and list of counties are available at www.michigan.gov/deqreswastecontacts.

Common Office Recyclables

- Paper
 - ~ White, mixed, newspaper, magazines
 - ~ Cardboard (boxboard and corrugated)
 - ~ Telephone directories
- Electronic media and equipment*
 - ~ CDs
 - ~ Floppy disks
 - ~ Computers
 - ~ Fax machines
 - ~ Copiers
 - ~ Phones
 - ~ Cell phones



***A Word About Electronic Equipment:**

Most offices are not familiar with nor do they normally generate hazardous waste in quantities that would require them to deal with hazardous waste regulations. With the increased use of electronics and their inherent hazardous components – lead in computer monitors and circuit boards, mercury in flat screens, for example – companies which never thought about hazardous waste need to rethink what they are throwing away. "What Michigan Generators Need to Know About Electronic Waste" at www.deq.state.mi.us/documents/deq-ess-recycle-miewasteregs.pdf provides an



overview of regulations that may apply to how electronic waste needs to be managed at your company.

Focus your program on:

- **Convenience** – Make it easy for anyone to participate.
- **Simplicity** – Make it easy to understand and operate for anyone.
- **Reliability** – Services and feedback must be predictable.
- **Cost-effectiveness** – The more efficient the program, the more cost effective it is.
- **Commitment** – Management and staff buy-in is critical for sustaining the program. Make sure there is a method for getting and using feedback from everyone participating in the program.
- **Contact Person** – Identify who the "bottom line" is for information about the program. This could be one person or members of an office team or group.
- **Education/Publicity** – Create a kick-off campaign and feedback system to remind participants of the "hows" and "whys" of the program. This could include posters, a bulletin board, Emails, or an internal web site.
- **Monitoring** – Check recycling containers for contamination and trash cans for recyclables.

- **Communication** – Create clear communication between the program contact, custodial staff, management, and staff to ensure smooth operation of the program.

Recycling 101

Recycling is most cost-effective when a large quantity of consistent material is collected.

When you deal with one facility, you are likely to get a large volume of the

same material with very

little contamination

of other materials. In

a community recycling program, there may be

hundreds or thousands of households, each with

different levels of

understanding of how to

sort and what is being

collected for recycling. In a

month's time, one

household could be

generating 100 pounds of

trash including newspaper, plastic, glass, and metals.

Mixing recyclables together or contaminating them

with food or non-recyclable

materials reduces their value

to a recycler. In contrast, in

one month a business could

be generating several tons

of valuable fiber products

such as old corrugated

containers or white ledger

paper. This scrap material

could be very valuable to a

recycler.

Recycling Means Jobs

Recycling creates more jobs than waste disposal. The recycling and reuse industry consists of approximately 56,000 establishments that employ over 1.1 million people, generate an annual payroll of nearly \$37 billion, and gross over \$236 billion in annual revenues. This represents a significant force in the U.S. economy and makes a vital contribution to job creation and economic development. Recycling also provides a large number of jobs that generally pay above the average national wage.

SOURCE: U.S. EPA Jobs Through Recycling; Result of the National REI Study; Updated in 2005; www.epa.gov/jtr/econ/rei-rw/result.htm#c2.



A successful recycling program is one that can be sustained. Many programs are started with great enthusiasm but slowly disappear over time. Make sure your program starts out with strong support from all involved, you continue to educate new employees about the program, and you continue to monitor and communicate changes and milestones with staff and management.

Finding a Recycler

There are several ways to find a recycler. A first step is to talk to your waste hauler and see if he/she offers recycling services. Another is to look in your local phone directory for recycling companies. Contacting your local recycling coordinator (www.michigan.gov/deqreswastecontacts) or looking in the "Michigan Recycled Materials Market Directory" (www.michigan.gov/deqrmmd) are also options. Consider calling several companies to compare prices and services. Things to keep in mind when talking to a recycler are:

- What materials do they collect?
- How does the company want the material collected and prepared?
- Will the recycler supply collection containers or a baler? Is there a charge for this equipment?
- Would the value improve if changes in collection are made?
- What is the minimum volume needed for a pick up?
- Is there a charge for pick up or will they pay for the material?



