



# Pollution Prevention News

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## Editor's Corner

by William K. Reilly

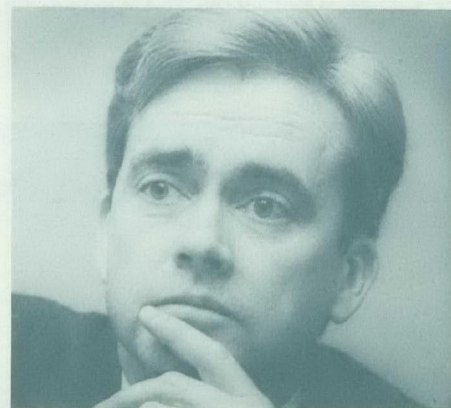
The 20th anniversary of Earth Day, this April 22, like the first Earth Day in 1970, marks a turning point—a time when we must find a new approach to meeting our needs. We must find ways to continue economic growth *without* depleting the natural capital of the planet.

I am encouraged today that our institutions and our people seem ready to embrace a new ethic, a new sense of stewardship on behalf of the environment. At the heart of this is a new approach to waste: reducing and preventing it.

Pollution prevention must become the watchword for all our activities. EPA has set a goal of recycling or reducing 25% of the nation's municipal waste by 1992. This is a realistic national goal if everyone contributes — government, business, and especially consumers. Increasingly, businesses are recognizing that pollution prevention can often save them money. As the magazine *The Economist* recently suggested, more and more, good growth will be "green" growth. New products need to be designed with less use of toxic material, and more attention to their recyclability and ultimate disposal. Manufacturers and distributors need to eliminate unnecessary packaging. And we all need to rethink the wisdom of disposable products, however convenient they may seem at first glance.

Recycling is another important step in assuring that the nation's basic stock of ecological capital remains intact for future generations. This need not come at the expense of economic progress. Not surprisingly, countries that have already made considerable progress in recycling aluminum, steel, paper, and glass are at the top of the list of international economic performers.

At EPA, we're doing our part to encourage markets for recycled and recyclable materials. We are taking action to reduce or eliminate pollutants at the source, such as our bans on



EPA's Administrator William K. Reilly

CFCs, asbestos, and lead in gasoline and drinking water. We're also changing enforcement policies to favor implementation of fundamental alterations in products and processes, in addition to meeting end-of-pipe pollution standards.

Some of the most intractable pollution problems confronting us are from decentralized sources and thus will require the help of many people throughout our society if the problems are to be addressed. We are dramatically increasing our support for education. I recently created an Agency-wide Environmental Education Task Force to work with the states to develop an environmental education program. EPA is also sponsoring the first National Minority Environmental Career Conference in April, in Washington, DC, in order to attract more of our brightest students to environmental fields.

My hope for Earth Day 1990 is that this celebration can help bring about a national commitment to pollution prevention — through the actions of millions of individuals finding ways to prevent, recycle, and reduce waste. Let us work together to preserve our environmental legacy and create a growing, sustainable, *environmentally sound economy* for generations to come.

Photo by S.C. Delaney/EPA



# In the News

## Int'l Conference on Pollution Prevention

The International Conference on Pollution Prevention to be held June 10-13 in Washington, D.C. will feature Henry Habicht, Deputy Administrator of EPA as the keynote speaker, with a program of 52 sessions focusing on innovative technologies and socio-economic issues in pollution prevention. Countries to be highlighted in the international sessions include Germany, the Netherlands, Scandinavia, Canada, and Yugoslavia; additional time will be reserved for discussions on US-USSR issues with members

of the US-USSR Joint Committee on Cooperation in the Field of Environmental Protection.

Sponsored by EPA and the International Association for Clean Technology, the conference will also present William H. Parker III, Deputy Assistant Secretary of Defense (Environment), Dr. Horst Wieseback, Deputy Director of the U.N. Industrial Development Organization, Barry Commoner, Director of the Center for the Biology of Natural Systems, and Kathryn S. Fuller, President of the World Wildlife Fund and the Conservation Foundation.

The conference will be conducted in accordance with "clean principles," meaning

non-disposable or reusable conference materials and recycle bins for trash. To register, call Mary Bourassa at SAIC, (703) 734-3198.

