THE MAINE WOODS

"In wildness is the preservation of the world."
Henry David Thoreau

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Eastern Marsh Spring Brook in Cutler. *Photo by Paul Donahue*

"Only after the last tree has been cut down. Only after the last river has been poisoned. Only after the last fish has been caught. Only then you will find that money cannot be eaten."

Cree Indian Proverb

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A Voice in the Wilderness by Jonathan Carter

DISPENSERS OF POISON

Some fifteen years ago in late August I set out with friends to canoe the Dead River from below Grand Falls to the Forks. This section of water provides some of the most challenging whitewater canoeing in the state. As we followed logging roads toward our put in point, I can remember the anticipatory tension and excitement of "doing the Dead". About two miles from Grand Falls, we were stopped by a Scott Paper Company (soon to become SAPPI, and now Plum Creek) roadblock. A forester informed us that if we proceeded, we could not come out for at least 24 hours due to a herbicide spray project underway. I could hear the sounds of helicopters overhead. When I inquired about the safety of the chemicals being used and the potential problems associated with drift, the forester told me not to worry and that the chemicals being used were perfectly safe. She also added that since she had a PhD, I could TRUST her assessment!

photo by Janet LeClair

FEN director Jonathan Carter in a Plum Creek clearcut north of Flagstaff Lake.

Since then I have had many interactions with these dispensers of poisons. Most recently Boise (now Meade) sprayed the hills feeding my watershed around my farm. Both clearcutting and plantation forestry require the use of toxic herbicides. In the last two decades hundreds of thousands of acres of Maine's forests have been sprayed. In addition, hundreds of thousands of additional miles of roadsides and utility right of ways have been doused. The scientific literature overwhelmingly demonstrates that herbicides are not "morning dew". The devastating results of herbicides on biodiversity, soil stability and nutrient content, wildlife habitat, and water quality have been thoroughly documented. In addition, herbicides damage the nervous system, decrease immune function, increase cancer risks, and reduce fertility. A 1999 study found a direct link between the active ingredient, glyphosate, in the most commonly used herbicide, Round-up, and non-Hodgkins lymphoma. Non-Hodgkins lymphoma is a cancer of the lymphatic system. It has increased in Maine at an alarming rate in the last several decades.

In January of 1998 an international group of physicians, scientists, government officials, lawyers, and labor and environmental advocates met at Wingspread in Racine, Wisconsin to discuss the Precautionary Principle. The Wingspread Statement on the Precautionary Principle says, " When an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically. In this context the proponent of an activity, rather than the public, should bear the burden of proof."

Clearly the Precautionary Principle should be applied in respect to herbicides. Yet, in spite of the evidence, the big corporate producers (Monsanto and Dupont) of these toxic chemicals continue a disinformation campaign in an attempt to "greenwash" the issue. There are numerous examples of falsified toxicity reports presented as scientific fact by these corporations. They spend millions of dollars on lobbyist and campaign contributions in order to ensure their "right" to poison all of us.

FEN's Herbicide Project is an attempt to counter their contaminated millions on a small scale here in Maine at the grassroots level. Maine municipalities are empowered by law to pass ordinances regulating pesticide use. In 2001, the towns of Guilford, Willimantic, and Coplin Plantation sought help from FEN to stop local aerial spraying by International Paper.

International paper backed down, not because of concerns about the dangers of herbicides, but because of the potential negative publicity. Although FEN succeeded temporarily, we can be sure that the paper corporations, with the backing of the chemical industry, are scheming to put down any "citizen's revolt". FEN's Herbicide Project will coordinate action among communities statewide in order to send a strong message to the sprayers and regulators to stop herbicide applications altogether.

For far too long your town and your community has been exposed to unwanted environmental toxins with little state protection from regulatory agencies. It is time to fight back. In order for the Herbicide Project to be successful, we need your help. As a fellow activist, I call on all of you to join this campaign for an herbicide free Maine. All of us have an opportunity to take an active role in defending and protecting our communities from the dangers of toxic chemicals. Please contact FEN now. FEN can help you exercise local control in eliminating herbicides from your environment.

"A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise."

Aldo Leopold

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The Forest Ecology Network's Herbicide Project

by Daisy Goodman

The Herbicide Project is a new FEN project, designed to help communities reduce herbicide use on roadsides, utility and railroad rights of way, and in forestry.

The international influence of agribusiness and its increasing reliance on genetically modified plant species has led to a dramatic increase in the use of pesticides worldwide. Fortunately, opposition to these policies is also growing, in the form of an international movement against the rampant use of pesticides. The scientific community has responded to public concern about pesticides by documenting their serious human and environmental consequences and is calling for precaution in their use. After more than fifty years of dependence on pesticides, a strong body of evidence exists on which to base a policy of minimal use. Unfortunately, the regulatory policies set nationally by the EPA and on the state level by Maine's own Board of Pesticides Control do not reflect current scientific knowledge. Clearly, communities must act on the local level if real change is to occur anytime soon. We can't let officials living far away from our communities continue to make decisions exposing us and our families to poisons.

