

*Natural Resources  
Defense Council  
Annual Report*



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*A tropical rain forest in Hawaii. Preservation of rain forests, which reduce the concentration of carbon dioxide in the atmosphere, is just one of the issues that must be addressed if we are to stave off a global warming trend. For more information on NRDC's new multi-faceted program to protect the earth's climate, see page 4.*

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# Natural Resources Defense Council Annual Report 1987-1988



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## Bequests

"Bequests (gifts through one's will) are an important source of long term support for NRDC. They enable us to continue our protection of the environment in the challenging years ahead. This year, we gratefully acknowledge bequests from the following:

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## Recommended Form of Bequest

The Trustees of NRDC recommend that for estate planning purposes, members and friends consider the following language for use in their wills:

"To the Natural Resources Defense Council, a not-for-profit, tax-exempt membership organization incorporated by the laws of the State of New York in 1970, having as its principal address 122 East 42nd St., New York, NY, 10168, I hereby give and bequeath \_\_\_\_\_ for NRDC's general purposes."

In order to prevent NRDC from incurring future administrative costs, it would be helpful if you would consider adding the following language to any restrictions you may wish to impose on your bequest:

"If at some future time, in the judgement of the Trustees of NRDC, it is no longer practicable to use the income or principal of this bequest for the purposes intended, the Trustees have the right to use the income or principal for whatever purpose they deem necessary and most closely in accord with the intent described herein."

If you wish to discuss the language of your bequest with a member of NRDC's staff, please contact the Planned Giving Office, 212-949-0049.

# To Our Members and Friends

In the year just passed, the environment sent humanity a powerful message. During the long months of record heat, drought, and ocean calamities, we could almost hear the planet pleading with us. I am proud to report that we are answering those pleas with direct action.

Many months before the heat wave of 1988 made "the greenhouse effect" a household phrase, the staff and trustees had begun to assemble the elements of our Atmosphere Protection Initiative. We are attacking the greenhouse effect in a variety of ways, developing the programs needed to protect the world's climate. The first achievement of our program is a new "anti-greenhouse" agreement under which NRDC and the Soviet Academy of Sciences will demonstrate how energy efficiency can reduce production of greenhouse gases.

That agreement was made possible by our ongoing work with the Soviet Academy to demonstrate how seismology can verify compliance with a nuclear test ban. The Nuclear Test Ban Verification Project reached a dramatic point in April when seismologists detonated simulated nuclear explosions in the Nevada desert. Each blast was successfully recorded at our seismic monitoring stations, validating our argument that verification should pose no obstacle to an international test ban agreement.

Pioneering work in international agreements has become an important complement to NRDC's consistent legal advocacy on behalf of America's natural resources. The cover of last year's annual report showed caribou grazing in the Arctic national Wildlife Refuge. The refuge was then in imminent danger, threatened by the Interior Department's plans for oil development. Environmentalists rallied and Congress halted the plans. It is far soon to declare victory, but we are very proud of our work to preserve this pristine area.

The Arctic Refuge is a touchstone for the entire environmental movement, and NRDC's part in the fight to preserve it is emblematic of the role we've filled for eighteen years. We moved quickly on all fronts, urging Congress to consider wilderness legislation, while helping to block pro-development bills. The staff published a stunning report, *Oil in the Arctic*, exposing the damage already done by oil development at nearby Prudhoe Bay and warning of similar consequences for the refuge. We followed up with legal action, filing Clean Water Act enforcement suits on oil companies now operating at Prudhoe Bay.

Eighteen years of environmental advocacy have taught us many lessons and we apply that experience every day. In these many years

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Mrs. Spencer R. Keare  
Mrs. Charles F. Kellers  
Douglas W. Kesten

\*Deceased



John H. Adams, executive director (left), and Adrian W. DeWind, chairman of the Board of Trustees

together we have forged a staff of dedicated professionals who are acknowledged as the best in the business. Several of our staff were honored this year by their peers. Lisa Speer received a commendation from the Natural Resources Council of America for *Oil in the Arctic*; Richard Ayres was honored by Yale Law School as an alumnus who has made an "outstanding contribution to public interest law; Justin Ward received the 1988 American Farmland Trust Agricultural Conservation Award; and Dr. Thomas Cochran was presented the American Physical Society's Slizard Award. In addition, the United Nations Environment Program selected NRDC for special honors, and the *Washington Monthly* cited NRDC as one of the five best public interest groups in America.

As we approach our twentieth anniversary in 1990, it is a great pleasure to see that NRDC has grown to nearly ninety-five thousand members, with a thriving staff and an accomplished board of trustees.

There are some notable changes on the board this year. Senator John C. Culver departed and Gifford B. Pinchot became an honorary trustee. Robert Curvin moved on to the Ford Foundation. Taking their places will be Lucy Blake, excutive director of the California League of Conservation Voters; Frederick W. Terry, a partner with Sullivan and Cromwell; and John E. Echohawk, executive director of the Native American Rights Fund.

The duty of defending our environment has become an ever more complicated task. We have grown to meet the demands of this defense, and your confidence and participation have made our efforts possible. On behalf of the trustees and staff, we thank you.

John H. Adams  
Executive Director

Adrian W. Dewind  
Chairman of the Board

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## New NRDC Headquarters

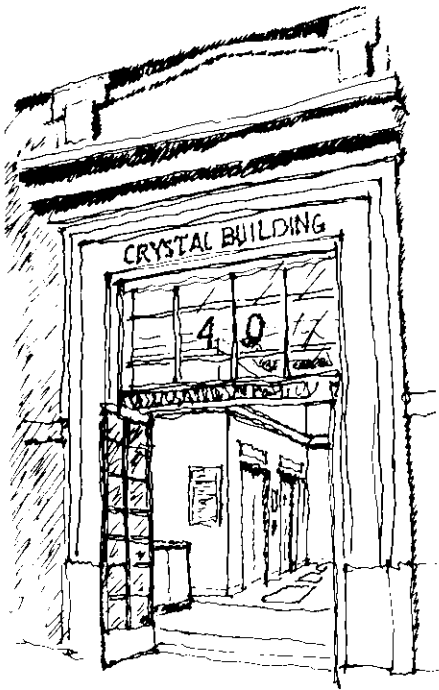
The New York office staff will soon be packing up their files and books and moving downtown; we have joined with two partners to purchase a twelve-story building at 40 West 20th Street. Three floors will be the home of NRDC's New York headquarters and the remaining floors will be sold as condominiums to other non-profit organizations.

Buying a building makes sound business sense. Since 1977, we have rented space at favorable rates, but our ten-year lease expired last spring, exposing NRDC to the high costs and instability of renting in New York. In ten years, rent alone could have cost the New York office as much as \$1.2 million a year. As owners, we will be able to reduce our future operating expenses, and thereby devote more of our income to our environmental programs. In addition, NRDC will have an appreciating asset.

The new offices will be the most energy efficient in the city, giving architects, engineers, planners, and conservationists a demonstration model that will instruct them on how best to conserve energy in the future. Extra insulation in the walls and windows, more efficient overhead and task lighting, light sensors, and one of the most advanced

heating and cooling systems on the market will reduce the amount of energy expended, thus reducing our total energy costs. In addition, the new offices will feature an environmental, science, and law library.

NRDC has launched a \$6 million capital campaign to finance its share of the purchase price and renovations. The staff is immeasurably grateful to the entire board of trustees for the generosity and support of this purchase, especially Frances Beinecke and Henry Breck, who co-chaired the capital campaign. The move is scheduled to take place in early 1989.



*NRDC's new headquarters in New York City.*

*Paul Segal Associates, Architects  
Architects: 40 West 20th Street*

*Croxton Collaborative, Architects  
Architects: NRDC Offices*

## Atmosphere Protection Initiative

### *An Anti-Greenhouse Action Strategy*

The prospect of a rapidly warming atmosphere and unstable climate is a threat to humankind second only to nuclear war. The risks posed by the greenhouse effect are so substantial and the causes of the phenomenon so deeply rooted in modern industrial activity, that we are forced to reexamine some of our basic national and international policies.

In early 1988, months before the "summer of distress" forced the greenhouse effect into our national consciousness, NRDC began forging a new way of organizing our scientists, attorneys, and resource specialists to better address the challenge of global warming. We are calling this endeavor the Atmosphere Protection Initiative, which better describes the multifaceted approach our staff has developed for initiating meaningful action to protect the earth's climate.

Major changes in national air pollution regulations and energy and land use policies, as well as carefully directed diplomacy, will be necessary to deal with global warming. NRDC has committed twenty attorneys and scientists from eight different on-going NRDC programs to the tasks of litigation, scientific reporting, congressional action, consumer campaigns, and public education.

Attorney Richard Ayres is leading this organization-wide team in the development of new legislative proposals, in cooperation with concerned members of Congress. As the new administration takes office, we will channel these proposals into a powerful stream of measures to improve energy efficiency, eliminate greenhouse chemicals, bolster protection of forests, and alter international lending and aid policies.

For eighteen years, NRDC has been the premier citizen voice for the protection of public health and the environment from air pollution. With more than half a century of experience, NRDC's three clean air attorneys—Ayres, David Doniger and David Hawkins—are acclaimed leaders who have greatly affected our public policy on atmospheric environmental issues. It was in spearheading efforts to protect the stratospheric ozone layer that we began the evolution to this major expansion of our program to address global atmospheric problems.