## Workshop for Dye Manufacturers

A workshop was held on March 5 and 6 at EPA Headquarters to explore opportunities for pollution prevention in dye manufacturing. Co-sponsored by EPA's Office of Solid Waste (OSW) and Pollution Prevention Division, and drawing 25 industry participants, the workshop reviewed the resources needed and available to embark on preven-

## Calendar of Events

Title	Sponsor	Dates	Contact
State Congress on Pollution Prevention	Assn. of State and Interstate Water Pollution Control Administrators	May 2-4 New Orleans, LA	Robbie Savage 202-624-7782
Hazardous Materials Spills Conference	National Response Team member agencies, AICHE, CMA	May 13-17 Houston, TX	AICHE 212-705-7325
20th Annual BioCycle Conference: Composting and Recycling	BioCycle Journal of Waste Recycling	May 14-16 Minneapolis, MN	Celeste Madtes 215-967-4135
Enviro Expo	Anchor Resources, Inc.	May 15-16 Baton Rouge, LA	Andy Johnson 504-291-9996
Environmental Management Institute (10 courses)	Tufts University, Center for Environmental Management	June 4-28 Medford, MA	Rita Moreno 617-381-3531
Int'l Conference on Pollution Prevention: Clean Technologies & Clean Products	EPA, International Association for Clean Technology	June 10-13 Washington, DC	Mary Bourassa 703-734-3198
1st U.S. Conference on Municipal Solid Waste Management	U.S. EPA	June 13-16 Washington, DC	GRCDA 800-456-4723
9th Annual New England Resource Recovery Conf/Expo	New Hampshire Resource Recovery Assn., Assn. of Vermont Recyclers	June 13-15 Burlington, VT	NHRRRA 603-224-6996
Hazwaste '90 Expo	National Association of Hazardous Waste Generators	June 18-21 San Diego, CA	Ken Sellinger 415-726-3823
83rd Annual Air and Waste Management Association Meeting and Exhibition	AWMA	June 24-29 Pittsburgh, PA	Sharon Andrea 412-232-3444
World Recycling Conference and Expo	<i>Recycling Today</i> Magazine	June 27-29 Baltimore, MD	CMC 203-852-0500
Hazardous and Solid Waste Minimization Course	Government Institutes, Inc.	June 28-29 Hilton Head, SC	Terri Summers 301-251-9250



## In the News (cont'd)

tion activities, the elements of a successful program, the evaluation of economic benefits, and prevention in the dye manufacturing and other industries. The program focused on azo dyes, a particular type of dye used in textiles, because OSW has been considering listing wastes from azo dye manufacture as hazardous. However, implementation of the project will include other dyes as well.

EPA staff also met with the azo dye manufacturers' waste minimization task force and the director of the industry's association to discuss implementation of prevention activities. The group developed a statement of goals and a timetable for implementation;

next steps include developing a pollution prevention guidance manual for the dye industry and conducting a baseline survey of industry prevention practices. EPA hopes this cooperative effort can be a model for similar efforts with other industry groups.

### Landmark TSCA Consent Order Includes Prevention

On January 30, 1990, EPA's Chief Judicial Officer signed a Toxic Substances Control Act (TSCA) consent order which includes, for the first time ever, a designated pollution prevention project. Sherex Polymers, Inc., of

Dublin, Ohio, agreed to pay a civil penalty of \$252,000 and to institute a pollution prevention project worth at least \$525,000 for failure to submit a premanufacture notice to EPA at least 90 days prior to manufacturing a new chemical substance, as required by TSCA.

The pollution prevention project involves replacing the existing filter system on a dimer fatty acid production unit at the company's Lakeland, Florida facility. The project should result in waste reduction of at least 500,000 pounds of filter cake annually, which would have been landfilled, and increase the recovery of reusable fatty acid material by over 250,000 pounds annually, which will be recycled.

## American Forestry Assn. Seeks Global ReLeaf for Overheated Planet

The American Forestry Association is urging public officials and citizens to take action against global warming by populating the earth with millions of healthy new trees.

The program, called Global ReLeaf, is based on elementary scientific principles. Trees are the natural predators of carbon dioxide, the gas that acts as the "glass in the greenhouse" and that contributes to global warming. Through photosynthesis, trees can absorb 26 pounds of carbon dioxide a year (about five tons per acre of trees), thereby helping to cleanse the atmosphere of excess carbon dioxide.