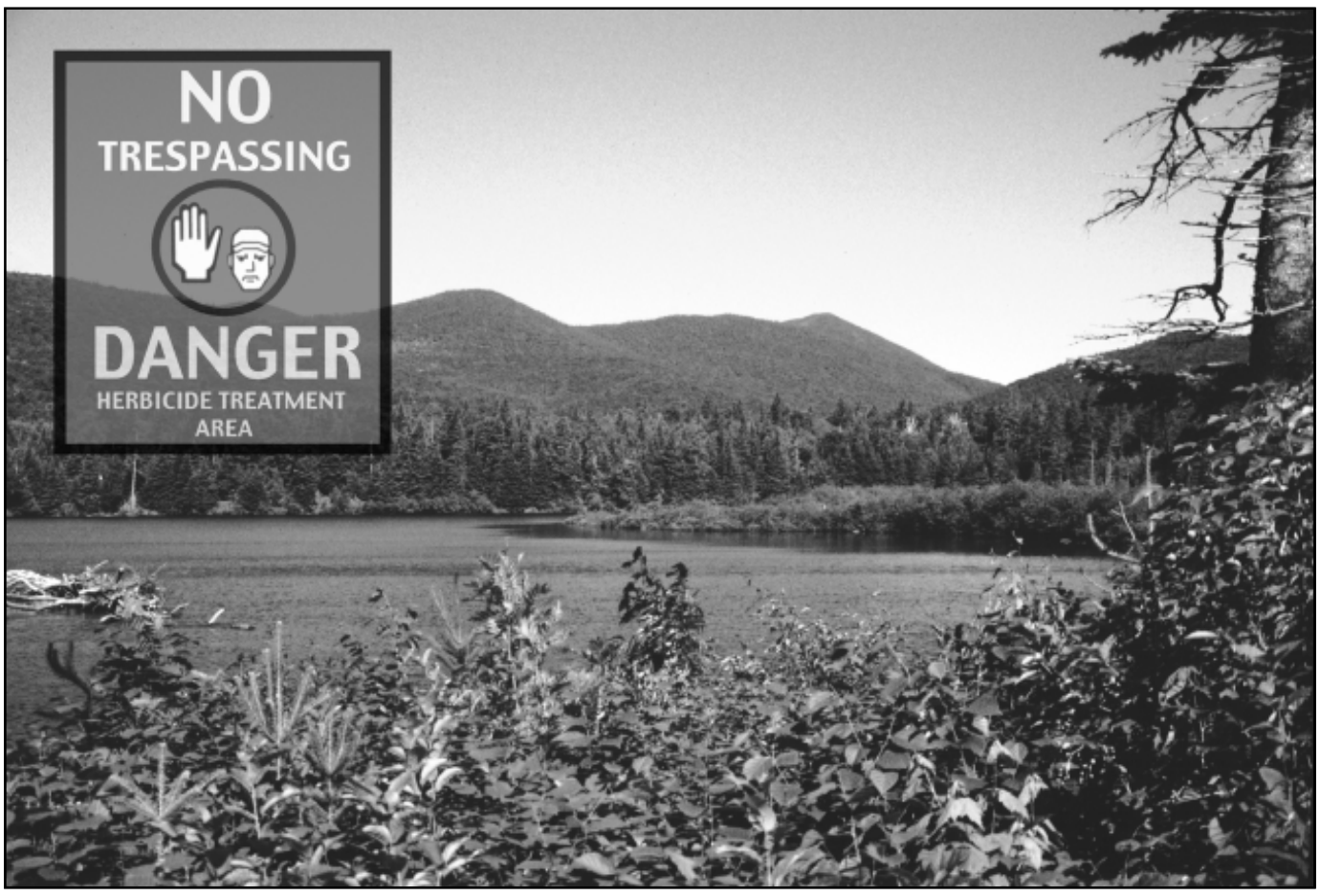


photo by Paul Donahue

Little Kennebago Lake in Stetsontown Township. The surrounding Mead-owned forests are among the hundreds of thousands of acres of forestland in Maine that have been sprayed with herbicides in the past twenty years.

FEN recognizes that pesticide use in general causes widespread environmental disruption, with serious human health consequences. To begin addressing these environmental and health problems of pesticide use, the Herbicide Project focuses on reducing specific herbicide applications on forests, rights of way and roadsides. Maine law recognizes the right of municipalities to regulate pesticide use, however, few communities have exercised this right because they lack information about the risks and alternatives to specific types of herbicide applications. The project will provide accurate information about herbicides and tools to help towns reduce their use. We anticipate that as communities become aware of the risks of herbicide use, this process of education and informed action will quickly expand to include other types of pesticide applications.

Herbicides represent the vast majority of pesticides applied in the United States. They are active at very small concentrations, and mobile in air, dust, and water. They are present in food, water and the air we breathe, and exposure to them is associated with immune system problems, reproductive problems, neurologic problems, and cancers. Everyone is affected, regardless of occupation or place of residence. For example, a recent survey of pesticide exposure found that 12% of people living in various rural and urban areas of the United States tested positive for residues of the herbicide 2,4-D. The only way to reduce exposure to herbicides is to stop using them.

Maine has a long history of fighting pesticide use. Maine has a flourishing organic agriculture movement, and individuals, organizations and communities have opposed many types of pesticide applications. A number of towns have already banned herbicide applications on roadsides, rights of way and forests. The goal of FEN's Herbicide Project is to strengthen this network, bring activists into better communication with one another, increase public awareness of the risks of herbicide and other pesticide use, and provide resources needed for change. Your comments, questions and suggestions are very important in this process. Please let us know if you want more information, or would like to become involved. *(See the model ordinances on page 16)*

Amazonian Deforestation Is Accelerating

A research team of U.S. and Brazilian scientists has provided compelling evidence that rates of forest destruction in the Brazilian Amazon have accelerated over the last decade.