*This NASA satellite photo from October 15, 1987 shows the most serious ozone depletion ever recorded. The lightest area in the center is the ozone hole.*

In September 1987, amidst concerns about the growing "hole" in the ozone, more than two dozen nations signed an unprecedented international accord to protect the stratospheric ozone layer. The accord is the fruit of a decade of persistent effort by NRDC scientists and lawyers, led by Doniger and International Program attorney David Wirth, to curb chlorofluorocarbons (CFCs) and other ozone-depleting compounds. The U.S. Senate ratified the Montreal Protocol in March 1988, and in August, EPA adopted rules to cut domestic production of CFCs by 50 percent. The rules were issued under a court-ordered deadline obtained by NRDC.

Although the accord only partially protects the ozone layer, and much more work on this problem lies ahead, the agreement demonstrates how NRDC orchestrated a broad-based campaign that has shown the way to global cooperation on international environmental issues.

In May 1988, Ayres and executive director John Adams led an NRDC delegation to Moscow that concluded an agreement with the Soviet Academy of Sciences for joint energy efficiency demonstration projects. The Soviet Union consumes almost as much fossil fuel as the United States; together, the two superpowers account for nearly half of the world's carbon dioxide emissions, one of the main precursors to global warming. Employment of sophisticated energy conservation techniques developed by NRDC's Dr. David Goldstein and Energy Program attorney Ralph Cavanagh could substantially reduce carbon dioxide emissions and help to stabilize the global climate.

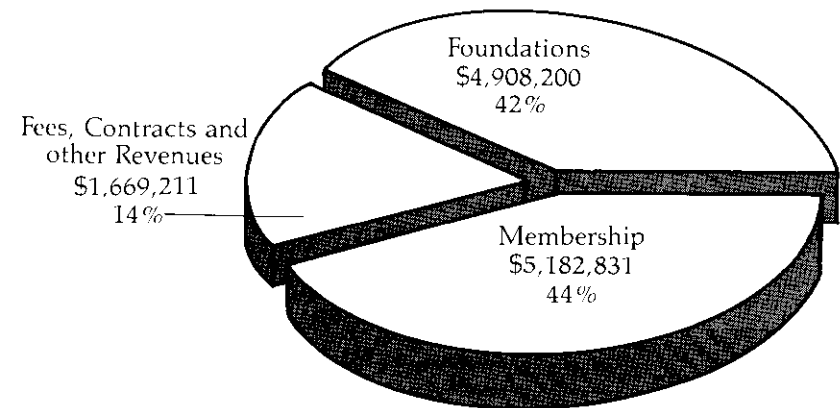
The project will be patterned on several NRDC conservation projects in the United States, including the successful Hood River Conservation Project, which tested the limits of residential energy conservation, and the Seattle Lighting Showcase, which is now in its initial phase.

As a first step, NRDC and Soviet scientists will prepare least-cost energy plans for two key areas of the Soviet Union. The plans will identify and describe in detail the policy mechanisms, such as building stan-

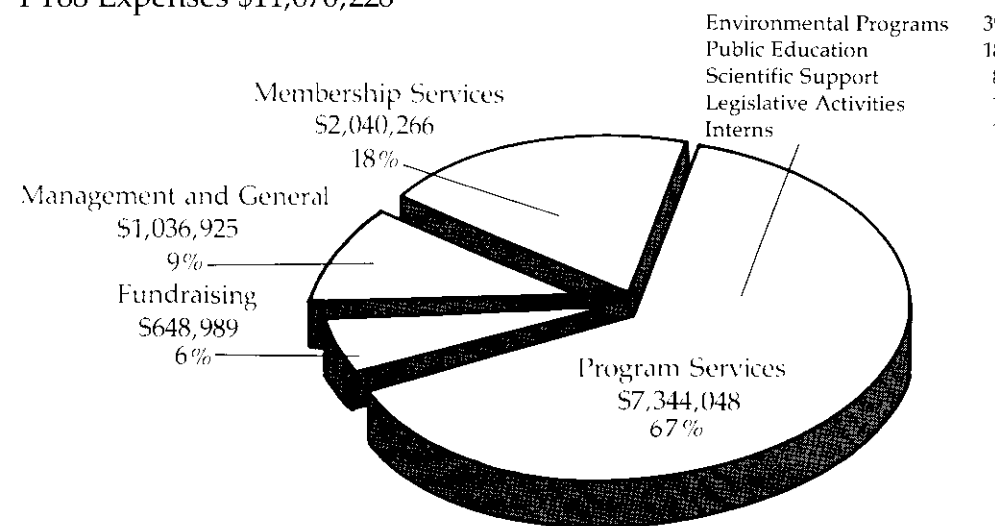


Robert Watson (left) and Dr. David Goldstein, Energy Program.

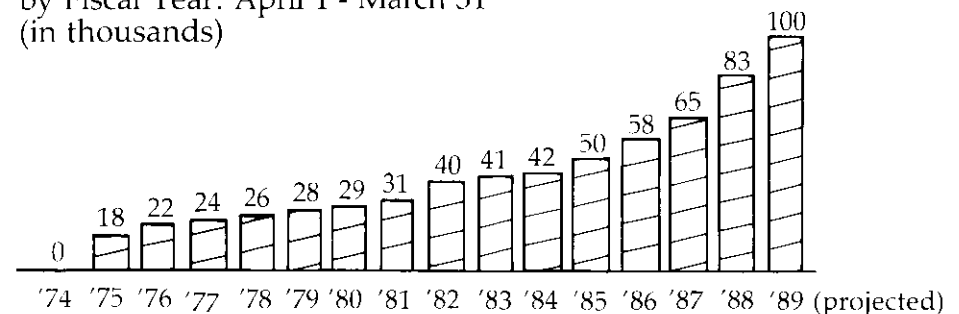
## FY88 Income \$11,760,242



## FY88 Expenses \$11,070,228



## NRDC Membership by Fiscal Year: April 1 - March 31 (in thousands)





# Summary Statement of Support, Revenues, and Expenses, Capital Additions, and Changes in Fund Balances

Years Ended March 31

1988 1987

## Public Support and Revenues

Foundations	4,908,200	4,554,954
Contributions	5,182,831	4,518,223
Court-awarded Fees	979,055	630,544
Investment Income	417,909	457,905
Contracts	70,312	35,117
Special Events (net of direct costs of \$123,509)	117,255	0
Other	84,680	30,987

<b>Total Public Support and Revenue</b>	<b>11,760,242</b>	<b>10,227,730</b>
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## Expenses

Environmental Programs	4,287,410	3,533,940
Scientific Support	1,983,015	1,932,022
Public Education	928,783	730,535
Legislative Activities	43,826	108,924
Intern Program	101,014	94,474
Management and General	1,036,925	952,233
Fundraising (includes membership services)	2,689,255	1,878,608

<b>Total Expenses</b>	<b>11,070,228</b>	<b>9,230,736</b>
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General and Restricted Funds excess (deficiency) of public support and revenue over expenses	(938,320)	375,758
--	-----------	---------

Capital and Building Fund excess (deficiency) of public support and revenue over expenses	1,628,334	621,236
---	-----------	---------

Total excess (deficiency) of public support and revenue over expenses	690,014	996,994
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Fund Balances, beginning of year	3,222,225	2,225,231
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Fund Balances, end of year	4,602,253	4,219,219
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## Summary of Fund Balances

Unrestricted General Fund	803,716	404,667
Various Donor Restricted Funds	2,052,864	1,996,764
Capital Fund	3,122,508	2,921,774
Building Fund	2,299,478	0

<b>Total Fund Balances</b>	<b>8,278,566</b>	<b>5,323,205</b>
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NRDC trustee Robert Redford signs agreement regarding continuing consultation between U.S. environmentalists and Soviet scientists on the issues surrounding global warming. The agreement was signed during a workshop in Moscow in May 1988.

dards, necessary to secure the least-cost resources. NRDC and the Academy also plan to retrofit residential buildings in the Soviet Union with energy efficiency measures, construct building technology demonstration centers in both countries, and prepare model building codes.

Protection of the world's forests is also a paramount concern because trees, especially dense tropical rain forests, capture carbon dioxide, thereby diminishing its concentration in the atmosphere. Despite that fact, the U.S. Forest Service is currently preparing long-range plans for the future of our national forests that call for doubling the annual timber cut by the year 2030. NRDC has been coordinating a nationwide network of attorneys and experts to scrutinize and challenge these misguided plans.

Actions by development aid agencies to help developing countries reduce emissions are extremely important; those nations are projected to account for an increasing share of global carbon dioxide emissions. NRDC's congressional testimony in the spring of 1988 led to provisions in this year's appropriations bill that direct AID and the U.S. representatives to the MDBs to take strong action to bring about increased energy efficiency in developing countries. This was the first time that Congress has directed federal agencies to act to prevent global warming, and thus sets an important precedent.

Our new team of attorneys and scientists, coordinated by NRDC attorney Jacob Scherr, will be working to transform this entire agenda for action into the basis for an international treaty for atmospheric protection.

# Development



Patricia F. Sullivan, NRDC Administrator, and trustee Robert Redford at the benefit premiere of *"The Milagro Beanfield War"*.

The loyal and generous members of NRDC and our friends in the foundation community are to be thanked for another year of financial growth. In the 1988 fiscal year (April 1, 1987 - March 31, 1988), NRDC's total income increased by \$1,533,000, to \$11,760,242. Special contributions earmarked for our building campaign (see page 48) account for the modest difference between income and expenses.

