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# 50 SIMPLE THINGS YOU CAN DO TO SAVE THE EARTH

THE EARTH • WORKS GROUP

**50  
SIMPLE  
THINGS  
YOU CAN  
DO TO  
SAVE THE  
EARTH**

**The EarthWorks Group**

**Earthworks Press  
Berkeley CA**

This is dedicated to the not-yet-born.

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practices and products in our book. In most cases,  
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"Nobody made a greater mistake than he who did nothing because he could only do a little."

—Edmund Burke



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# INTRODUCTION

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**A**t least once a week, I get a call at NRDC from members and concerned citizens asking what they can do, personally, to combat specific environmental problems. I enjoy that part of the job, helping people get involved.

So I consult my bookshelf and then point them in a few promising directions. By necessity, the information I give out comes from a diverse array of sources, some easy, some difficult to obtain. No one has ever taken the time to compile it in one place, until now.

The Earthworks Group has given us the solution to this problem in 96 pages—a volume deceptively slim for the amount of information it contains. Want to know the facts about energy-efficient shower heads and lightbulbs, and where to buy them? It's all here. What can actually be recycled? That's here, too. Even cars, cans, tires, trash, and toilets get their moment in the sun.

Like few books in this decade have ever done, *50 Simple Things* empowers the individual to get up and *do something* about global environmental problems. No point in letting the news reports and magazine coverage drive you to despair; even the most "intractable" environmental problems march toward a solution when everyday people get involved.

Few of us can do anything to keep million-barrel oil tankers on course through pristine waters. All of us can do something, every day, to insure that fewer such tankers are needed. None of us can close the hole in the ozone layer above Antarctica. All of us can help prevent its spread to populated areas by reducing our use of chlorofluorocarbons (CFCs).

Most of the 50 Things covered here are unbelievably easy. They are the kind of things you would do anyway to save money—if you knew how much you could save. Now you do; the Earthworks Group has done your legwork for you. At the very least, this book shows you how to use energy more intelligently. Don't shiver in the dark; just make sure you're getting as much comfort and



convenience as possible from every dollar you spend on electricity, natural gas, and gasoline.

The 1990s are bringing, I think, a new sense of awareness that institutions alone can never solve the problems that cumulate from the seemingly inconsequential actions of millions of individuals. My trash, your use of inefficient cars, someone else's water use—all make the planet less livable for the children of today and tomorrow. But remember: as much as we are the root of the problem, we are also the genesis of its solution. Go to it!

**Chris Calwell,  
Energy Program / Atmospheric Protection Initiative  
Natural Resources Defense Council (NRDC)**

**—September 21, 1989**



# WHAT'S



# HAPPENING



# THE GREENHOUSE EFFECT

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## THE GOOD

"The greenhouse effect, when functioning normally, keeps our planet warm. Natural gases in the atmosphere form a blanket which allows sunlight to reach the earth's surface, but prevents heat from escaping (much like the glass in a greenhouse). This gas blanket traps heat close to the surface, and warms the atmosphere."

—*Global Warming: The Greenhouse Effect*  
Friends of the Earth

## THE BAD

"For the first time in history, human activities are altering the climate of our entire planet. In less than two centuries, humans have increased the total amount of carbon dioxide in the atmosphere by 25% from the burning of fossil fuels and the destruction of forests . . . Unless we reduce emissions of greenhouse gases, the stable, hospitable climate on which civilization is based could become a thing of the past."

— *Cooling the Greenhouse*,  
NRDC

## THE UGLY

The Greenhouse Gases:

- *Carbon Dioxide* (CO<sub>2</sub>). Responsible for about 50% of the greenhouse effect. Every year, people add 6 billion tons of it to the atmosphere (1.5 billion from the U.S.). Main sources of CO<sub>2</sub>: Burning fossil fuels such as coal, oil, and natural gas, and the destruction of forests—which release CO<sub>2</sub> when they're burned or cut down.
- *Chlorofluorocarbons* (CFCs). Not only responsible for 15-20% of the global warming, but also destroy the earth's ozone layer.
- *Methane*. 18% of the greenhouse effect. Produced by cattle, rice fields, and by landfills.
- *Nitrous Oxide*. Responsible for 10%. Formed by microbes, breaking down chemical fertilizers, and by burning wood and fossil fuels.
- *Ozone*. Comes from ground-based pollution caused by motor vehicles, power plants, oil refineries.



# AIR POLLUTION

## **BLOWIN' IN THE WIND**

"Almost twenty years after Clean Air Act passed, tens of millions of Americans still breathe dirty air. According to the Environmental Protection Agency, over 76 million people live in areas where the [clean air] standard is exceeded."

—*Breathing Easier,*  
The World Resources  
Institute

## **WHAT IS IT?**

"Ozone, the primary component of smog, is a gas formed when nitrogen oxide and hydrocarbons combine in sunlight. In the atmosphere, ozone occurs naturally as a thin layer that protects us from the sun's ultraviolet rays. But when it's formed at ground level, it's deadly."