The team, led by William Laurance of the Smithsonian Tropical Research Institute, analyzed deforestation estimates produced by Brazil's National Space Agency that were based on detailed satellite images of the Amazon since 1978.

Contrary to the claims of the Brazilian government that threats to Amazonian forests have fallen in recent years because of improved environmental laws and public attitudes, the Smithsonian team asserts that rates of deforestation have risen sharply since 1995.

"Forest destruction from 1995 to 2000 averaged almost two million hectares a year," said Laurance. "That's equivalent to seven football field a minute, and it's comparable to the bad old days in the 1970s and 1980s, when forest loss in the Amazon was catastrophic."

The research team's findings are important because the Brazilian government plans to invest over $40 billion in new highways, railroads, hydroelectric reservoirs, power lines, and gas lines in the Amazon over the next few years. About 5000 miles of highways will be paved. The government claims that these projects will have only limited effects on the Amazon.

But the research team disputes these assertions. "There's no way you can criss-cross the basin with all these giant transportation and energy projects and not have a tremendous impact on the Amazon," says Laurance.

"When you build a new road in the frontier, you almost always initiate large-scale forest invasions by loggers, hunters, and slash- and-burn farmers."

Although new environmental laws in Brazil are designed to slow forest loss, the research team claims that most laws are rarely enforced. That, in concert with a rapidly growing population and dramatically expanding logging and mining industries, means that threats to Amazonian forests are growing.

"The scariest thing is that many of the highways and infrastructure projects will penetrate right into the pristine heart of the Amazon," says Laurance. "That could increase forest loss and fragmentation on an unprecedented scale."

The team's findings are described in a paper that appeared in the journal Environmental Conservation (William F. Laurance, Ana K. M. Albernaz, and Carlos Da Costa. 2001. Is deforestation accelerating in the Brazilian Amazon? Environmental Conservation 28:305-311).

This report was first published in ScienceDaily Magazine, *January 15, 2002*

Update on Forestry Herbicides

by Daisy Goodman

Aerial herbicide spraying continued in the Maine woods in 2001. According to officials at Maine's Board of Pesticides Control, the amount of forest land treated with herbicides has been reduced in recent years, although the exact number of acres and their location are not available to the public. Companies intending to apply herbicides must file a notice of intent to spray with the Board of Pesticides Control, notify abutting landowners of their plans, and publish a notice in the local press, however, records of the actual applications, once they occur, are not filed with the Board.

Between 16,000 and 20,000 acres of forest land in Maine were treated with herbicides in 2001 (see map). Unfortunately, aerial applications are notoriously inaccurate, resulting in contamination of air, water, and the land surrounding target areas. Aerial herbicide applications can drift over large areas. Based on data collected by the Spray Drift Task Force, an industry research group, the US EPA's Ecological Effects Branch reports that during aerial applications "it is inevitable that a predictable percentage of spray will transport potentially as far as 2 or more miles form the treatment site" [1]. In the same document, the EEB estimates that 40% of the amount of spray applied per given acre is lost off-site when surface transport and atmospheric drift losses are combined[2]. Clearly, the acreage targeted for aerial spraying represents only the center of a much larger area affected by herbicide drift.

photo by Paul Donahue

Thousands of healthy Paper Birches killed by herbicide on Mead Paper Company land in Stetsontown Township.

Forestry herbicides are active at extremely low concentrations, significantly extending the environmental impact of off-target movement during aerial applications. In fact, one class of herbicides used in forestry applications in Maine is so potent, and damage by minute concentrations so widespread, that the EPA's Ecological Effects Branch specifically recommended banning their use in aerial applications. [3] The cumulative effects of aerial herbicide applications on wildlife, plant ecology and the northern forest ecosystem as a whole is unknown. There has been no environmental impact analysis of forestry herbicide applications, despite their extensive use in the Maine woods over the past twenty years. It is interesting to note that when the U.S. Forest Service did conduct such an analysis of its aerial herbicide programs in the northwestern United States in the 1980s, it cancelled routine aerial applications, and now uses herbicides as a "last resort only".[4]

The vast majority of aerial spraying occurs in the unorganized townships, which do not have self-governance, and therefore lack authority under Maine law to regulate pesticide use. Eliminating spraying in these areas can only be accomplished by passage of a statewide referendum banning herbicides in forestry, or through action by the legislature or regulation by the Board of Pesticides Control. To date, these bodies have done nothing to interfere with the forest industry's aerial spray programs. Public involvement in this issue is crucial if any significant change is to occur.

Herbicides are part of a forest management strategy based on clear- cutting, rapid rotations of softwoods for pulp, and an emphasis on mechanization rather than human labor. The alternative, forestry based on selective cutting of mixed hard and softwoods, eliminates the need for herbicides because a forest of diverse age and species composition does not create conditions for an overgrowth of brush. This approach also favors long-term productivity by protecting soil stability, preserving environmental quality, and utilizing human labor for thinning rather than the broad scale application of toxic chemicals. Such a strategy benefits the environment and working people, and is safe and sustainable.