The most significant and dramatic growth was in membership, the people whom NRDC lawyers and scientists represent when they file a lawsuit or testify before Congress. We added 29,000 new members, for a total of 83,000 at the end of the fiscal year; we currently have 95,000 members and expect to cross the 100,000 mark next year. In addition to providing 51 percent of NRDC's annual income, our members augment NRDC's work by participating in petition and letter writing campaigns. They are a constant source of pride to the board and staff.

One group of members, the Council of 1000, deserves special mention for their outstanding support of NRDC. These four hundred individuals, each of whom gives at least \$1,000 annually, contributed over \$1,500,000 in FY88.

NRDC prides itself on running lean. This year, only 6 percent of our budget was spent on fundraising, and 9 percent on management of the organization. More than \$9,400,000 was available for environmental programs run by our staff of lawyers, scientists, and resource specialists, our internship program, *The Amicus Journal*, and our efforts to build an active and informed membership. Special thanks must be given to NRDC's small but energetic development staff, who helped us raise more money than ever before.

High points of last year were the benefit premieres of two films with environmental themes. Over 1200 people attended *The Milagro Beanfield War*, directed by trustee Robert Redford. In June, we held our first film premiere on the west coast when we screened *Big Business*, starring Bette Midler and Lily Tomlin. NRDC also sponsored a very successful public lecture, in honor of the late James Marshall, one of NRDC's founding trustees. Former Governor Bruce Babbitt of Arizona spoke on "Priorities on the Eve of the 21st Century."



# NRDC Publications

## *The Amicus Journal*

Now in its tenth year of publication, *The Amicus Journal* is a leading arbiter of environmental thought and opinion. Focusing on national and international policy, it features commentary, investigative reporting, book reviews, and poetry.

Last year, *Amicus* inaugurated the Fund for Environmental Journalism, enabling expanded research and reporting. The Fund launched a highly acclaimed, four part series on the state of today's environmental movement. The series will form the basis of *Crossroads: Environmental Priorities for the Future*, to be published by Island Press.

*Amicus'* editor, Peter Borrelli, is an experienced journalist and environmentalist who has guided the magazine from its inception. The assistant editor, Jacquelyn Southern, combines environmental and broad public interest experience. The poetry editor, Brian Swann, is a poet and authority on Native American literature.

Widely indexed, reprinted, and cited, *Amicus* reaches not only NRDC's membership, but Congress, government officials, editorial writers, environmental reporters, and over 2,500 libraries. *Library Journal* calls it "one of the best of its type." *Mediafile* says it "presents some of the best writing around," adding, "its fact-crammed articles are well researched, well written, and well illustrated. The quality and style are equal to that of any major national publication."

## *Books and Reports*

The NRDC staff produces numerous technical and consumer-oriented publications on a wide variety of environmental issues. Listed below are some of this year's highlights. For a full list and order form, contact the New York office.

*A Solid Waste Blueprint for New York State*

*Fact Sheet on Oil and Conservation Resources*

*Nuclear Weapons Databook, Volume IV: Soviet Nuclear Weapons*

*Oil in the Arctic: The Environmental Record of Oil Development on Alaska's North Slope*

*Pesticide Alert: A Guide to Pesticides in Fruits and Vegetables*

*Responsible Power Marketing in an Increasingly Competitive Era*

*Right Train, Wrong Track: EPA's Mismanagement of Superfund*

*Taxing the Rural Landscape: Improving State and Federal Policies for Prime Farmland*

# The Nuclear Program

## *Nuclear Test Ban Verification Project*

NRDC's historic scientific exchange with the Soviet Academy of Sciences continued to break new ground as it entered its third year of operation. This project is setting the stage for a nuclear test ban by demonstrating that such an agreement can be effectively monitored using state-of-the-art seismic stations.

Last March, as a result of NRDC's efforts, the U.S. government finally granted unrestricted visas to the Soviet Academy scientists, allowing them to do field work here. This policy change opened the door to an experimental chemical explosion in Nevada in April. Just before the experiment, the Soviet team brought over their own monitoring equipment and established the first Soviet-equipped and operated seismic station ever on American soil. NRDC and Academy scientists then detonated three underground blasts simulating the seismic waves of very small nuclear explosions.

The explosions were tens to thousands of times smaller than nuclear weapons tests. In spite of their small size, they were successfully recorded on more than 150 seismometers hundreds of miles away, including those at the new Soviet stations, the three NRDC/Soviet Academy permanent stations, and along two arrays set up for the experiment. The experiment demonstrated the remarkable sensitivity of the equipment and confirmed the seismologists' beliefs about rock formations underlying test sites in both countries. This new information will help seismologists to calibrate the test sites and design a network of seismic stations necessary to monitor a test ban.

In August and September 1988, joint field teams made seismic recordings of nuclear explosions at the Nevada and Kazakh test sites, which were carried out as part of a government-to-government verification experiment. Our objective was to show that the seismic method of estimating explosion yields is superior to the hydrodynamic method favored by the Reagan Administration.

In cooperation with leading arms control and environmental organizations, NRDC cosponsored earlier this year the International Scientific Symposium on a Nuclear Test Ban, in Las Vegas. At the conference, NRDC released a *Nuclear Weapons Databook Working Paper* revealing 117 unannounced nuclear explosions at the Nevada Test Site. The report focussed attention on the unnecessarily secretive nature of the U.S. government's testing policy.

*Heated water and gravel fly into the air in the Black Rock Desert in Nevada, after NRDC and Soviet Academy scientists set off chemical explosions to demonstrate the capabilities of seismic monitoring equipment.*

The Verification Project has increased public awareness of the failure of the U.S. government to make real progress on ending nuclear testing. Although the House once again approved a moratorium on all but the smallest nuclear tests, the Senate voted by a small margin not to follow suit. Congress did, however, increase significantly the funding for cooperative research on seismic verification and initiated an Energy Department program to begin preparing for a comprehensive test ban. As a result of NRDC's verification work, led by Dr. Thomas Cochran and Jacob Scherr and involving leading seismologists, the next administration will be in a position to quickly initiate and implement a mutual, verifiable halt to nuclear testing.

### *Environmental Effects of Nuclear Weapons Production*

After ten years of advocacy, NRDC has now compelled leaders at the highest levels to finally address the deteriorating and dangerous nuclear weapons production facilities overseen by the Department of Energy (DOE). We are taking legal action to compel full disclosure and debate on the serious problems of safety, nuclear and chemical wastes, and excessive pollution at more than thirty DOE facilities nationwide. In addition, NRDC will force DOE and Congress to consider seriously the future of the production complex, and to implement the more than \$100 billion cleanup that is required to protect health and the environment.

Long-standing NRDC efforts to address the contamination at DOE weapons facilities already achieved a significant victory earlier this year, long before officials admitted to the public that there was a problem. In settling a case brought by NRDC and three citizen groups, the DOE has agreed to clean up several waste sites at the Savannah River Plant in South Carolina.

NRDC strongly advocates a halt in DOE's production of plutonium and a reevaluation of the need for tritium. In cooperation with other leading groups, NRDC launched the "Plutonium Challenge," a campaign calling upon the President and Congress to halt the production of plutonium, and to challenge the Soviets to do the same. At the same time, NRDC contested DOE's plans to increase plutonium production, when attorney Dan Reicher filed suit to compel the agency to prepare an Environmental Impact Statement on a proposed restart of the N-Reactor at the Hanford Nuclear Reservation in Washington state. NRDC's litigation and lobbying efforts were a significant factor in DOE's eventual decision to mothball the reactor.

NRDC also led a successful national campaign against DOE's proposed billion dollar plutonium refinery in Idaho. A panel of experts assembled by NRDC developed a strong technical and economic case against the facility, the Special Isotope Separation plant. An NRDC-coordinated media campaign focused national attention on the plant, and lobbying efforts by NRDC and others convinced Congress to delay a decision about constructing the plant until the next administration takes office.

The NRDC-sponsored Working Group on Tropical Wetlands drafted similar guidelines to protect wetlands from the adverse effects of development projects. Acting Treasury Secretary M. Peter McPherson released the guidelines as voting standards for U.S. representatives in September 1988. Although wetlands occupy only 6 percent of the earth's surface, they are enormously important for flood control, food production, water supply, and wildlife habitat.

The Treasury Department has requested that Wirth and resource specialist Steve Parcels help to ensure full implementation of the standards by organizing an educational symposium for the World Bank staff. And, at the invitation of the World Bank, NRDC has joined the bank's Critical Ecosystems Task Force, a position that will allow us to exert considerable influence on future policy development. Parcels is now beginning work on standards for projects that affect the marine environment.

The program staff have carried out case studies of several MDB projects, both to initiate change in those projects and to draw attention to environmentally inadequate policies. David Wirth's exposure of a World Bank plan for an environmentally destructive livestock project in Botswana led this year to a suspension of disbursements for flawed cattle ranching schemes. Wirth also succeeded in convincing the African Development Bank to begin a thorough overhaul of its lending policies regarding livestock.

As a result of his concern over the Botswana livestock project, Wirth was invited by the Botswana government and the AfDB to visit that country. Upon his return, the Botswana Cabinet confirmed an unprecedented agreement, drafted by Wirth, to work with NRDC and the Sierra Club on a range of environmental issues. Wirth plans to use that agreement to advance conservation policies throughout Africa.



Adele Auchincloss, trustee (left) Faith C. Campbell, Species Conservation Program, and John Echolaw, trustee.



Former Arizona governor Bruce Babbitt delivers the 1988 Marshall Lecture, "Priorities on the Eve of the 21st Century".

### *Multilateral Development Banks*

The United States government has great influence on the policies of four multilateral development banks (MDBs), which together lend approximately \$23 billion worldwide each year for development projects. NRDC has managed to exert considerable influence for positive environmental reform at the banks, by working with the Treasury Department, Congress, and bank staff.