- Is the pick up on-call or on a fixed schedule?
- What other services can the company provide, such as document destruction, environmental savings, report, etc.?

Determine an effective collection system by considering:

- Who will need to handle the material (i.e., employees, maintenance staff, recycler, etc.)?
- What equipment for collection and compacting will be necessary?
- What space will be needed?
- What is the physical layout needed for collection, storage, processing, and pick up?

Starting the Program

- Develop and distribute promotional and educational materials to maximize staff participation and ensure compliance with the program requirements.
 - ~ Provide information on what to recycle and how to recycle.
 - ~ Coordinate training for staff.
- Implement a pilot program to work out any operational challenges.
- Monitor efficiency and effectiveness of the program by gaining feedback from:
 - ~ Custodial staff – input on material quality and handling practices.
 - ~ Employees – input on convenience and participation.
 - ~ Waste hauler and recycler – input on type and amount of material recycled or landfilled and disposal costs compared to the recycling costs.
- Identify ways to reduce insufficient container capacity or placement problems.

- Provide an annual report that includes environmental statistics on the program and where improvements can be made.
- Identify new ways to become more environmentally friendly, sustainable, and energy efficient. This could be done by:



- ~ Expanding the program to collect more materials.
- ~ Buying **environmentally preferred products (EPP)**, recycled, or recyclable products (www.epa.gov/oppt/epp/database.htm).
- ~ Using surplus or buying refurbished furniture.
- ~ Developing contracts for electronic equipment that includes asset recovery.
- Develop an awards program to recognize staff involvement and program improvement.

Tips for Success

- Label containers – Label all recycling containers with signs of what can and cannot be recycled in the containers.
- Monitor trash cans – Determine how much office paper is being thrown away and how it may be recycled instead.



Container Placement Tips

Remember to make recycling as convenient as possible. Any type of container can be used:

- At desks.
- In areas where paper is generated in large quantities such as mailrooms, copiers, fax machines, and printers.
- In high traffic areas where staff can easily see and use containers.

Work with your recycler and custodial staff to work out the best system for collecting paper and other recyclables.



- Education – Provide participants with "A reason, a direction, a reminder, and a pat on the back."
- ~ Kick-off memo – Describe benefits of program, explain how it will work, and detail what people must do to participate.
- ~ Educational sessions – Explain why employees should participate and how they can participate, distribute literature, show a video or slide presentation, and discuss the do's and don'ts of the program.
- ~ Recycling updates – Provide updates by Email on "Recycler of the Month," waste reduction tips, low participation or contamination problems, and successes of the program.

- ~ By using resources such as the [Paper Calculator.org](http://www.environmentaldefense.org/papercalculator/) (<http://www.environmentaldefense.org/papercalculator/>) you can provide information about how much you are actually saving in resources and energy by buying recycled paper at your office.
- ~ Green Office board – Provides helpful hints, memos, progress reports, charts or graphs, and energy-saving calculations for the building's program.
- ~ Provide flyers, bulletins, labels, and/or slide shows to remind participants of the program.

Financial Benefits of a Waste Reduction and Recycling Program

- Reduced disposal costs.
 - Savings in material and supply costs.
 - Revenue from sale of collected recyclables.
 - Revenue from marketing reusable materials.
 - Reduced cost when purchasing refurbished office equipment and furniture.
 - Positive company and community image.
- One voluntary pollution prevention program available to Michigan companies is the [Michigan Business Pollution Prevention Partnership \(MBP3\)](http://www.michigan.gov/deq/0,1607,7-135-3585_4129_4188---,00.html) (www.michigan.gov/deq/0,1607,7-135-3585_4129_4188---,00.html). The MBP3 provides members a forum to apply creative, cost-effective techniques to reduce waste and prevent the release of hazardous substances. For their efforts, MBP3 members receive recognition and assistance in achieving their pollution prevention goals. Some counties have similar recognition programs. To find out what is available in your area, contact the recycling

coordinator for your county. Go to www.michigan.gov/deqreswastecontacts to locate your county coordinator.

Environmental Benefits of a Waste Reduction and Recycling Program

- Provides an opportunity for employees to do their part for the environment.
- Reduces a company's impact on the environment.
- Conserves natural resources.
- Reduces greenhouse gas emissions.
- Reduces air emissions and water discharges.