For more information on forestry herbicide applications, or to get involved, please contact the Forest Ecology Network or visit the Herbicide Project website at www.herbicideproject.org.and see the aerial spraying map on page 17 of this issue of *The Maine Woods*.

[1] U.S. EPA (1994). Qualitative assessment of sulfuonylurea herbicides. Memo from A Maciorowksi, Ecological Effects Branch, to E. Byington, Environmental Fate and Effects Division. Washington, D.C. (March 24). P. 8.

[2] U.S. EPA (1994). Qualitative assessment of sulfuonylurea herbicides. Memo from A Maciorowksi, Ecological Effects Branch, to E. Byington, Environmental Fate and Effects Division. Washington, D.C. (March 24). P. 8.

[3] U.S. EPA (1994). Qualitative assessment of sulfuonylurea herbicides. Memo from A Maciorowksi, Ecological Effects Branch, to E. Byington, Environmental Fate and Effects Division. Washington, D.C. (March 24). P. 12ff.

[4] Forestry Herbicides in the Pacific Northwest: No poisons in my watershed. Northwest Coalition for Alternatives to Pesticides, www.pesticide.org.

"Over the long haul of life on this planet, it is the ecololgists, not the bookkeepers of business, who are the ultimate accountants."

Stuart Udall

What Everyone Should Know About Roadside Herbicide Applications

by Daisy Goodman

Herbicides are sprayed along 5500 miles of roadsides each year in Maine, often in residential areas. A review of existing research raises serious concerns about the impacts of these chemicals on human health, wildlife, and water quality. In recent years the public has become more aware of the risks of pesticides in general, and eager to reduce unnecessary pesticide exposure. It is time to ask whether herbicides are necessary to keep our roadsides safe, and whether the benefits of their use outweigh their risks.

Dept. of Transportation Herbicide Program

Herbicides are applied from trucks to 12-15 feet along the roadside. Two herbicide products are mixed together for roadside applications: Garlon IV (active ingredient Triclopyr) and Vanquish (active ingredient Dicamba). Herbicides are applied both by Department of Transportation personnel and a number of subcontractors, who are licensed by the Maine Board of Pesticide Control (BOP). Permits are not required for roadside applications, although herbicide applicators are required to identify all "sensitive areas" which fall within 500 feet of the designated spray area. According to BOP staff, the Department of Transportation is frequently granted variances exempting it from this regulation.

Human Health Effects of Herbicides

The public is exposed to herbicides used on roadsides by playing in areas bordering roadsides, waiting for the schoolbus, wading in drainage ditches along roadsides, picking berries along roadsides, jogging and walking, walking the dog, through "drift" (blowing herbicides) during applications, through dust blowing from defoliated shoulder areas, or water running through drainage ditches sprayed into streams, and in contaminated wells and springs. Dicamba has been detected in groundwater in Maine since 1991[1].

Research shows that both Dicamba and Triclopyr are dangerous to human health. Exposure to Triclopyr increases the incidence of breast cancer and tumors of the adrenal glands[2], and damages the kidneys[3]. Exposure to Dicamba has been linked with a two-fold increase in the rate of non-Hodgkins lymphoma, a cancer of the immune system[4], liver damage[5], and severe effects on the nervous system due to inhibition of the critical nervous system enzyme acetylcholinesterase.[6]

Dicamba and Triclopyr are associated with reproductive problems. Both herbicides are linked to specific birth defects, Triclopyr to skeletal deformations and nervous system problems[7]; Dicamba to genetic mutations[8], and both Dicamba and Triclopyr to growth retardation and increased miscarriage rates. [9]

Children are more susceptible to exposure to toxic chemicals than adults, because their bodies are growing and changing. Rapidly dividing cells are most susceptible to the effects of chemicals which cause mutations. Unfortunately, several studies showed that dicamba increases the rate of breaks in chromosomes in human blood cells and bacteria. [10]

Triclopyr is broken down in mammals, soil, and water into a compound known as TCP[11]. Research conducted by EPA demonstrates that exposure to TCP inhibits growth in cells of the nervous system at very low concentrations, [12] as well as significantly reducing the activity of mitochondria, the "powerhouses" present in all cells which provide energy for cell function and growth[13]. Children are more likely to be exposed to herbicides through extended time playing in mud and grass, eating berries, and exploring in sprayed areas.

Inert Ingredients: what do we know?

Herbicide products contain both active ingredients and proprietary "inert" ingredients. The identity of inert ingredients is not released by the EPA without permission of the manufacturer, even through Freedom of Information Act (FOIA) requests. After years of failed FOIA requests, appeals, and litigation by environmental groups, the identity of many inert ingredients has been revealed. Some "inerts" in herbicide products have proven to be more toxic to humans and wildlife than their associated active ingredients- but are exempt from the EPA testing requirements for herbicide active ingredients. As an example, the Triclopyr product used on Maine's roadsides contains kerosene, a severe respiratory irritant and nervous system toxin, and a petroleum solvent known to damage the kidneys and nervous system as "inert" ingredients. Additional inert ingredients in triclopyr products have been linked to tumor growth and specific birth defects[14]

Effects on wildlife

Dicamba and Triclopyr are directly toxic to wildlife. Additionally, herbicides destroy the roadside habitat of many songbirds, small mammals, and amphibians who inhabit shoulder areas and drainage ditches. Populations of beneficial insects such as butterflies and bees are greatly reduced after exposure to herbicides. The EPA reports that Triclopyr decreases the survival rate of Mallard duckings.[15] In an independent study, application of Dicamba to Mallard eggs caused deformed and stunted hatchlings[16].