In 1987, attorney David Wirth led a coalition of environmental groups in securing legislation that requires U.S. representatives to the banks to press for environmental reform. This legislation for the first time makes public access to MDB documents a part of U.S. policy, and reaffirms a policy calling for increases in environmental staff and environmentally beneficial lending. It also requires the administration to press for alternatives to questionable projects.

Working with the Treasury Department, NRDC has been able to initiate significant reform in bank policies regarding tropical forests. In April, Treasury Secretary James A. Baker III released standards requiring U.S. representatives to the MDBs to vote against projects that do not meet strict environmental requirements for preservation of tropical forests. The guidelines were drafted by the NRDC-sponsored Tropical Forest Working Group, which is chaired by trustee Robert Blake.

### *Nuclear Weapons Databook*

Through the *Databook* Project, NRDC seeks to raise the quality of the nuclear weapons debate and enhance public participation. While publication of the *Databook* series remains a central focus of the project, the staff increasingly works on a number of other publications and activities. In addition, NRDC is called upon daily by congressional staffers, journalists, and other organizations to provide information.

In December 1987, NRDC organized "Summit Watch" to serve as a source of independent information and analysis on nuclear weapons for the thousands of journalists covering the meeting of President Reagan and Secretary General Gorbachev. NRDC analysts Dr. Stan Norris, Dr. Thomas Cochran, and William Arkin, in cooperation with leading experts, issued detailed technical analyses and held daily briefings and press conferences to help journalists understand the new INF treaty.

Volume IV of the *Databook*, the most comprehensive compilation of information on the Soviet nuclear arsenal, is now complete.



In the Nevada Desert, Evigeney Velikhov (left), vice president of the Soviet Academy of Sciences, Dr. Thomas B. Cochran, NRDC, and Soviet scientists Nikolai Yukhnin and Mikhail Gokhberg toast the simulated nuclear explosion with a glass of vodka.



# The Global Environment

The environments of developing nations, home to two-thirds of the earth's population and land mass, have long been subject to the whims of more powerful countries, with the result that deforestation, desertification, and squandering of scarce resources is commonplace. These problems not only undermine development efforts in the countries concerned; they have serious global impacts.

NRDC's International Program aims to reverse these trends by encouraging international policymakers to develop environmentally sound policies and to consider long term environmental factors as important as short term political pressures.

## *U.S. Foreign Policy*

The U.S. Agency for International Development (AID), the world's largest bilateral development aid agency, is an extremely important point of leverage in solving international environmental problems. NRDC staff have played a significant role in establishing AID as a major force for conservation.

By putting pressure on AID and Congress, program director Thomas Stoel succeeded this year in nearly doubling the funds that AID must spend on wildlife conservation, to \$4.5 million a year. Projects supported by AID under this mandate include rhino conservation in Kenya and Nepal, preservation of coral reefs off Belize, and protection of Costa Rica's Corcovado National Park.

NRDC is now urging the Senate to approve an amendment to the Foreign Assistance Act that contains several important environmental provisions. The amendment was drafted in part by Stoel and after intensive lobbying, was passed by the House of Representatives in December 1987. It would require AID to spend at least \$45 million on specific environmental protection activities in Africa, where disregard for the environment has contributed to recent famines. The projects would emphasize participation of and administration by local people rather than distant bureaucrats. The amendments also call for new AID emphasis on sustainable agriculture and energy, environmental soundness of water projects, and protection of biological diversity. Once the legislation is enacted, NRDC will use its international contacts to ensure that proposals for beneficial projects are submitted to AID and receive the necessary funding.

# Energy Conservation

The Energy Program, directed by Ralph Cavanagh and David Goldstein, works to demonstrate that low-cost opportunities to improve energy efficiency, as well as renewable energy, can entirely replace the need for environmentally destructive sources of new electricity, oil, and gas supplies. The program has focused on developing successful regional examples of "least-cost" energy planning, which serve as models for minimizing dollar and environmental costs by exploiting conservation "resources." During the past year, NRDC obtained exciting new agreements and policies to save energy on the regional and national levels.

## *Efficiency is our Untapped Resource*

In California, NRDC developed a coalition of building industry and public interest organizations to obtain passage of improved energy efficiency standards in new houses. The standards represent a consensus of the coalition, and are accompanied by the nation's most comprehensive set of training materials for building professionals. The new standards will reduce household energy consumption by more than 80 percent, compared to pre-energy-conservation levels. The wide range of choices that the new rules offer will be supported by home builders and energy conservation programs. Savings from adopting similar standards nationwide would exceed the amount of oil consumed in barrels of oil, over half the mean projected output of the National Wildlife Refuge.

NRDC found additional ways to tap conservation resources in an agreement with the Pacific Power and Light Company, the Pacific Northwest's largest utility. Over a period of at least two years, NRDC and Pacific will jointly develop programs for improving the efficiency of long-lived electric appliances and furnaces. Pacific will also launch an ambitious campaign to bring at least 60 percent of the new electrically heated houses in its region into compliance with stringent efficiency standards by 1991. The NRDC/Pacific accord is a breakthrough in a long-standing dispute between environmentalists and utilities over power marketing policies during periods when generating capacity is in surplus.

Also in the Northwest, NRDC helped organize a collaborative effort to build a Seattle demonstration facility for super-efficient lighting, which will show builders and architects how to cut lighting needs in commercial buildings by 75 percent or more. Currently, commercial buildings consume approximately 100,000 megawatts of peak power, which ex-



*Trustee Cruz Reynoso and Executive Director John H. Adams at the benefit premiere of "Big Business".*

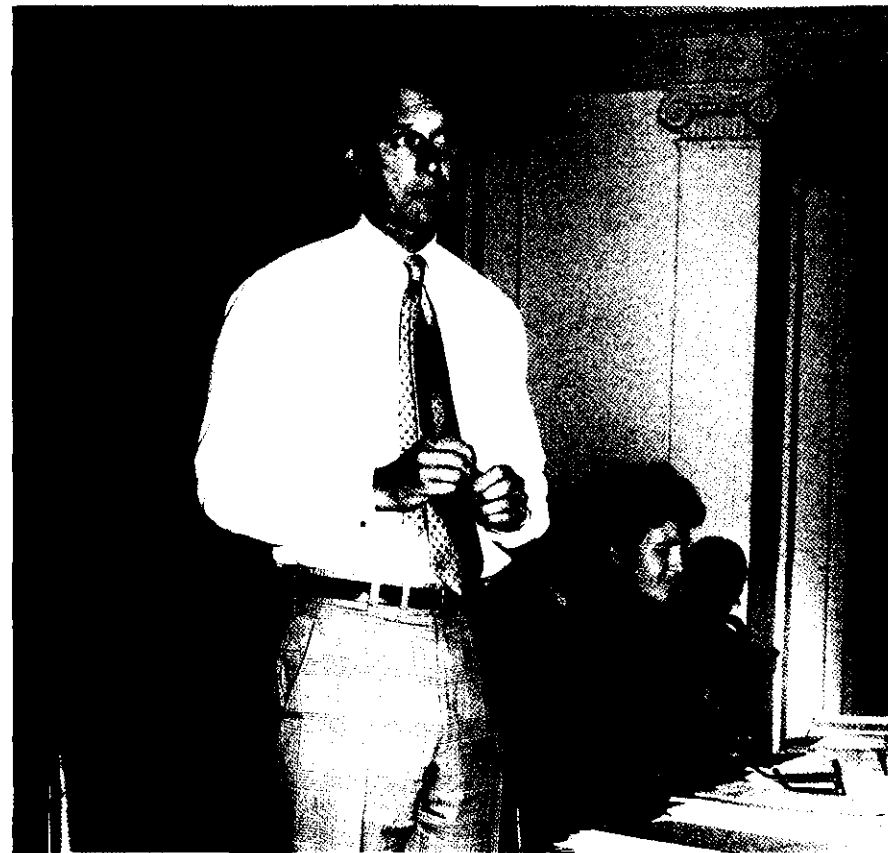
ceeds the entire installed capacity of the U.S. nuclear program. The facility is jointly sponsored by NRDC, the Bonneville Power Administration, the Northwest Conservation Act Coalition, the California Energy Commission, and Seattle City Light, the city's municipal utility. Operation of the new Lighting Showcase is expected to begin in the summer of 1989.

NRDC is also now constructing a "demonstration model" of its own. Relying on the technical expertise of the Energy Program staff, NRDC's new headquarters in New York City is being fitted with state-of-the-art energy conservation measures, including sensors that turn off lights in unoccupied rooms and one of the most advanced heating and cooling systems on the market. Our new offices will be the most energy efficient in New York City, and will prove to architects, engineers, and city planners that energy conservation is feasible and affordable.

### *National Energy Conservation*

On the national level, NRDC helped convince Congress to enact a sequel to the 1987 National Appliance Energy Conservation Act, which sets minimum efficiency requirements for most common household appliances. The new law, signed on June 28, 1988, creates standards for commercial lighting equipment. Savings from the first installment of the regulations will be equivalent to fourteen large coal-fired power plants.

It is not enough simply to secure new legislation; enforcement requires continued vigilance. For example, NRDC is working to ensure that national guidelines for refrigerator efficiency are consistent with



*NRDC trustee Henry R. Breck addresses the annual meeting of members. On the right are trustees Francis Beinecke and Carol R. Noyes.*

The Governor of California, George Deukmejian, has consistently tried to cut the heart out of the statute by issuing regulations that exempt most of the products it is supposed to cover. For the past year, Meyerhoff has led the California environmental community's litigation efforts to uphold the intent of Proposition 65. Three lawsuits now pending in the California courts have managed to hold off the governor's hatchet for the time being. If successful, they will result in a strong toxics protection law for California consumers and a shining example for other states.