Waste Reduction Tips

- Eliminate unnecessary packaging. Talk with your suppliers to reduce or take back packaging, especially pallets, drums, or other large packages. Include packaging in your discussions with potential suppliers. Reuse what you can – recycle what you can't reuse.
- Buy products in bulk quantities when feasible. Don't purchase more than you need. You may save money initially but end up using valuable storage space or pay for disposal if you can't use what you purchased. This is especially important if materials are potentially hazardous.
- Reduce hazardous materials in ink, solvents, paint, glue, and other materials. Volatile organic compounds (VOCs) can off-gas into the air and degrade indoor air quality. Consider water-based products when making purchasing choices.

- Assess your shipping needs. Ship merchandise in returnable or reusable containers when feasible.
- Assess your business needs. Invest in higher quality, longer lasting supplies and equipment that is easily repaired.
- Consider switching to reusable dishware rather than using disposable coffee mugs, etc. Some green office programs supply staff with mugs containing company logos to promote their business and eliminate disposable cups.
- Make it company policy to reuse file folders and interoffice envelopes. It will save money in supply costs and get staff thinking about other ways to reduce waste.
- Reduce the amount of unsolicited mail coming to your office by removing your company from large mailing lists. The [Direct Marketing Association \(www.dmaconsumers.org/\)](http://www.dmaconsumers.org/) offers information regarding removal service from marketing lists.
- Print and copy efficiently. By reducing paper use, you save on paper purchase, file space, and postage costs.
 - ~ Reuse paper which has only been printed on one side.
 - ~ Make double-sided printing and copying the default or an easy option. Train staff or provide easy tip sheets so they can operate office equipment more efficiently. Training in the following areas can reduce wasted time and resources.
 - + Organizing computer files.
 - + Setting up print commands to effectively use double-side and draft printing options.
 - + Learning to set up copiers to double-side print.
 - + Learning to use all equipment options.
 - + Setting up record retention and purging schedules.
 - + Organizing office files for maximum efficiency.
 - ~ Use electronic mail instead of paper memos.
 - ~ Avoid double spacing text when appropriate.
 - ~ Consider the need for printing drafts or final copies of documents.
 - ~ Circulate single copies instead of providing separate copies for everyone.
 - ~ Choose staples over glued bindings. Glue contaminates the paper recycling process; staples are easily removed with magnets.
 - ~ Choose recycled and recyclable paper for company print jobs.
 - ~ Keep mailing lists up to date to reduce returned mail and unnecessary printing.
- Buy "recycled" toner cartridges and send your spent toner cartridges to be recycled. This can be a very effective way of saving money.
- Invest in rechargeable batteries and battery chargers. Make sure staff know that rechargeable batteries should be reused or recycled and never thrown away. The Rechargeable Battery Recycling Corporation has an extensive nationwide collection system for recycling rechargeable batteries. Go to the [RBRC website \(www.rbrc.org\)](http://www.rbrc.org) for a location near you or to set up a collection program in your building.

Other Opportunities

Tyvek® Envelopes – are made from easily recycled polyethylene. DuPont™ manages a nationwide recycling program that collects used Tyvek® envelopes. Tyvek® is recycled into more envelopes and personal protective equipment used when handling hazardous materials. Call 800-222-5676 or 866-33-TYVEK® or go to http://envelopes.tyvek.com/en/science/versitile/vers_recycle.shtml for more information.

3M Transparency Film Recycling Program – recycles collected transparency films used as slides for overhead projectors. 3M uses recycled content in new slides it makes. Visit their web site for more information (www.3m.com/us/office/meetings/product_catalog/trans_recycle.jhtml).

Yellow Pages Recycling – Check the inside front cover of your phone books for local recycling opportunities or look under "recycling" in the business pages. If you need further assistance, call EARTH 911 at 877-EARTH911 or visit www.earth911business.org or <http://michigan.earth911.org/usa/master.asp>. To reduce paper in the office, you may want to consider using one of the many phone number directories that are available on the Internet.