Water Quality

Dicamba and Triclopyr do not break down rapidly. Spraying 10-12 foot swathes along roadsides contaminates ditches, which drain herbicide-tainted water into streams, ponds and lakes.

Both Dicamba and Triclopyr have high potential to leach through soil and contaminate ground water[17]. Dicamba has been detected in ground water in Maine since 1991.[18]

Are herbicides necessary?

The goal of herbicide use is to eliminate vegetation, which can limit visibility along roadsides. Root growth under roadbeds is thought to damage pavement, although research shows that soil erosion due to lack of stabilization by plant root structures is at least as destructive to roads.[19]

Due to public concerns about safety, many states have stopped or greatly reduced the use of herbicides on roadsides. Alternatives strategies have been successfully introduced in Lane County, Oregon (1991), and in Iowa, Oregon, and New Hampshire. The State of California's Department. of Transportation has plans to reduce herbicide use by 80% in 2012.[20]

Alternatives to roadside herbicides

The key to successful weed control along roadsides is to develop a stable perennial ground cover capable of controlling erosion and keeping taller plants from growing. This is accomplished by seeding with a mix of hardy native grasses and wildflowers that enhance wildlife habitat; limited mowing or chipping; and spot application of herbicides or use of recently introduced steam and infrared technologies for specific weed problems.

Affectionately known as IRVM (Integrated Roadside Vegetation Management), this common sense strategy was successfully introduced in 1989 in Iowa's Black Hawk County. It is now practiced by state and municipal transportation authorities around the United States, including the California Department of Transportation (Caltrans)[21].

Maine communities empowered to fill the herbicide regulatory gap

Pesticide regulation is the responsibility of the Maine Board of Pesticide Control, an agency located in a relatively small office in Augusta's Amhai State office complex.

22 M.R.S.A., subsection 1471, recognizes the right of Maine's municipalities to regulate pesticide use in their communities. A number of towns have exercised this authority by passing ordinances regulating various types of herbicide use. Maine towns which have banned or restricted the use of herbicides on roadsides include Arrowsic, Southport, Rangeley, Castine, Newburgh, and Owl's Head. Once an ordinance is passed, the town enters into a "no-spray agreement" with the State's Board of Transportation, in which the town agrees to control brush along roadside to Department specifications, at town expense, and the Department agrees not to spray with herbicides. "No-spray" agreements with the Department of Transportation are not available to individual landowners with roadside frontage.

The Forest Ecology Network has drawn up a "model" ordinance banning roadside herbicide applications, based on the example set by these communities. Interested individuals or town representatives may contact F.E.N. for a copy of the ordinance, information about the risks of roadside herbicide applications, and alternatives to their use.

Contact the Forest Ecology Network Herbicide Project on-line at www.powerlink.net/fen, or visit the Herbicide Project website at www.herbicideproject.org for additional information on herbicide use.

[1] U.S. EPA. Prevention, Pesticides and Toxic Substances. (1992). Pesticides in ground water database: a compilation of monitoring studie: 1971-1991. National Summary. Wash. D.C.

[2] U.S. EPA. Office of Prevention, Pesticides, and Toxic Substansces. 1996. Carcinogenicity peer review of triclopyr. Memo from McMahon, T.F. and E. Rinde, Health Effects Division, to R. Taylor, Registration Division and T. Luminello, Special Review and Reregistration Division. Washington, D.C. May 9.

[3] U.S. EPA. 1998. Reregistration eligibility decision (RED): Triclopyr. Washington, D.C.

[4]Cantor, K.P. (1992). Pesticides and other agricultural risk factors for non-Hodgkins lymphoma among men in Iowa and Minnesota. Cancer Res. 52: 2447-2455.

[5] U.S. EPA. Office of Pesticides and Toxic Substances. 1984. Summary of results of studies submitted in support of the registration of dicamba. Washington, D.C.

[6] Beasley, V.R. (1991). 2,4-D toxicosis 1: a pilot study of 2,4-D dichlorophenoxyacetic acid and dicamba induced myotonia in experimental dogs. Vet. Hum Toxicol. 33 (5) 435-440.

[7] U.S. EPA. 1998. Reregistration eligibility decision (RED): Triclopyr. Washington, D.C.; and
Das, K.P. and S. Barone. (1999). Neuronal differentation in PC12 cells is inhibited by chlorpyrifos and its metabolites: is acetylcholinesterase inhibition the site of action? Toxicol. Appl. Pharmacol. 160:217-230.

[8] Perocco, P. et al. (1990). Evaluation of the genotoxic effects of the herbicide dicamba using in vivo and in vitro test systems. Environ. Mol. Mutag. 15:131-135., and
Plewa, M.J. et al. (1984). An evaluation of the genotoxic properties of herbicides following plant and animal activation. Mut. Res. 136: 233-245.

[9] US EPA Office of Pesticide Programs. 1983. Guidance for the reregistration of pesticide products containing dicamba as the active ingredient. Washington, D.C.; and
U.S. EPA. 1998. Reregistration eligibility decision (RED): Triclopyr. Washington, D.C.