Other pending NRDC litigation would also serve to strengthen policies governing all pesticides. We have challenged EPA's approval of daminozide, which is applied primarily to apples to delay ripening. Daminozide poses a cancer risk to children, because they consume large quantities of apple products; the suit seeks to establish that the government may not permit cancer causing pesticides in food. Another suit is contesting a court decision to allow the use of dinoseb, which causes birth defects.



five thousand copies sold out soon after Mott completed a nationwide media tour. Her campaign produced a host of articles, editorials, and radio and television interviews that educated many people who were perhaps unaware of the risk. Across the country, several supermarkets are responding by providing organically grown produce and using independent testing services to detect pesticides on produce.

A companion report on the potential health risks of pesticides in preschool children's diets, prepared by Brad Sewall and Robin Whyatt, is scheduled for release in early 1989. It documents an elevated risk of cancer in preschoolers, and urges major changes in the way EPA establishes permissible pesticide residue limits.

The key to a safer food supply lies in reauthorization of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). Intensive, final-hour lobbying by NRDC attorney Janet Hathaway and actress Meryl Streep helped to ensure enactment of legislation that will substantially strengthen FIFRA. The new law will require pesticide manufacturers to help fund the evaluation of each pesticide's health and environmental effects, and repeals the requirement that EPA purchase all stocks of pesticides suspended from use. The new legislation is a significant step on the long road to pesticide reform, but it does not adequately control pesticides. Hathaway will continue to press for additional legislative changes to protect groundwater from contamination and to ensure that pesticide residues do not pose health threats.

The Pesticides Program staff is also working to strengthen California statutes that could set the pace for the nation. The Birth Defect Prevention Act requires that all pesticides used in the state be tested for their ability to cause cancer, sterility, miscarriages, birth defects, and other chronic diseases. It requires the California Department of Food and Agriculture to survey all pesticides used in the state, and identify all "data gaps" in inadequate health studies. The pesticide chemical industry must then do the testing necessary to fill in the gaps. Unfortunately, deadlines for both agency and industry compliance have passed with little action. NRDC attorney Al Meyerhoff has filed suit against the agency; if successful, full chronic toxicity testing of nearly half the pesticides used throughout the country will be done long before the EPA would require such testing.

One of the most controversial state environmental laws on record, the Safe Drinking Water and Toxics Enforcement Act, or Proposition 65, was overwhelmingly approved by California voters in 1986. This sweeping measure prohibits human exposure, without warning, to toxic chemicals that present a significant risk of cancer or reproductive problems. It also prohibits contamination of drinking water by those chemicals. The goal of this citizen-sponsored initiative is to drive dangerous chemicals out of the environment, the home, and the marketplace by requiring warnings to consumers. Market forces could convince businesses to consider the use of safer alternatives.

protection of the global ozone layer; our focus has been conservation technologies that avoid the use of ozone-destroying chemicals. NRDC also prepared extensive comments on specific techniques for improving lighting efficiency in federal buildings. The U.S. Department of Energy subsequently proposed to adopt verbatim NRDC's recommended lighting performance requirements, effective in 1992.

As the first step toward a national least-cost energy plan, NRDC resource specialist Robert Watson prepared a report, *Fact Sheet on Oil and Conservation Resources*. His analysis shows that the largest unexploited oil and gas reserves lie not in environmentally sensitive coastal or Alaskan fields, but in an enormous stock of inefficient automobiles, buildings, and appliances. Watson's calculations demonstrate that these conservation resources could provide more than twice as much energy as the total predicted oil production from all federal unleased offshore and Alaskan lands.

Through their work, the program's staff have established reputations as impeccable sources of information and ideas on energy issues. As a result, Ralph Cavanagh has been appointed to serve a three-year term on the Energy Engineering Board of the National Academy of Sciences. David Goldstein was honored by the American Council for an Energy Efficient Economy in recognition of "his efforts in creating the National Appliance Efficiency Act of 1987-88." And congressional committees active in national energy policy matters have repeatedly sought NRDC assistance on issues ranging from global warming to competitive auctions for new electricity supplies.



Ralph C. Cavanagh, Energy Program attorney, addresses the NRDC Board of Trustees.



coalition of environmental groups found that EPA used legitimate cleanup methods in only 8 percent of last year's decisions regarding toxic waste site cleanups under the Superfund law. The report received widespread publicity and sparked a number of congressional hearings; Warren and legal fellow Douglas Wolf testified about EPA's mismanagement at three hearings. A followup suit has charged EPA with failing to incorporate into the cleanup plan the stringent standards contained in the 1986 amendments.

To avoid creating more Superfund sites, hazardous wastes are to be disposed of according to guidelines in the Resource Conservation and Recovery Act (RCRA). The basic statute is sound, but rules proposed by the EPA have consistently tried to circumvent or weaken a ban on land disposal of untreated wastes. Several of the rules do not ensure adequate containment of wastes, and do not protect the public from possible waste migration. Attorney Jane Bloom and other program staff have analyzed each land disposal rule issued and filed extensive comments outlining for EPA the many shortcomings. Two lawsuits challenging the rules are now pending; one protests the rule on solvents and dioxin-containing wastes, the other addresses underground waste injection proposals.

A waste reduction policy could substantially reduce the amount of waste that later has to be treated and disposed. Project scientist Ned Smith published recommendations for a national performance standard for waste reduction, prompting discussions with state officials, congressional staff, the National Academy of Sciences, and industry representatives. While others working on this subject have tended to rely on voluntary moves toward waste reduction, NRDC's approach would limit releases of chemicals to a small fraction of the total amount used or produced. Staff members are now working with Congress to incorporate our recommendations into the 1989 RCRA reauthorization, and are supporting similar waste reduction legislation in the Senate.

### *Pesticide Policy Reform*

NRDC's Pesticides Program aims to improve public health by reducing exposures to toxic pesticides and by fostering increased public demand for safe food. A strategy combining legislative and educational efforts, as well as litigation, is proving to have a notable impact.

Public response to *Pesticide Alert: A Guide to Pesticides in Fruits and Vegetables*, by staff scientist Lawrie Mott and research associate Karen Snyder, verified what NRDC has been saying for many years: Americans are worried about the hazards posed by pesticides in food. They realize that the government is not protecting them, and they want to know how best to protect themselves.

*Pesticide Alert*, for the first time, provides consumers with information on pesticides found on fruits and vegetables, what the known health risks are, and how to reduce those hazards. The first printing of twenty-

and medical wastes are closing beaches. NRDC has initiated a series of programs that will build on our past successes in the hazardous waste arena to find solutions to these emerging problems.

At congressional hearings on medical waste, attorney Jacqueline Warren called for a new federal program to address the impacts of illegal disposal, and outlined possible tracking and control measures. Warren and the program staff are now developing an overall solid waste management strategy that will be presented to Congress for consideration in the 1989 reauthorization of the Resource Conservation and Recovery Act. It expands on the recommendations of *A Solid Waste Blueprint for New York State* with a nationwide survey of innovative solid waste reduction programs, now being conducted by research associate Andy Kass.

Until an acceptable national plan is implemented, NRDC will continue to press for improved management of medical wastes, mandatory recycling, and strengthened controls on landfills and incinerators. Warren and research associate Brad Sewall have testified at Senate hearings on the federal solid waste program, analyzed proposed technology requirements for landfills, and acted as peer reviewers for the EPA's proposed waste strategy.

### *Drinking Water & Groundwater Protection*

Evidence that contamination of groundwater is a major national problem also continued to accumulate this year, but EPA has done little to protect our resources. In an effort to remedy the situation, NRDC united with other environmental organizations in designing a national groundwater protection plan that would reduce land disposal of municipal and industrial wastes by 80 percent within fifteen years. The plan, *Protecting the Nation's Groundwater: A Proposal for Federal Legislation*, was released in February.

Proper implementation of the 1986 amendments to the Safe Drinking Water Act could help to stem many groundwater contamination problems. Continuing their oversight of EPA's administration of the amendments, project scientists Wendy Gordon and Robin Whyatt have analyzed several proposed regulations and guidelines. They are also now developing a model program to help communities plagued with contamination of drinking water supplies. Working with the EPA, the water supply industry, and a community whose water is contaminated with lead, NRDC will create a system to notify citizens about the dangers, and will try to find a feasible solution to the problem.

### *Hazardous Waste Disposal*

A graphic example of government inaction on toxic substances was released this year in the report *Right Train, Wrong Track*. NRDC and a

# Public Lands and Natural Resources

## National Forest Management

- From New Hampshire's White Mountains to California's Sierra Nevada, the 156 national forests constitute a rich natural resource. But the future of nearly every one of those forests is now at stake. The Forest Service is currently preparing new management plans for each forest—plans that will guide logging, road development, wildlife habitat, and recreational opportunities for the next fifty years. Many of the plans issued so far have been heavily skewed toward commercial development at the expense of environmental values.
- 

This year, NRDC's Forestry Program increased its efforts to influence this critical planning process. Attorneys Kaid Benfield, David Edelson, and James T. [redacted] Specialist Justin Ward are working with a network of [redacted] and attorneys to examine the plans for [redacted] rests.