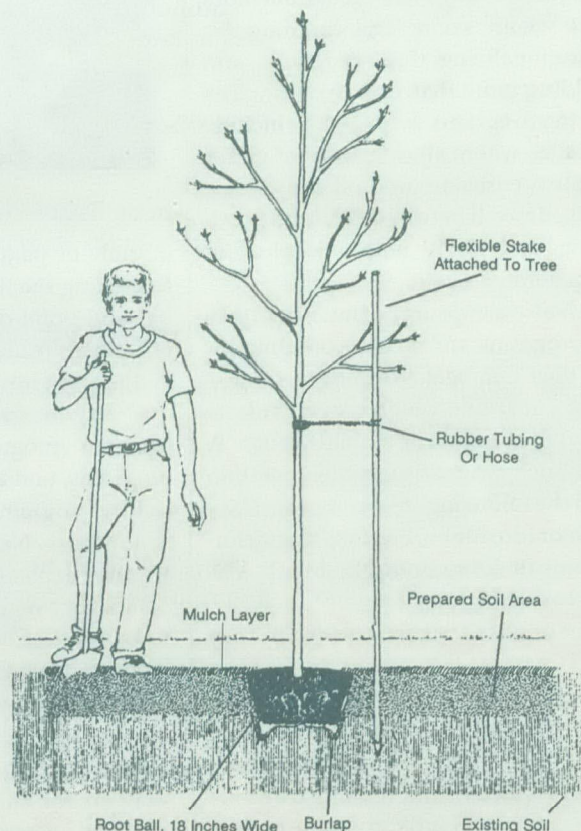
The program's organizers hope that Global ReLeaf will reverse the current worldwide depletion of forest areas. Of particular concern are tropical forests, where an area the size of Tennessee (approximately 27 million acres) is destroyed or damaged each year. The program also focuses on urban and rural reforestation. According to the American Forestry Association, an average city in the U.S. currently loses four trees to death or removal for every new tree planted. Rural forests often fall prey to pollution and inadequate management.

Global ReLeaf hopes to see 100 million new trees planted on private lands in American cities and towns before the end of 1992. In addition to offsetting millions of tons of carbon dioxide emissions, Global ReLeaf estimates that the shade from the new trees could save American consumers \$4 billion each year in energy costs.

A network of state and local citizens groups is carrying out the Global ReLeaf program. Coordination is provided by the American Forestry Association, the nation's oldest citizen conservation organization. Further detailed information can be obtained from AFA, P.O. Box 2000, Washington, D.C. 20013, (202) 667-3300.

To register your tree-planting with EPA's Earth Day 1990 Tree Registry, fill out and mail the form on page 8.

## How to Plant Your Tree



### Instructions:

1. Locate a site with generous rooting area and adequate space for the tree at maturity.
2. Prepare a planting area five times the area of the rootball using a rototiller or shovel.
3. In the center of the planting area, dig a hole for the tree roots at least as wide but only as deep as the rootball.
4. Remove the tree from burlap or container, place on solidly packed soil so that the root collar is slightly above the surrounding grade. Gently separate tangled roots; cut encircling roots.
5. Backfill the hole and water to settle the soil into place.
6. Spread a 2-3 inch layer of mulch, but not within 6-8 inches of the tree trunk.
7. Stake the tree so that it can flex with the wind.



# Focus On: Household Hazardous Waste

## Recent Trends in Household Hazardous Waste Management

by Dana Duxbury  
Dana Duxbury & Associates

The decade of the 1980s saw a significant increase in awareness of household hazardous waste management (HHWM) issues and HHWM activities. This growth occurred across the country, with the greatest activity on both coasts and in the upper mid-west.

Involvement in HHWM now extends to government at all levels, industry, the media, citizens, and environmental groups. Close to 2000 HHW collection programs were held in the 1980s, with almost a third of them (628) happening in 1989 alone. These programs were mainly one day events, but more and more we are seeing that communities are institutionalizing their programs and often holding more than one per year. The scope of the programs vary — they include drop-off sites where all categories of HHW are accepted, curbside used oil collections, paint only, dry cell battery only, farm pesticides only, and HHW with conditionally exempt generator waste.