[10]Perocco, P. et al. (1990). Evaluation of the genotoxic effects of the herbicide dicamba using in vivo and in vitro test systems. Environ. Mol. Mutag. 15:131-135. and
Plewa, M.J. et al. (1984). An evaluation of the genotoxic properties of herbicides following plant and animal activation. Mut. Res. 136: 233-245.

[11] U.S. EPA. 1998 Reregistration eligibility decision. (RED): Triclopyr. Washington, D.C.

[12] Das, K.P. and S. Barone. (1999). Neuronal differentation in PC12 cells is inhibited by chlorpyrifos and its metabolites: is acetylcholinesterase inhibition the site of action? Toxicol. Appl. Pharmacol. 160:217-230.

[13] Abo-Khalwa, N. and R.M. Hollingworth, 1974. Pesticide chemicals affecting some energy-linked functions of rat liver mitochondria in vitro. Bull. Environ. Contam. Toxicol. 12:446-453.

[14] Cox, C. (2000). Triclopyr Jour. Pest. Reform 20 (4), 12-19.

[15] U.S. EPA. 1998 Reregistration eligibility decision. (RED): Triclopyr. Washington, D.C.

[16] Hoffman, D.J. and P.H. Albers. 1984. Evaluation of potential embryotoxicity and teratogenicity of 42 herbicides, insecticides and petroleum contaminants to mallard eggs. Arch. Environ. Fontam. Toxicol. 13:15-27.

[17] Reinert, K.H. and J.H. Rodgers. 1987. Fate and Persistence of aquatice herbicides. Rev. Environ. Contam. Toxicol. 98: 61-98.

[18] U.S. EPA. Prevention, Pesticides and Toxic Substances. 1992. Pesticides in ground water database: A compilation of monitoring studies. 1971-1991/ National Summay. Washington, D.C.

[19] Nuzzo, V. (1987). Natural Roadsides: Ideas from Wisconsin and Illinois. Jour. Pest. Reform: winter, 1987.

[20] State of California Business, Transportation and Housing Authority. (a997). California Roadsides: A New Perspective. Sacramento, CA.

[21] Daar, S. (1994). Integrated approaches to vegetation management. IPM Practitioner, XVI (9).

What Everyone Should Know About Utility Right of Way Herbicide Applications

by Daisy Goodman

Each year, hundreds or thousands of miles of utility rights of way are treated with herbicides in Maine. Because Maine's Board of Pesticides does not require permits for right of way herbicide applications, the exact area treated is unknown. This article describes the use of herbicides along rights of way in Maine, and briefly discusses key issues of concern.

Herbicides used

Herbicides are applied by powered sprayers mounted on the backs of trucks to a 12-15 foot wide swathe along utility lines and pipeline corridors. Similar technology is used on railroad lines. Six herbicides are used in combinations on rights if way in Maine: Garlon IV (active ingredient Triclopyr), Roundup or Accord (active ingredient Glyphosate), Escort (active ingredient Metsulfuron methyl), Krenite (active ingredient Fossamine ammonium, and Tordon 101 (a mix of Picloram and 2,4-D). Although each herbicide active ingredient used has undergone testing required by the EPA registration process, they have not been studied in combination.

Health Effects

Several of the herbicides used in right of way applications are associated with serious environmental and human health risks, including increased incidence of breast[1] and thyroid cancers[2], non-Hodgkins lymphoma, and depression of immune system response[3]. Four of the six herbicides used are associated with reproductive problems in mammals and/or people, including: skeletal defects (Triclopyr)[4]; skeletal and nervous system problems (2,4-D)[5]; genetic mutations (Picloram)[6], low birth weight and increased miscarriage rates (active ingredients in Garlon, Roundup/Accord, Tordon)[7], and damage to the male reproductive organs and reduced sperm count (active ingredients in Roundup, Tordon)[8]. In general, children are more susceptible to exposure to toxic chemicals than adults, because their bodies are still growing and changing, and because their ability to break down toxins is less than that of healthy adults[9]. Children are also more likely to be exposed to herbicides through playing in mud, grass, eating berries, and exploring in sprayed areas.

Unknown ingredients

Unfortunately, state regulatory agencies and the public know dangerously little about the complex mixture of herbicides applied in Maine. Herbicide products contain far more than the small percentage of active ingredient listed on the product label. Inert ingredients can make up more than 90% of an herbicide product. In addition to inerts, some herbicide products also contain dangerous contaminants, including dioxins.[10] Once herbicides are mixed and applied, they are subject to chemical interactions both with other ingredients and with environmental factors, which may alter the expected degradation of chemicals. There is no evidence in the scientific literature that the toxicity and environmental fate of the complex mixtures actually applied to rights of way in Maine have ever been studied.