In one project, [redacted] ing seventeen local and national groups, NRDC is helping to develop the management plan for the Gallatin National Forest. The Gallatin is part of the largest [redacted] last sizable intact ecosystems in the western United States, home for grizzly bears and elk. The integrity of the forest with extensive road building, oil and gas [redacted], and below-cost timber sales. NRDC's in-depth administrative appeal of the plan seeks widespread restrictions on development and protection of wild lands.

Another significant case involves the Rio Grande National Forest in Colorado. NRDC provided local conservationists with technical support for an appeal that attempted to block extensive below-cost timber sales. The appeal was denied, so the local group initiated a lawsuit against the Forest Service, relying in part on precedents set in another NRDC case in Colorado. NRDC has intervened in the suit to ensure that the precedent is properly interpreted and preserved.

Preservation of unlogged, ancient forests is a vital issue that affects many forests plans. Old growth forests in northern California and the Pacific Northwest are irreplaceable ecosystems that provide optimum habitat for the northern spotted owl and many other species. With a broad coalition of conservation groups, NRDC has filed lawsuits that seek to protect spotted owls under the Endangered Species Act and

challenge the Bureau of Land Management's logging plans in southern Oregon; the latter case has already halted many planned timber sales.

Other priority cases include the George Washington National Forest, where the Forest Service is rewriting the plan in response to an NRDC appeal; the Sequoia, where NRDC contributed to a challenge to abusive logging practices; and the Willamette, where the proposed plan would liquidate one of the largest remaining old growth forests.

On the national level, the program staff continues to audit regulations that affect national forests, particularly the "umbrella" plan for overall management and congressional appropriations for below-cost sales. Of special concern this year is a Forest Service proposal to narrow the time frame allowed for appeals of management plans. NRDC is opposing these changes through various administrative and legislative channels.

## Tropical Forests

A new NRDC program was launched this year to protect tropical forests in Hawaii, Puerto Rico, and the Virgin Islands. Although these forests are small in comparison with others throughout the world, their biological values are great. If intense development pressures are not met now with equally intense pressure for conservation, key areas and species may be lost forever. NRDC's strategy, developed by Laura King, David Edelson, and Dr. Faith Campbell, will address the primary issues affecting the forests, including species loss, land management, water resources, and coastal development.

In Hawaii, which has more endemic species than anywhere else in the world, two national parks and several wildlife refuges are seriously threatened by invading plant and animal species. The state has some of the most progressive environmental laws in the nation, but they have not generally been implemented effectively. NRDC has opened an office in Honolulu and hired Susan Miller, a seasoned environmentalist, to help address this problem. Our first tactic will be to publish a report on protection of endangered species, identifying the species and communities that need protection, and analyzing legal and funding issues.

NRDC staff will later participate in reviews of Hawaii's land use and coastal zone management plans, and will push for increased funding for parks, refuges, and protection programs. Funding increases for programs to control invading species have already been secured through Campbell's efforts in Congress.

In Puerto Rico we are concentrating on the fourteen commonwealth forests. Suzzette Delgado, our research assistant from Puerto Rico, is now investigating development projects; where projects are found to have been implemented contrary to environmental law, NRDC will take action to force compliance. In the Virgin Islands we are working with local groups to secure funding to purchase unprotected land, and are lobbying Congress to release more funds for land acquisition.



NRDC's Communications Department; Jeanne Whalen (left), Paul Allen, and Catherine A. Dold.

Chorover, and scientists Patrick O'Malley and Kim Locke—have continued to bring new cases throughout the country. Suits have been initiated against polluters in New England, the Atlantic states, and the Great Lakes states.

After six years of successful Clean Water Act enforcement, the program is preparing to move in new directions; we are now investigating citizen enforcement of other environmental statutes.

## Toxic Substances Control

From coast to coast, the effects of toxic substances and solid waste have hit home in hundreds, if not thousands of communities. Small towns like Times Beach and Love Canal have been rendered uninhabitable; others can no longer tap into their water supplies. Overflowing landfills have forced many towns to look for alternative methods of garbage disposal. And this summer, millions more people were forced to face the problem when medical waste and sewage fouled their favorite beaches.

Many federal and state laws exist to deal with these problems. But some are full of loopholes, and others have been poorly implemented, so high hopes of real action are often spoiled. To counter such neglect, NRDC's Toxics Program provides a forceful citizen's voice in the ongoing debate over regulation of wastes and chemicals, and strives to assure the most stringent protection of public health possible.

### *Solid & Medical Waste Disposal*

Glaring deficiencies in the federal solid waste program have become increasingly apparent in the past year: municipal solid waste is piling up

# Environmental Law Enforcement

NRDC's Citizen Enforcement Program was founded in 1982 to bring lawsuits against companies that are in violation of environmental statutes, on behalf of NRDC members. The program has investigated the records of thousands of companies in over twenty-five states, and prepared lawsuits against more than one hundred of the worst violators.

The program has enjoyed a remarkable success rate. To date, all of the suits have been concerned with violations of Clean Water Act permits that limit pollutant discharges into waterways and sewage treatment plants. Most of the companies that NRDC has sued or negotiated with have agreed to comply with their permits, and over three million dollars in penalties has been paid to the United States Treasury, state environmental agencies, or third party environmental organizations.

Last year NRDC reached a settlement unprecedented in size with the Bethlehem Steel Corporation for its pollution of the Chesapeake Bay. In addition to promising to comply with its discharge permits, the company agreed to pay \$1.5 million in penalties. One million dollars was placed in an escrow fund for restoration and protection of the Chesapeake Bay, and the balance was paid to the U.S. Treasury. This year, NRDC received court approval to direct \$200,000 from the escrow fund to the Trust for Public Land for the purchase of critical watershed areas near Chesapeake Bay, and \$300,000 to Maryland authorities for model sewage treatment projects.

In 1988, NRDC continued its court action against Gwaltney of Smithfield, a Virginia meat packing plant. In this case, NRDC obtained an assessment of nearly \$1.3 million in penalties against Gwaltney for pollution of a Virginia river. The case has been important not only for stopping Gwaltney's pollution, but also for establishing the right of citizens to bring suit under the Clean Water Act. It has been heard by the Supreme Court, twice by the Fourth Circuit Court, and twice by the trial court, which reaffirmed its original judgement. An additional appeal by the company to the Fourth Circuit has been filed.

This summer NRDC sued ARCO Alaska Inc., for violations of the Clean Water Act in connection with its oil and gas drilling activities on the North Slope of Alaska. The case arose from NRDC's report *Oil in the Arctic*, which exposed the dismal record of environmental compliance in that region. Trustees for Alaska, the Northern Alaska Environmental Center, and the Alaska Center for the Environment have joined NRDC in the suit.

While pursuing final judgments in these and other cases, the program's staff—attorneys James Simon, Nancy Marks, and Nora



Faith Campbell (left) David Edelson, and Laura King launch NRDC's new Tropical Forest Conservation Program in Hawaii.

## Agricultural Resources

Conservation of agricultural resources is a critical issue: more than half the nation's land is used to produce crops and livestock. Nationally, agriculture accounts for more than 80 percent of water consumption, and nearly one in five private sector jobs. But the successes of American agriculture have been accompanied, unfortunately, by threats to the industry's sustained well-being: soil erosion, hazardous chemical use, economic difficulties, and water depletion and pollution.

The primary focus of NRDC's Agriculture Program has been to further environmental gains won in the 1985 Food Security Act (the farm act) and the 1986 Tax Reform Act. Resource specialist Justin Ward helped persuade the Department of Agriculture (USDA) to set soil erosion standards under the farm act for fragile rangelands and woodlands being plowed up for crop production. He is working now to establish similar standards for severely eroding cropland. Such measures should help prevent future dust bowls and alleviate rural water pollution. NRDC also joined other conservation organizations in defending the farm act's "swampbuster" provision against weakening assaults in Congress and at USDA. Swampbuster rules remove federal crop subsidies for agricultural destruction of scarce natural wetlands.

The program's staff exposed the connection between agricultural conservation and tax policy in several in-depth analyses released this year. Highlights include *Tax Shelter Surplus*, describing how the new tax law should benefit the rural environment and economy; and *Taxing the Rural Landscape*, suggesting provisions for laws favoring farmland protection.

In a new program area, resource specialist Thomas Kunhle is examining how federal farm supports discourage low-chemical cropping practices. This analysis will help guide development of the 1990 farm bill.

# Western Water Policy

In this year of severe drought, the Western Water Program intensified its fight to end illegal water subsidies to large agribusinesses that lead to water waste and environmental contamination.

Efforts to reduce federal irrigation subsidies focused on new regulations adopted by the Bureau of Reclamation to implement the landmark Reclamation Reform Act (RRA). At the behest of western agribusiness interests and a handful of politicians, the rules opened loopholes that perpetuate millions of dollars in unintended subsidies, sparking a new cottage industry of 'paper farms' technically small enough to receive the subsidies. These schemes are exacerbating the demand for new water projects in the west.

NRDC exposed the loopholes in a report, *The Broken Promise of Reclamation Reform*, and attorney Hal Candee presented the results to Congress at a Senate oversight hearing. Congressional concern led to several RRA amendments requiring audits of the largest Bureau of Reclamation irrigators, and a full report to Congress so it can take further corrective action. In early 1988, NRDC filed a lawsuit contesting the remaining loopholes. A coalition of environmentalists, family farmers, rural advocates, and local government officials interested in strict enforcement of the subsidy limits have joined the suit.