There is also an upsurge of interest in permanent programs and a corresponding increase in their numbers. We define a permanent program as one which is open at least once a month at a fixed or mobile facility. A total of 36 such programs were in operation in 1989 in the following states: Alaska, California, Colorado, Idaho, Florida, Massachusetts, Michigan, Minnesota, New York, Virginia, and Washington.

Various trends have been emerging. They include:

- **Broadened scope of concern** — sponsors are not just concerned about the dangers of putting HHW in landfills. There is a concern about the production and use of hazardous household products, HHW storage in homes, and the need to protect air and water quality by minimizing HHW in incinerators and wastewater, as well as in landfills.
- **Wider range of products** — program sponsors are increasingly concerned with a wider range of HHW categories, including such things as televisions and other high tech equipment, white goods such as refrigerators and washing machines, and lead and cadmium found in plastics and pigments.

- **Expanded group of generators** — HHW programs are increasingly perceived as a potential means of capturing waste from conditionally exempt generators (0-100 kilograms per month), such as schools, farms, and some small businesses.

- **New types of programs** — specialty programs are being established, such as used

An analysis of permanent programs has documented that from 5 to 30% of the HHW collected goes to a hazardous waste landfill. Program sponsors have been finding ways to reuse or recycle frequently collected items, such as paint.

- **Heightened participation** — participation rates are starting to increase, from an av-



"Amnesty Day" HHW Collection in Orlando, FL. Photo by Michael Frishman.

oil-only or paint-only. Permanent facilities (including the first mobile permanent facility) and point-of-purchase collection in retail stores are also becoming more common.

- **Program integration** — HHW programs are being integrated with solid waste management programs, especially recycling programs, and also with sewage treatment facility programs. Regulations are starting to appear — New York and Massachusetts already regulate permanent HHW facilities; California's regulations are in the offing.

- **Increasing sophistication** — program sponsors have continued to refine requests for proposals and contracts with hazardous waste contractors; HHWM experts have been put on the staff of many contractors; toll-free numbers for HHW information have been provided in many communities; and specialty equipment has been developed to improve and speed collection programs.

- **Incorporating the hierarchy** — there is a greater appreciation for following the waste management hierarchy (source reduction, recycling, treatment, and finally landfill disposal). In Florida's first Amnesty Days program, 75% of the HHW collected went to a hazardous waste landfill. In Amnesty Days II, only 5% of the waste is being landfilled.

erage of 1% of an area's households, to 5% for some first-time programs in Connecticut and even a reported 10% in a San Bernardino County, CA program.

- **Broadened educational efforts** — program sponsors are realizing that they must have a viable educational program in addition to their collection program. These education programs aim to ensure that consumers learn how to reduce their consumption of products with hazardous constituents and how to manage properly those wastes already stored in homes and those they cannot avoid generating, such as motor oil from cars.

- **Broadened awareness of the need for stable funding** — the search for stable funding mechanisms includes tipping fees, utility bill surcharges, and internalizing program costs in the costs of products.

A whole new set of terms has entered our vocabulary in recent years — pollution prevention, environmentally friendly products, product stewardship, integrated and comprehensive programs, internalization, hierarchy, toxic use reduction. The progress made in the last 10 years is an exciting indication of what lies ahead.



# Household Hazardous Waste

Numerous household products are hazardous — they contain ingredients that are flammable, corrosive, toxic, or radioactive. When discarded, these products create hazardous waste.

1. As a first step in preventing pollution, whenever possible, avoid using hazardous products. Look for and use non-toxic alternatives instead.
2. When purchasing hazardous products, buy only as much as you need; do not buy bulk quantities. Store hazardous products and materials carefully. Follow label instructions.
3. Find someone who can use up unwanted hazardous products, like paint; recycle the recyclables (like used motor oil). All household products containing hazardous constituents should be disposed of carefully. Find out your local community's policy on disposing of hazardous waste. If an HHW collection program is not in place, encourage your community to start one.

Here is a partial list of household products, some of the hazardous constituents they may contain, and alternatives available to purchasing these products.