—The Clean Air Project

## **WHERE DOES IT COME FROM?**

"Cars, trucks, and buses...are one of the chief sources of ozone. In 1986, [an astonishing] 6.5 million tons of

hydrocarbons and 8.5 million tons of nitrogen oxides were [spewed] into the air by motor vehicles....Utilities, oil, and chemical plants, are also a large part of the problem, accounting for approximately half the hydrocarbon emissions and half the nitrogen oxide emissions in the U.S."

—*Exhausting Our Future,*  
The Public Interest  
Research Groups.

## **SMOG ALERT**

"Lung damage from ozone-polluted air is a risk faced by roughly 3 out of 5 Americans.

—*Exhausting Our Future,*  
The Public Interest  
Research Groups.

"Most people don't realize that smog harms other forms of life as well as people. Ozone smog is responsible for extensive damage to pines in California and in the eastern United States....It's also to blame for crop losses in many agricultural states."

—The Clean Air Project



# OZONE DEPLETION

## UP, UP...

"High above our heads, a fragile, invisible layer of ozone shields the earth's surface against dangerous solar ultraviolet radiation. The ozone layer has been there for eons."

—The Natural Resources  
Defense Council

## ...AND AWAY

"But now man is destroying this protective shield. Chlorofluorocarbons (CFCs), halons, and other manmade chemicals are wafting up to the stratosphere, 6 to 30 miles overhead. There they break down, releasing ...atoms that destroy ozone."

—The Natural Resources  
Defense Council

## WHAT ARE CFCs?

"CFCs are put to hundreds of uses because they are relatively nontoxic, nonflammable, and do not decompose [easily]....Because they are so stable, they will last for up to 150 years. The CFC gases rise slowly to about 25 miles where the tremendous force

of the sun's ultraviolet radiation shatters the CFC, freeing the chemical element chlorine. Once freed, a single atom of chlorine destroys about 100,000 molecules of ozone before settling to the Earth's surface years later. Three percent, and perhaps up to five percent, of the global ozone layer has already been destroyed by CFCs."

—Curtis A. Moore,  
*International Wildlife*  
magazine

## WHAT NEXT?

"As ozone diminishes in the upper atmosphere, the earth receives more ultraviolet radiation, which promotes skin cancers and cataracts, and depresses the human immune system....As more ultraviolet radiation penetrates the atmosphere, it will worsen these health effects, reduce crop yields and fish populations. It will affect the well-being of every person on the planet."

—*Worldwatch Paper 87*,  
The Worldwatch Institute



# HAZARDOUS WASTE

## GROWING CONCERN

"The environmental impact of the huge amounts of hazardous wastes produced each year has been of increasing national concern....In 1983, 266 million tons of hazardous waste were generated—more than a ton for every person in the United States."

—*Wrapped in Plastics,*  
Environmental Action  
Foundation

## WASTE NOT...

"Advanced nations manufacture some 70,000 different chemicals, most of which have not been thoroughly tested....Careless use and disposal of these substances contaminate our food, water, and air, and seriously threaten... the ecosystems on which we depend."

—*Citizen's Guide to*  
Global Issues  
Coalition for a Global  
Tomorrow

## HASTE MAKES WASTE

"Chemicals have become an indispensable part of our daily lives. We enjoy the con-

venience of such chemically-derived products as plastics, detergents, and aerosols, and yet we are often unaware of the hidden price tag associated with them. Eventually they find their way into water and / or the ground via landfills, drains, or sewage sludge.

—*Guide to Hazardous*  
Household Products,  
The Clean Water Action  
Project

## IT COMES BACK TO US

"Although consumers rarely make the connection between the everyday plastics products and packaging they buy and the growing problem of toxic pollution, many of the chemicals used in the production and processing of plastics are highly toxic...In an EPA ranking of the 20 chemicals whose production generates the most total hazardous waste, five of the top six are chemicals commonly used by the plastics industry."

—*Wrapped in Plastics,*  
Environmental Action  
Foundation



# ACID RAIN

## HOW DO WE GET IT?

"Sulfur and nitrogen oxides, pollutants released by coal-burning electric-power plants or motor vehicles, are spewed into the atmosphere. There they are changed chemically ...and they fall back to Earth as acidified rain or snow.

This destroys plant and animal life in streams, damages forests, and even erodes buildings."

—*Cleaning Up the Outdoors*

## DROPPING ACID

The effect is staggering. Along the Appalachian Mountain chain, rain is 10 times more acidic than nearby lower elevations...and about 100 times greater than unpolluted rain. The most acidic rain measured at several eastern mountains is 2,000 times worse than unpolluted rain water. In fact, it is so acidic that it approximates lemon juice.

—*Breathing Easier,*  
The World Resources  
Institute

## DON'T JUST SIT THERE

"[We must take] action... soon, for otherwise no forest—not even in the wildernesses of North America—will be safe in the future....If we continue this pollution at the present rate, there will be scarcely any trees left to worry about in only a few decades."