Clean Your Files Day – is a nationwide recycling event that over 250 cities, businesses, and organizations participate in each year. The Clean Your Files Days web site provides tools, methods, and information to help you with your event. A file cleanout day can be used as a blueprint for organizing new recycling events and to encourage year-round recycling. It can also

be a tool to reinvigorate existing recycling programs and increase recovery of recyclables. Visit www.usmayors.org/uscm/recycle/clean/cyfd.htm for more information.

Areas With Special Waste Reduction Opportunities

- Shipping/Receiving – Reuse shipping boxes or containers, as well as packing materials such as polystyrene "popcorn peanuts," used paper, and shredded paper.
- Cafeteria/Food Processing –
 - ~ Promote using a lunch kit and reusable containers to carry lunch or snacks.
 - ~ Promote a bring-your-lunch-to-work program using reusable dishware.
 - ~ Have reusable cutlery and plates in lunch and break rooms for take-out lunches.
 - ~ Compost food waste or offer it to a local farm for animal feed. Vermicomposting (with worms) is ideal for offices. There are some examples from **IKEA** (www.wormwoman.com/acatalog/IKEA-vermicomposting/IKEA-vermicomposting-13.html) and many resources about building, managing, and the importance of vermicomposting at www.bae.ncsu.edu/topic/vermicomposting/vermiculture.

Using Energy More Efficiently

More than half the electricity used to power personal computers is wasted because 60 percent of monitors are left on at night, 30 percent to 45 percent are not enabled for monitor power management, and over 90 percent of computers are not enabled for power management. (Source: "Power Management" PowerPoint slide presentation by Robert Huang,

The Cadmus Group, Inc.; July 13, 2005; U.S. EPA Energy Star Program). The U.S. EPA Energy Star Program

(www.energystar.gov/index.cfm?c=home.index)

has many tips to reduce energy use in the office. You can save energy and money by:

- Making sure computers are shut off at night.
- Making sure the system standby and hibernation mode are activated.
- Activating monitor power management and computer power management using **free software** from ENERGY STAR www.energystar.gov/index.cfm?c=power_mgt.pr_power_management).

Grounds Maintenance Tips

Since March 28, 1995, yard clippings have been banned from disposal in Michigan municipal solid waste landfills. (A few exceptions to the ban are diseased or infested yard clippings.) Yard clippings include leaves, grass clippings, vegetable or other garden debris, shrubbery, or brush or tree trimmings less than four feet in length and two inches in diameter. Yard clippings do not include stumps, agricultural wastes, animal waste, roots, sewage sludge, and garbage. Some suggestions for reducing your yard waste include:

- Grasscycling – leave grass clippings on the lawn. Investing in a mulching mower could be an option.

- Composting on-site for grass and leaves. Compost can be used to revitalize the building's landscape.

A Note About Personal Data

Assistants (PDAs)

Use PDAs to help save on the amount of paper used for reminders, calendars, memos, etc. PDAs can be an efficient and secure way to store and access important information. They can sync to your desktop computer, allowing information to be updated on both systems. Investigate the growing capabilities of these little "computers on the run."



- Consider using native species and natural methods of maintaining the landscape. Native species are better adapted to our area and require less maintenance than more exotic plants.

- Proper use of fertilizers, herbicides, and pesticides. This can be done by providing a sample to your local **Soil Conservation District** (www.macd.org/macdset.html) or **MSUE** ([www.msue.msu.edu/portal/default.cfm?pageset_id=25744&page_id=25770&msue_portal_id=](http://www.msue.msu.edu/portal/default.cfm?pageset_id=25744&page_id=25770&msue_portal_id=25643)

[25643](http://www.msue.msu.edu/portal/default.cfm?pageset_id=25744&page_id=25770&msue_portal_id=25643)) to determine your soil's specific nutrient needs (i.e., nitrogen, phosphorous).

- Overapplying fertilizers and pesticides results in runoff that can pollute waterways. Contact a Michigan Clean Sweep site (www.michigan.gov/mda/0,1607,7-125-1568_2383_2406-11759--,00.html) to dispose of any left over or unwanted pesticides.

For more yard waste reduction information, go to www.michigan.gov/deq/0,1607,7-135-3585_4130_4192-12661--,00.html.

Additional Information

Go to www.michigan.gov/deqrecycling for more information about recycling in Michigan.