PRODUCTS	ALTERNATIVES
<b>Kitchen</b>	
• <b>Scouring powder</b> (chlorine)	Use brands without chlorine; baking soda.
• <b>Oven cleaner</b> (sodium or potassium hydroxide, ammonia)	Sprinkle salt & baking soda on spill while warm; scour with steel wool and baking soda. (Do not put baking soda on heating elements.)
• <b>Floor cleaner</b> (pine oil, petroleum distillates, naphthas)	Soap and wet mop; or mop with 1 c. white vinegar mixed with 2 gallons water; polish with club soda.
• <b>Metal polish</b> (naphthas, oxalic acid)	Polish brass with Worcestershire sauce; copper: vinegar and salt; soak silver in 1 quart warm water containing 1 tsp. baking soda, 1 tsp. salt, and a piece of aluminum foil.
• <b>Roach killer</b> (organophosphates, carbamates)	Caulk cracks using white glue; use roach traps; sprinkle cracks and dark places with boric acid (powder) if no children or pets in the vicinity.

PRODUCTS	ALTERNATIVES
<b>Bathroom</b>	
• <b>Drain opener</b> (potassium or sodium hydroxide (lye), hydrochloric acid)	Plunger or plumber's snake; vinegar & baking soda followed by boiling water.
• <b>Toilet bowl cleaner</b> (sodium bisulfate, oxalic acid, paradichlorobenzene, hydrochloric acid)	Use toilet brush and baking soda.
• <b>Disinfectant</b> (pine oil, phenols, chlorine, cationic surfactants)	1/2 cup borax dissolved in 1 gallon hot water; detergent cleaners. (Must use bleach for disinfectant purposes.)
• <b>Hair color</b> (cadmium chloride, cobalt chloride, lead acetate, etc.)	Plant-derived rinses.
• <b>Nail polish</b> (toluene, xylene)	None.
• <b>Nail polish remover</b> (acetone, ethyl acetate)	None.
<b>Laundry/Utility</b>	
• <b>Spot remover</b> (perchloroethylene)	Club soda; lemon juice and hot water; borax and cold water; use bleach-type remover instead of solvent-type.
• <b>Starch</b> (formaldehyde, phenols, pentachlorophenol)	1 tbsp. cornstarch in 1 pt. cold water.
• <b>Bleach</b> (chlorine, sodium tripolyphosphate or sodium hypochlorite, hydrogen peroxide)	Calgon, borax, non-chlorine bleach, lemon juice, sunlight. (NEVER mix with ammonia or strong acids.) (Must use bleach for disinfecting.)
• <b>Furniture polish</b> (petroleum distillates, oil of cedar)	1 part lemon juice to 2 parts olive or vegetable oil.
• <b>Carpet &amp; upholstery shampoo</b> (perchloroethylene, naphthalene, chlorinated solvents)	Sprinkle dry cornstarch on rug, then vacuum. Or shampoo with 6 tbsp. soap flakes, 2 tbsp. borax, 1 pt. boiling water.