The identities of herbicide "inert" ingredients are trade secrets. Although manufacturers do file this information with EPA, it is not subject to release to the public under the Freedom of Information Act (unlike most other EPA documents). Litigation led by the Northwest Coalition for Alternatives to Pesticides has uncovered the identity of inert ingredients in some pesticides, confirming concerns that some "inert" ingredients are more toxic to humans and wildlife than the active ingredients listed on product labels. However, inerts are not subject to EPA pesticide testing requirements because only the active ingredients of herbicide products are registered with EPA. A few "inert ingredients" known to be present in herbicide products used on Maine's rights of way include ethylene glycol, a neurotoxin which can cause abnormal nervous system development in animals in utero,[11] a petroleum solvent, isopropyl alcohol, and triisopropanolamine, a severe respiratory, eye, and skin irritant.[12]

Effects on wildlife

The method of application used in right of way herbicide applications ensures exposure of large and small animals and birds to the toxic mixture of herbicides. Wildlife, including songbirds, butterflies, bees, moose, deer, bear and many small mammals frequent rights of way clearings, eating grass, brush plants and berries, or use them for travel corridors. Birds nest in areas which may be sprayed, and eat insects, seeds and berries which may contain herbicide residues. Spraying eggs with the active ingredient of Tordon 101 (2,4-D) decreases the survival rate of newly hatched birds[13], and Krenite has been shown to cause death and birth defects when applied to bird eggs[14].

Very little research has been done to document the impact of multiple herbicide exposure on animals in the wild- we only know the results of selected laboratory testing of active ingredients alone. Mixtures of chemicals often produce unexpected or intensified effects, a phenomenon known as synergism. As noted above, there are no published studies examining potential synergistic effects of the mixtures of herbicide products currently in use in Maine. The interaction between loss of habitat and exposure to a complex mix of toxins is another factor not considered in existing research. Long-term field studies of populations and their reproductive success are also

lacking[15].

Off-target drift and water quality

Application of herbicides from the back of a moving truck is an inefficient method, resulting in contamination of more than the targeted brush. Off target movement of herbicides is known as "drift". The extent to which drift injures surrounding plants and wildlife depends on the toxicity (potency) of the herbicide used. For example, the herbicide Escort is so strong that minute concentrations found in drift will kill or damage plants. The herbicide Tordon is so toxic and so mobile in the environment that the EPA's own researchers warned "effects at distant locations are plausible, in view of the high persistence, mobility, and phytotoxicity of these chemicals," recommending that the herbicide be banned from use.[16]

The herbicides used on right of way applications in Maine all have a high potential to contaminate water. Picloram, one of two active ingredients in Tordon, has been described by EPA researchers as "among the most mobile of currently registered pesticides"[17]. All except glyphosate (the active ingredient of Accord and Roundup) leach easily through soil to contaminate groundwater.[18] Picloram has already been detected in wells in Maine[19] After rainfall, herbicides run off right of way application sites into wetlands, streams, and ponds. Many of these herbicides and their "inert" ingredients are toxic to fish and other aquatic life.

Alternatives to herbicides

The goal of herbicide use is to eliminate trees and vines which can damage lines and disrupt power transmission, or put down deep root systems which disturb pipelines. Critics point out that applying a complex mix of poisons broadly only serves to exacerbate the cycle of soil disturbance and colonization by rapidly growing, undesireable, brush species, creating an articifical need for regular use of herbicides.

The key to successful weed control is to develop a stable, perennial ground cover which controls erosion and keeps taller plants from growing. Due to public concerns about safety, many utility companies and railroads nationwide have eliminated or severely reduced herbicide use along rights of way, using alternative strategies focus on prevention, rather than exacerbation of the problem, and are both more effective and greatly reduce environmental risks.

Establishment of a stable, non-problematic ground cover is accomplished by selective cutting, burning, or other techniques to favor hardy, low-growing grasses and shrubs. Once these plants are in place, taller species will not be able to take hold. Some companies encourage the growth of huckleberries, goldenrod, and other plants which inhibit the growth of competing species. Special, agile mowers and skidders have been designed for use on utility rights of way. Some utility companies in New Hampshire and California have introduced flocks of sheep and goats to control brush along specific stretches of utility lines. The St. Lawrence and Atlantic Railroad has successfully introduced steam treatment for weeds on railroad beds in Vermont, but still uses herbicides in Maine. Spot application of new steam or infrared technologies can be used to kill selected plants instead of the more traditional selected herbicide treatments.

Several towns in Maine have also banned or restricted the use of herbicides on rights of way, including Montville, Arrowsic, Lebanon, and Owl's Head. In recent years, utility companies have worked with landowners to identify "no-spray" areas; the company agrees not to spray as long as the landowner keeps brush away from lines.

Regulation of herbicides

Herbicide use is regulated by the Maine Board of Pesticides (BOP). However, the BOP does not require permits or prior notification for right of way applications. Few restrictions protecting ground or surface water are placed on herbicide applications. For example, although applications by "powered equipment," such as trucks, require the applicator to identify 'sensitive" areas (i.e. surface water or wells) within 500 feet of the spray target area, this requirement is routinely waived for right of way herbicide applications. No follow up monitoring of water quality or off target drift is done by the BOP or any other state agency in Maine.

Action by local communities

Under Maine law, towns can pass ordinances regulating pesticide use. In the absence of meaningful regulation by the Board of Pesticides, more towns are joining those with no-spray ordinances in place.

Until an ordinance is passed, individuals may post their land as a "no-spray" area, although this has no basis in existing Maine law. However, since Central Maine Power unsuccessfully fought a "no-spray" ordinance in the Town of Lebanon in the 1980s, utility companies have voluntarily worked with landowners to respect "no-spray" areas.