Meanwhile, our campaign to end toxic contamination caused by agricultural drainage from Bureau of Reclamation projects prompted several noteworthy decisions by California authorities. Spurred by staff scientist Laura King, the California Water Resources Control Board approved pioneering water quality objectives for the San Joaquin River that would sharply limit discharges of selenium-laden agricultural drainage. The objectives call on irrigators to adopt new water conservation and drainage reduction measures as advocated by NRDC.

In addition, under pressure from NRDC, the board rejected yet another Interior Department plea to delay cleanup of Kesterson Wildlife Refuge, where thousands of fish and waterfowl have been poisoned by agricultural drainage. In July 1988, the board upheld NRDC's request that the department eliminate all seasonal flooding at the refuge, after new scientific studies showed that the seasonal ponds contain hazardous levels of selenium. Although the board granted a one-year reprieve on cleaning up the remainder of the refuge, it rejected Interior's request for an alternative, open-ended research experiment which NRDC charged would delay cleanup indefinitely.

objected to EPA's interpretation, and notified all states that they should follow the law rather than EPA's illegal proposal. Many states reportedly revised their plans to conform with the law because of NRDC's pressure. But NRDC still may have to go to court to correct EPA's unlawful policies.

## Chesapeake Bay Clean-up

The 1987 amendments call on states to control the runoff of toxic and other pollutants from agricultural, residential, and urban sources: so-called "nonpoint source" pollution. About half the nation's water pollution stems from these diffuse sources, which are much harder to control than "point sources" such as factories.

NRDC has selected the Chesapeake Bay and Virginia as a model for encouraging effective nonpoint source pollution control programs. With the support of the Virginia Environmental Endowment, research associate Paul Thompson is preparing a detailed report that will help Virginia and other states to implement successful control programs. Drawing from the best examples of existing programs, as well as the most recent research, Thompson's report will be a "how to" guide for state and local officials, far more comprehensive than is available from EPA or other sources.

## Sewage Treatment

Toxic pollution in sewage sludge, which comes from the discharge of industrial wastes into public sewage treatment plants, can contaminate air, water, and food supplies when the sludge is incinerated, landfilled, dumped in the ocean, or used as fertilizer. The Clean Water Act amendments directed EPA to develop criteria governing the level of toxics that can be present in sludge. Under earlier law, regulations were due in 1978, but were never issued. Continuing this decade-long history of delay, EPA is already well behind the new statutory schedule. To precipitate faster action, Landman filed suit to force EPA to agree to a new schedule; we expect to win an enforceable schedule from the court this year.

An earlier NRDC lawsuit has prohibited industries from increasing their toxic discharges to sewage plants until the sludge rules go into effect. That ban should have prompted a number of the affected cities and industries to urge EPA to issue the sludge rules, but they chose instead to seek a legislative bailout from Congress. Their efforts failed, largely due to lobbying efforts by Adler and Landman. Some cities and industries have sued EPA, arguing that the pretreatment requirements should be weakened, despite Congress' prohibition and the court decision. NRDC has intervened in these cases to uphold our earlier victory.

## Controlling Toxics

The 1987 amendments contained new deadlines for regulating the organic chemical and pesticide industries, two of the largest remaining sources of toxic water pollutants. Due in part to NRDC pressure, the EPA issued the organic chemicals rule in late 1987; it improves regulation of the chemical industry, but is still riddled with loopholes and deficiencies. Thirty different industry litigants, including most of the nation's largest chemical companies, have sued EPA to weaken the rule. NRDC, led by attorney Bob Adler, is the only party in the case arguing for more protection of water quality. Adler is also stepping up the pressure on EPA to fill other regulatory voids concerning discharges from hazardous waste treaters, waste oil refiners, and paint manufacturers.

Congress stipulated that states must adopt numerical standards for toxic pollutants in their waters, identify toxic "hotspots," and clamp down on discharges of these pollutants. Although the language of these provisions is crystal clear, EPA has proposed to allow states to circumvent them. Clean Water Program attorney Jessica Landman vigorously



Sarah Glover (left) and Jessica Landman of the Clean Water Program check water samples on a boat in the Chesapeake Bay.



Johanna Wald, Public Lands Program Director (left), Donna Wilcox, D.C. Office Manager, and Ann Notthoff, Coastal Program.

## Public Lands Protection

The Public Lands Program realized several noteworthy accomplishments this year in its efforts to protect the diverse lands and resources managed by the Bureau of Land Management (BLM).

Following up on a settlement agreement signed last fall with the Department of Interior, program director Johanna Wald kept a close eye on the department's processing of non-competitive coal leasing applications, and helped prevent indiscriminate leasing on thousands of acres of valuable wildlife habitat. When the first two Environmental Impact Statements on proposed leases were issued, as mandated by the settlement, Wald and the National Wildlife Federation prepared detailed critiques of their content. Those comments revealed the department's failure to address the impacts on wildlife, with the result that no lease applications have been granted.

A new lawsuit, now pending, is challenging the department's procedures for granting competitive coal leases. Known as "unsuitability criteria," the procedures are supposed to identify land that should never be leased because environmental impacts would be too great. But the criteria fail to address such important values as wetlands, air quality, and Native American sacred sites. NRDC's suit aims to secure compliance with the National Environmental Policy Act and thereby force the department to consider fully the impacts of leasing.

Much of the program's work is aimed toward limiting the role of livestock grazing in management of public lands. This year, NRDC forced the BLM to back off from its plan to resurrect "cooperative management agreements," which would have institutionalized livestock grazing as the dominant use of public lands and turned over their management to livestock owners. The BLM abandoned that plan, as well as several other damaging proposals, after Wald and David Edelson

generated substantial public opposition and submitted comments. NRDC is now concentrating on changing the federally subsidized grazing fee formula and securing more protection for riparian areas. In testimony before the House Subcommittee on Parks and Public Lands, Wald documented how the formula used by the Forest Service and the BLM fails to charge fair market value.

## Endangered Species

### *Plant Trade*

The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), which seeks to prevent the extinction of species by overexploitation, has now been signed by ninety-six countries. NRDC resource specialist Faith Campbell successfully pressed for improved treaty protection for vulnerable plant species, and in the past year, maintained pressure on the U.S. to improve enforcement of CITES. Campbell has also been working to increase the funds to implement CITES, and testified before Congress in support of a larger U.S. contribution. As a member of the board of the Conservation Treaty Support Fund, she is assisting efforts to generate world-wide public support for the treaty.

Many plant species dug from the wild to supply the horticultural market are not yet protected by either CITES or U.S. law. NRDC is working with the World Wildlife Fund and the Garden Club of America to identify which species are collected from the wild, to educate the gardening public to avoid purchasing them, and to improve legal protection for those species. More than twenty-five thousand copies of a brochure on wildflowers and a fact sheet on bulbs have been distributed to the public. In response, plant retailers and the National Association of Botanical Gardens are now reconsidering their role in educating the public and making propagated plants available.

### *Protecting a Fragile Asset*

The Endangered Species Act was finally reauthorized and strengthened in October 1988, capping four years of lobbying efforts by NRDC and others. The law was due for reauthorization in 1985, but controversies over individual species had delayed action. Faith Campbell's testimony on endangered plant species proved instrumental in securing new protections for plants; for the first time it is illegal to destroy endangered plants on public or private land.

To fend off attempts by the administration to cut back other endangered species programs, Campbell lobbied Congress for increased funds. In the last several months, increases have been won for several



*Katherine Kennedy and Mitchell Bernard, staff attorneys for NRDC's new Urban Law Center.*

established an Urban Law Center to confront the environmental effects of real estate development in New York City. Unchecked residential and commercial development, which can have adverse impacts on air, water, transportation, parks, open space, and community character will now be met head on by advocates for responsible, controlled development. Two attorneys have been hired to staff the center: Mitchell Bernard, who spearheaded the last round of successful litigation against the Westway highway in New York City, and Katharine Kennedy, a recent Harvard Law School graduate.

## Clean Water

### *Safeguarding Rivers, Lakes & Streams*

The battle for a comprehensive, strengthened Clean Water Act took ten years, and was accomplished only when Congress overrode a presidential veto last year. NRDC played a critical role in persuading Congress of the need for the new strengthening provisions, shaping the substance of the amendments, and mustering support for the override.

This year the program's staff concentrated their efforts on ensuring the timely and effective implementation of those amendments. Already, EPA's implementation of the new act has been plagued by delays and "interpretations" designed to weaken the act's most important provisions.



Another air pollution milestone was put into effect this spring. Six low-polluting methanol-powered buses began rolling on New York City streets to test whether alternative fueled vehicles can replace the smoky diesel buses that pour noxious pollutants into urban air. This demonstration project, an outgrowth of an NRDC case settlement, and a similar experiment involving buses running on natural gas are being closely monitored by NRDC. If successful, these pilot projects could lay the foundation for the eventual phase-out of diesel-powered buses in heavily polluted urban areas.

This was also an active year on the solid waste front. In the spring, NRDC headed up an environmental coalition that released *A Solid Waste Blueprint for New York State*. In late summer, the New York State Department of Environmental Conservation announced adoption of comprehensive new rules on recycling, incineration, and landfilling activities. The rules incorporate several key NRDC recommendations, including tighter recycling mandates for local communities, and one of the nation's first standards to limit incinerator emissions. Meanwhile, NRDC supplied the legal firepower in a year-long administrative permit challenge to the first of several proposed new garbage burning plants that would surround New York City. A decision in this important proceeding is pending.

Finally, we added an important new weapon to our urban environment arsenal this year. With assistance from the J.M. Kaplan Fund, we

programs, including Forest Service endangered species management, the BLM's wildlife program, and the international conservation efforts by the National Park Service and the Fish and Wildlife Service.