# Household Hazardous Waste

PRODUCTS	ALTERNATIVES	PRODUCTS	ALTERNATIVES
<b>Automotive Supplies</b>			
• <b>Motor oil</b> (lead, hydrocarbons)	None.	• <b>Paint stripper</b> (benzene, methylene chloride, toluene, phenols, cresols)	Sandpaper, scraper, heat gun, water-based strippers.
• <b>Antifreeze</b> (ethylene glycol)	None.	• <b>Wood preservative</b> (pentachlorophenol, creosote, copper naphthenate)	Water-based preservatives; rot-resistant wood.
• <b>Car battery</b> (sulfuric acid, lead)	None.	• <b>Adhesive</b> (naphthalene, phenol, ethanol, vinyl chloride, formaldehyde, acrylonitrile)	White or yellow wood glues.
• <b>Brake &amp; transmission fluid</b> (glycols)	None.	<b>Other</b>	
• <b>Engine degreaser</b> (chlorinated solvents, cresol, stoddard solvents)	None.	• <b>Mothballs</b> (paradichlorobenzene)	Cedar chips.
• <b>Gasoline</b> (gasoline, tetraethyl lead)	None.	• <b>Air freshener</b> (formaldehyde, petroleum distillates, p-dichlorobenzene, aerosol propellants)	Leave open box of baking soda or bowl of vinegar out; pour baking soda down garbage disposal.
<b>Garden Supplies/Pesticides</b>		• <b>Glass cleaner</b> (ammonia, isopropanol)	Spray on vinegar, wipe dry with newsprint.
• <b>Weed killer</b> (various toxic herbicides)	Selecting seed mix with low weed-seed content; hand pick weeds.	• <b>Used batteries</b> (nickel, cadmium, mercury)	Rechargeables, electric current.
• <b>Insecticides</b> (organo-phosphates, carbamates)	Select pest-resistant plants; plant garlic cloves at 1 foot intervals in vegetable and flower gardens; use traps or a soap spray.	• <b>Photographic chemicals</b> (hydroquinone, phenidone, acetic acid, hypo- or sodium thiosulfate)	None.
• <b>No-pest strip</b> (dichlorvos)	Burn citronella candles; eliminate mosquito breeding habitat.	<b>For Further Information:</b>	
• <b>Insect repellent</b> (butopyronoxyl, dimethyl phthalate, etc.)	Citronella oil.	<ul style="list-style-type: none"> <li>• Dana Duxbury, Dana Duxbury &amp; Associates 16 Haverhill Street, Andover, MA 01810 (508) 470-3044. Quarterly Newsletter - <i>Household Hazardous Waste Management News</i></li> <li>• Susan Mooney, U.S. EPA, Office of Solid Waste, 401 M Street SW (OS-301), Washington, DC 20460, (202) 382-5649</li> </ul>	
<b>Garage/Workshop</b>		<b>Books:</b> <i>The Non-Toxic Home: Protecting Yourself and Your Family from Everyday Toxics and Health Hazards</i> by Debra Lynn Dadd. Jeremy P. Tarcher, Inc. 1986. <i>The Healthy Home</i> by Linda Mason Hunter. Rodale Press, 1989.	
• <b>Oil-based paint</b> (organic solvents, pigments)	Water-based paints.	EHMI Hazardous Waste Wheel. Environmental Hazards Management Institute. P.O. Box 932, Dept. GM, Durham, NH 03824. (800) 446-5256.	
• <b>Paint thinner</b> (toluene, turpentine, ethyl or butyl acetate, mineral spirits)	Use water-based paints so that thinner is not needed; use baby oil, butter or margarine to clean hands of paint.		
• <b>Lacquer</b> (methanol, ethanol, mineral spirits, benzene, turpentine)	None.		



# Interview with Barry Commoner



Barry Commoner is one of the country's leading environmental scientists. He directs the Center for the Biology of Natural Systems at Queens College of the City University of New York. His new book, *Making Peace with the Planet* (Pantheon Books, \$19.95), will be published this month. Through his writings and lectures, Dr. Commoner has drawn nationwide attention to the need for environmental action. *Time* featured him in a cover article in 1970, calling him the "Paul Revere of ecology...endowed with a rare combination of political savvy, scientific soundness and the ability to excite people with his ideas." Dr. Commoner shared his views on pollution prevention and other subjects in a telephone interview.

**PPN:** What does *Earth Day* mean to you?

**BC:** It means bringing NEPA [the National Environmental Policy Act] back to life. *Earth Day* set out to achieve what is in NEPA's statement of purpose: "to eliminate and prevent pollution." We must recognize — and this needs to be said on *Earth Day* — that we have failed. Our major accomplishment over the past 20 years is that the social intention to eliminate pollution has been very firmly established. We also know a lot more about the environment than we did, and EPA deserves much of the credit. But as a society, we have failed to recognize the root cause of pollution. For that reason, we have set up regulatory programs that are basically Band-Aids. We haven't developed the right approach to cleaning up the environment.

**PPN:** What is the right approach?

**BC:** First, I regard it as an established fact

that prevention — the few instances of prevention — have been the only steps that have rolled back pollution levels. Prevention means to eliminate the production of pollutants from the agricultural, power, or industrial system that generates them. Therefore, to have a workable environmental program, there has to be social determination of the technologies used in our production systems. We need to revise the basic technologies in agriculture, transportation, power production, and certainly chemicals over the next 20 years. This is a very tall order, but it is the only thing that can be done.

**PPN:** How would you revise those technologies?

**BC:** As far as I'm concerned, it ought to be a national policy to switch from chemical to organic agriculture. It ought to be a national policy to switch from fossil fuels to solar sources...a national policy that no automobile engine should emit nitrogen oxide, which is what triggers the smog reaction ... a national policy that any toxic synthetic chemical that is not necessary ought to be eliminated. For example, synthetics ought to be eliminated where natural materials are available.