—John Seymour and  
Herbert Girardet,  
*Blueprint for a  
Green Planet*

## HIGHLY CHARGED ARGUMENT

"Sulfur dioxide (SO<sub>2</sub>) is the primary [component of acid rain] in most regions, and electric utilities are responsible for approximately 65% of the total SO<sub>2</sub> emissions in the U.S. Therefore, large reductions in electric utility SO<sub>2</sub> emissions [are necessary] Electricity conservation is one [way to achieve this]."

—American Council for an  
Energy-Efficient Economy



# VANISHING WILDLIFE

## URBAN SPRAWL

"In 1980 there were 4.4 billion people on Earth. In 1990, there will be 5.2 billion. Every day, some of these human beings move into places on the planet where only plants and animals used to live. Forests are cut down. Wetlands, oceans, ice caps, and prairies are invaded."

—*Russell Train,*  
World Wildlife Fund, U.S.

## GOING, GOING...

"Extinctions are accelerating worldwide. Our planet is now losing up to three species per day. That figure is predicted to be three species per hour in scarcely a decade. By the year 2000, 20% of all Earth's species could be lost forever."

—*The Nature*  
Conservancy

## ...GONE

"Nearly all of Africa's elephants will be gone in 20 years if the present killing rate continues."

—*Defenders magazine*

## DEAD DUCKS

"To judge by the dwindling population of North American ducks, the continent's wetlands—feeding and breeding grounds for many waterfowl—must be under severe stress. The U.S. Fish and Wildlife service estimates that only 66 million ducks migrated south this past fall (1988), 8 million fewer than in 1987."

—*Worldwatch magazine,*  
Feb. 1989

## EQUAL PROTECTION

"Only a few popular and charismatic mammals are receiving adequate concern and protection....It is important to fight also for less well-known species...particularly insects, fish, amphibians, reptiles, and plants. Otherwise, we will be allowing crucial pieces of the fabric that holds ecosystems together to disappear."

—*Brian Gaffney,*  
The Ecology Center  
Newsletter



# GROUNDWATER POLLUTION

## **WATER-LOG**

"As a nation, we consume 450 billion gallons of water every day. Ninety-seven percent of the Earth's supply is contained in our oceans, and 2% is frozen. We get our water from the 1% that is left, which comes from one of two places: the Earth's surface (rivers, lakes and streams) or from...groundwater."

—The National Coalition  
Against Pesticide Use

## **PRECIOUS RESOURCE**

"Today nearly 117 million citizens—over one-half of the U.S. population—rely on groundwater for their source of drinking water....It is no wonder that the discovery of groundwater contamination in every state across the country has generated great concern."

*Velma Smith,*  
Environmental Action

## **WHERE DOES IT COME FROM?**

"Groundwater...is water that fills the cracks and pore spaces in rocks and sediments...

beneath the surface of the earth. Most groundwater is naturally pure....In many cases, groundwater remains undisturbed for years, even centuries, before it is used.... More than 90% of the world's total supply of drinkable water is groundwater....

—The Water Pollution  
Control Federation

## **THE PROBLEM**

"Because we have not understood...groundwater—or how vulnerable it is—we have been careless. Gasoline or other harmful liquids have been allowed to leak from underground storage tanks into the groundwater supply. Pollutants seep...from poorly constructed landfills or septic systems. Groundwater [is] polluted by runoff from fertilized fields [and] industrial areas. Homeowners contribute to groundwater contamination by dumping household chemicals down the drain or...on the ground."

—The Water Pollution  
Control Federation





# ALL THAT GARBAGE

## WHAT A DUMP

"More than half the cities in America will exhaust their current landfills by 1990. Already, rising mountains of trash overwhelm...town dumps, and thousands of dumps have been closed for pollution problems."

—*State of the States, 1987,*  
*Renew America*

"America has for a long time taken the cheapest option in waste disposal: 90% of its rubbish is simply dumped in landfill sites and buried. But landfill sites are filling up; a third have closed since 1980. More than half the cities on the east coast will run out of room by 1990. In New York, 14 sites have closed in the past ten years. All of Seattle's sites will soon be full."

—*The Economist*

## FLOATING GARBAGE

"No one really knows how much plastic is fouling the oceans. But a recent report...estimated that up to 350 million pounds of packaging and fishing gear alone may be

lost or dumped by fishermen and sailors each year. Millions of pounds more may come from individuals, private boats, and factories"

—*Michael Bowker,*  
*International Wildlife*  
*magazine*

## THE WRONG PACKAGE

"The burgeoning solid waste problem reflects a trend in lifestyles...that emphasize shopping convenience, quick preparation and consumption, and easy disposal. Since 1960 the waste generated by packaging has increased more than 200%."

—*Renew America*

## COMMON SENSE

"Other industrial countries produce half as much trash per person as we do, and recycle a major portion of it... The cheapest and safest ways to deal with trash are those that make common sense: producing less waste and recycling more."

—*1988-89 Annual Report,*  
*The Environmental*  
*Defense Fund*