## Coastal Resources

In the summer of 1988, beaches closed by pollution and medical waste graphically illustrated what conservationists have been saying for years: the oceans do not have a limitless capacity to absorb society's waste. Without further protection, they will soon lose their ability to rebound from abuse. Demands for shoreline development, offshore oil leasing, and garbage disposal must be viewed in the context of their impact on the environment. NRDC's coastal program, in addressing both the national and local impacts of coastal development, is forcing decision makers to consider more seriously the consequences of their actions.

### Troubled Waters

In early 1988, the Coastal Program began to focus on strategies to halt the steady degradation of ocean waters in the northeast. In the first segment of this campaign, attorney Lynne Edgerton testified in support of the federal Ocean Dumping Phase-Out Act of 1988. Under this act, all ocean dumping of sewage would be illegal after December 31, 1991. Congress is expected pass the act in late 1988.



Eric A Goldstein (left), Urban Environment Program director, and Charles L. Gray, Director of the EPA's Emissions Control Division in Ann Arbor, Michigan, launch the methanol bus test program in New York City.



Lisa Speer, Coastal Program Scientist, at the Beaufort Sea, near Prudhoe Bay, Alaska.

While the legislation was making its way through congressional committees, Edgerton and Jessica Landman pressed for improvements in New York City's pretreatment program in order to prevent toxic materials from entering the waste stream, and for restrictions on the city's offshore dumping permit. In August, Edgerton notified nine New York and New Jersey municipalities of NRDC's intention to sue to end ocean dumping, charging that continued dumping of sewage sludge violates several federal environmental laws. Both actions helped to publicize the urgency of the issue and stimulated congressional action on the Ocean Dumping Phase-Out Act.

To ensure that sewage sludge produced in the future is either beneficially used or safely disposed of, NRDC has initiated an inter-program effort to identify the most environmentally and economically preferred land-based alternatives.

### *The Arctic Refuge*

NRDC's efforts to protect coastal environments do not stop at the shoreline. In January 1988, staff scientist Lisa Speer released *Oil in the Arctic*, the first in-depth analysis of the oil industry's environmental record on the North Slope of Alaska. The report, which exposed widespread abuse of the environment and of the law, is the centerpiece in NRDC's campaign to convince Congress to prohibit similar development in the coastal plain region of the Arctic National Wildlife Refuge. It is the only documented, comprehensive rebuttal to the oil industry's claim that fifteen years of oil development at Prudhoe Bay has not harmed the environment.

The report has been the subject of three congressional hearings, and continues to play a major role in the ongoing legislative debate over the fate of the refuge. NRDC's campaign scored a very important, albeit temporary, victory when legislation to open the refuge was shelved until 1989. The debate will resume in earnest in January, and NRDC will continue to bring its expertise to bear on this classic conservation battle.

### *Offshore Oil Leasing*

Secretary of the Interior Donald Hodel's 5-Year Offshore Oil and Gas Leasing Program poses one of the greatest threats to the ocean environment. The Interior Department itself admits that twenty or more major oil spills will likely result from the program. NRDC attorneys Sarah Chasis, James Thornton, and Johanna Wald filed a suit challenging the department's refusal to exclude ecologically sensitive areas or consider alternative energy sources.

Thornton presented oral argument in the case in September 1988. But Hodel's program remains in effect until the court makes a decision, so NRDC staff have turned to other avenues to protect sensitive areas from

## *Toxic Air Pollution*

A legal victory governing emissions standards for the toxic air pollutant vinyl chloride marked the judicial rejection of the cost-benefit approach to protecting public health from air pollution. The court held that emission controls must be based on health protection, rather than clean-up costs. This ruling greatly improves prospects for meaningful controls on dozens of other toxic air pollutants, including benzene and radionuclides.

As of July 1988, major manufacturing facilities that handle large quantities of some 328 toxic chemicals are required to report their discharges to the air, land, and water. Much of this pollution is emitted to the air, largely because toxic air emissions are so poorly regulated and controlled relative to other media. NRDC's Deborah Sheiman has been at the forefront of efforts to secure public access to comprehensive information about toxic releases. She sent a Reporters Kit to hundreds of journalists around the country, generating extensive coverage of the toxic release data. Sheiman later released a prototype report on toxic air pollution releases in Maryland, to serve as a guide for citizens in other states.

## *The Urban Environment*

### *Making Progress in New York City*

The Urban Environment Program, directed by Eric A. Goldstein, is a unique undertaking for a national environmental organization. For more than a decade, the mission of this program has been to improve environmental quality in the nation's most densely populated metropolis, New York City, and to develop solutions that could be applied in other urban areas. Over the years, our team of lawyers and urban specialists paved the way for the multi-billion dollar rebuilding of the region's transit system, brought successful litigation to increase shorefront parklands, and spearheaded nationwide reductions in toxic gasoline lead.

During the summer of 1988, ozone smog in the New York-New Jersey region peaked at the highest levels seen in the last decade. Millions of residents in these two states alone were regularly breathing unhealthy air. In the wake of our successful 1987 court actions directing officials in both states to implement clean air strategies without further delay, NRDC worked to insure that smog control measures ordered by the courts were actually implemented. Our staff testified at numerous administrative hearings and our attorneys turned back petroleum industry appeals of the federal court rulings. In one of the summer's few air quality bright spots, several pollution reduction strategies, including controls on escaping gasoline fumes at thousands of service stations, were finally being put into place.



David Hawkins, Clean Air Program attorney.

## Legal Action & Public Education

While the legislative battle continued, NRDC worked through the EPA and the courts to address the problems of acid rain, urban smog, and toxic air pollutants.

Hawkins won a significant victory this year in the sixteen-year legal battle to outlaw the heart of the acid rain problem: the electric utility industry's dispersion of pollution through extremely tall smokestacks, rather than control of sulfur and nitrogen oxides at their source. The U.S. Court of Appeals ruled that EPA regulations permitting this practice are illegal, and ordered the agency to tighten pollution control requirements for as many as two hundred of the nation's largest units. Hawkins is now pursuing court actions under three other provisions of the Clean Air Act which could curtail emissions of sulfur oxides by nearly as much as the acid rain bills that were considered by Congress.

Resource specialist Deborah Sheiman helped keep the acid rain issue in the public eye by providing citizens and the media with the most recent monitoring data on acid deposition and stream acidification throughout the eastern United States. Much of this information came from government studies that otherwise might not have been brought to public attention.

NRDC is also leading efforts to reinvigorate the moribund EPA smog control program, which has contributed to worsening threats to human health. Hawkins, whom the *National Journal* profiled as "the detail man on the clean air beat," because of his encyclopedic knowledge of technical and legal issues, completed special studies documenting the increasing health threat. His analyses show that on Long Island, and in Washington, D.C., the outdoor air is so polluted many days of the summer that it violates workplace standards for ozone.



Franklin E. Parker, NRDC treasurer, and Laurie Alemian-Derian, comptroller.

leasing. This summer, Lisa Speer worked to secure Congressional leasing bans protecting 23 million highly sensitive acres off northern California, the Florida keys, and New England's Cape Cod and Georges Bank. The staff also participated in the individual lease sale process under the program, and supported local efforts to control the effects of leasing and related development off New Jersey, Rhode Island, Florida and Alaska. NRDC attorney Johanna Wald and resource specialist Ann Notthoff compiled extensive comments on the first sale in northern California, incorporating the opinions of numerous experts.

On the local level, NRDC intervention succeeded in upholding the ordinances of more than a dozen California cities and counties to regulate onshore support facilities, and helped to defend the state's Coastal Management Program from attack by the federal government. Both efforts were major victories for state and local governments that have often felt powerless to influence the national leasing program.



# Public Health and the Environment

## Clean Air

### *A Sky Full of Storm*

The summer of 1988 brought the worst air quality in recent memory to most of the nation's metropolitan areas, imparting fresh urgency to enacting new pollution control measures.

As leader of the National Clean Air Coalition's campaign to strengthen the Clean Air Act, NRDC has shaped the congressional agenda. NRDC attorneys Richard Ayres (chairman of the coalition), David Hawkins, and David Doniger testified more than two dozen times before House and Senate committees this past year, urging enactment of new pollution control requirements for motor vehicles, electric power plants, chemical factories, and other emissions sources.

The clean air staff worked with members of both Houses of Congress and their staffs to frame and revise legislative proposals on acid rain, smog, and toxic air pollutants. The challenge was to devise new programs that industrial opponents could not defeat, while preserving the essential elements of effective control programs. Throughout the summer, NRDC staff worked on compromise proposals designed to address industry objections.

In the final days of the congressional session it became apparent that these efforts would not succeed this year. While many issues were resolved, two industries in particular were adamantly opposed to passage of a new law: the automobile and electric utility industries. If more time had remained in the session, this opposition could have been overcome. However, with only a few days left, all had to concede that these forces could block legislation simply by using procedural delaying tactics. In October, congressional leaders for a new clean air law announced there would be no floor vote this year.

Our work was not in vain, however; we now have an advanced base from which to proceed next year. There is now a congressional consensus that passage of a new law is a priority task for the next Congress. Protection of the environment has been elevated as a public issue by the past 'summer of distress' and by the presidential candidates' pledges to do a better job than the current administration. This should produce a better climate for passage of a strong Clean Air Act in the next Congress.

*Millions of cars produce tons of pollution: In 1986, transportation sources emitted 47 million tons of carbon monoxide, 70 percent of the U.S. total, and 7.2 million tons of hydrocarbons, 33 percent of the total.*