**PPN:** How would you achieve such changes?

**BC:** In the old-fashioned way, through politics. People need to recognize that we have the democratic right to tell corporations how to run their business insofar as the businesses have an impact on the environment — and they do, in many areas of production. This means we must overcome the taboo about challenging the right to do what you want with your own capital. It would be a challenge to what passes for our economic ideology, but in my view, environmental goals take priority. What we need can be called environmental democracy. As I say in my new book, we should be encouraged by how the inherent impulse towards democracy has changed the face of Europe. It would be unbecoming to us in the U.S. to say that we cannot express the same democratic impulse in terms of production decisions.

**PPN:** Do you think there have been any success stories in pollution prevention?

**BC:** One was the recent alar case, in which mothers said, we don't want this stuff in apples, and manufacturers got the message. Earlier, there was the removal of DDT, largely

because of public agitation based on Rachel Carson's work, as well as the banning of PCBs in TSCA [Toxic Substances Control Act] — but these were exceptions. Where there has been an opportunity to adopt the prevention approach, EPA and the White House have gone the other way. For instance, Mr. Bush's Clean Air Bill, which has corporations trading the right to pollute, is the very opposite of prevention. The bill assumes that corporations will all have something to trade. What's needed is to influence manufacturers before pollution is created.

**PPN:** Your work has addressed the needs of Third World countries, where economic development so often seems to come into conflict with solving global environmental problems. Is conflict inevitable?

**BC:** The reason for the apparent conflict is the assumption that Third World development has to depend on the same pollution-generating technologies that have caused trouble in developed countries, chemical agriculture in particular. If we say this is the only way, indeed, the environment will suffer. Yet the economic productivity of chemicals has been declining steadily since they were brought into use. Since the 1950s, it has dropped 60 percent — you have to use more and more to get less and less result. In the long run, the environmentally sound technologies of organic farming are economically productive. Developed countries can help the Third World by making such technologies available and by eliminating Third World debt.

**PPN:** Let's turn to recycling. You recently worked with the Town of East Hampton, NY, on a project to recycle nearly 85 percent of the town's residential trash into marketable products. Is this a realistic goal for other communities?

**BC:** Ninety percent of trash can be recycled using existing procedures, and of that, 97 percent can be recycled into marketable products. Nothing stands in the way. Everywhere a sensible recycling program is offered, people flock to it. Seattle currently recycles 34 percent of its trash...70 percent of the residents participate. Since recycling is cheaper than any other method of handling trash, and it is environmentally benign, we ought to recycle everything that is recyclable.

**PPN:** What are you currently working on at the Center?

*continued on page 8*



## EPA Earth Day 1990 - Tree Registry

1. Project Title: _____ 2. Contact: Name: _____ Phone: _____ Street: _____ City, State, Zip: _____ 3. Project Location: _____ 4. Participating Groups: _____ _____ _____ _____ _____	5. Number of Tree Planters Participating: _____ 6. Dedication Date: _____ 7. Planting Date: _____ 8. Tree Species:                      Quantity: Type 1. _____ Type 2. _____ Type 3. _____ Others (s) _____ Send to: U.S. Environmental Protection Agency OECM/Air (LE134-A) 401 M Street, S.W. Washington, D.C. 20460 For more information, call: (202) 475-7091
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### Barry Commoner

(from page 7)

**BC:** We want more communities to move into intensive recycling, so we are preparing a book for communities on how to deal with their trash problems. We are about to begin a project advising the Bronx on trash. We just completed an analysis of what is claimed about biodegradable plastics—we concluded that there is no evidence that the plastic itself is biodegradable. In a different area, we are completing a study for New York State on the

importance of energy conservation for energy policy...I'm sure that we will be doing more on energy because of the importance of global warming and the transition to solar energy. We are also doing a study for Greenpeace on ways of evaluating the environmental impact of toxic chemicals.

**PPN:** *From a personal standpoint, what aspects of your work have you found the most rewarding?*

**BC:** One is the work that I do explaining these things to people. I run into people who tell me how much they've learned from things

I've written or speeches I've given. This is gratifying. And in the last few years increasingly, communities have asked us at the Center to help them solve their problems. For someone like me raised as a fundamental scientist, who mostly wrote papers about esoteric laboratory experiments, to do work with real world consequences is very rewarding.

*Communities wishing to undertake recycling projects with Dr. Commoner's assistance can call him at the Center for the Biology of Natural Systems, 718-670-4180.*

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