Concerned communities and individuals are urged to contact the Forest Ecology Network Herbicide Project for more information about herbicides, and to visit the Herbicide Project website at www.herbicideproject.org

[1] U.S. EPA. Office of Prevention, Pesticides and Toxic Substances. 1996. Carcinogenicity peer review of triclopyr. Memo from McMahon, T.F. and E. Rinde, Health Effects Division. May 9.

[2] U.S. EPA Office of Pesticides and Toxic Substances. 1991. Second peer review of glyphosate. Memo from W. Dykstra and G.Z. Ghali, Health Effects Division. October 30.

[3] American Lymphoma Foundation (2002). Please see their extensive annotated bibliography, on line at www.lymphomahelp.org.

[4] U.S. EPA, Prevention, Pesticides and Toxic Substances. (1998). Reregistration eligibility decision (RED): Triclopyr. Washington, D.C.

[5] Chernoff, N. et al (1990). Effects of chemically induced maternal toxicity on prenatal development in the rat. Teratol. 42: 651-658.

Garry, V.F. et al (1996). Pesticide appliers, biocides, and birth defects in rural Minnestoa. Environ. Helath Perspe. 104: 394-399.

[6] California Dept. of Food and Agriculture, Medical Toxicology Branch. Summary of toxicological data: picloram. Sacramento, CA. March 7.

[7] U.S. E.P.A. Office of Pesticides and Toxic Substances. (1995). Reregistration eligibility decision (RED): picloram. Washington, D.C.

World Health Organization, U.N. Environment Programme, the International Labour Organization. (1994). Glyphosate. Environmental Health Crieteria #159. Geneva, Switzerland.

U.S. EPA, Prevention, Pesticides and Toxic Substances. (1998). Reregistration eligibility decision (RED): Triclopyr. Washington, D.C.

[8] Youseff, et al. (1995). Effects of Carbofuran and Glyphosate. Journal Environmental Sci. Health. B30(4) 513-534.

Lerda, D. and R. Rizzi. (1991) Study of reproductive function in persons occupationally exposed to 2,4-dichloropheoxyacetic acid (2,4-D). Mut. Res. 262:47-50.

[9] Wargo, J. (1996). Our Children's Toxic Legacy. Yale University Press: New Haven, CT.

[10] Cox, Caoline. (1999). 2,4-D: Toxicology, part 2. Journ. Pest. Reform, 19(2).

[11] Cox, C. (1994). Dicamba. Jour. Pest. Reform, 14 (1), 30-35, and

U.S. Dept. of Health and Human Services, Public Health Service Agency for Toxic Substances and Disease Registry. (1993). Technical Report for ethylene glycol/propylene glycol.

[12] Cox, C. (1998). Picloram. Jour. Pest. Reform 18 (1) 13-20, and

Acros organics. (1996). Material Safety Data Sheet, Triisopropanolamine. Fairlawn, N.J.

[13] U.S. EPA. (1981). Untitled Memo. Review of one-generation reproduction study-mallard ducks. Jan. 5.

[14] U.S. EPA. Office of Pesticide Programs Special Review and Reregistration Division. (1994). Reregistration Eligibility Decision (RED): Fosamine Ammonium. Washington, D.C.

[15] Chen, Bolger and Calvi, (2000). Ecological effects of aerial herbicides: A research review and critique. Unpublished manuscript.

[16] U.S. E.P.A. Office of Pesticides and Toxic Substances. (1995). Reregistration eligibility decision (RED): picloram. Washington, D.C.

[17] U.S. E.P.A. Office of Pesticide Programs. Environmental Fate and Groundwater Branch Review of Picloram. Washington, D.C.

[18] U.S. EPA. Office of Pesticide Programs Special Review and Reregistration Division. (1994). Reregistration Eligibility Decision (RED): Fosamine Ammonium. Washington, D.C.,

USGS NAWQA. Pesicide National Synthesis Project. (1998). Pesticides in surface and groundwater of the US. Summary of the results of the NAWQA program. http://water.wr.usgs.

U.S. EPA. Prevention, Pesticides and Toxic Substances (1998). Reregistration Eligibility Decision (RED): Triclopyr. Washington, D.C.

[19] U.S. EPA. (1992). Pesticides in Ground Water Database: A compilation of monitoring studies 1971-1991. Region 1. Washington, D C.

About the Author

Daisy Goodman has helped get FEN's Herbicide Project off the ground and has written several articles dealing with herbicides in this issue of *The Maine Woods*. Daisy is a certified nurse midwife and is working on a Master's degree in nursing. She attended College of the Atlantic and graduated from Yale University. Before moving to Maine, Daisy worked for the Northern Appalachian Restoration Project. She headed up a New Hampshire Herbicide Project which involved a herbicide use reduction campaign, community outreach, building a liaison with the scientific community, coordination of a malformed frog survey in collaboration with the N.H. Department of Environmental Services, extensive herbicide literature review, development of legislative testimony, and public oversight of herbicide applications. Daisy became involved in pesticide issues because of her deep concern for the health of both humans and the environment, especially the health of children. She currently lives in Farmington with her two children and husband, Tom. We look forward to her continued involvement in FEN's Herbicide Project.

Legal Right to Emit 20,000 Pounds of Air Pollution Purchased by Acid Rain Retirement Fund

by Michael S. Hamilton

Maine is downwind of the 105 dirtiest coal-fired power plants in the U.S., most of which are located in the Ohio River Valley. One is the Merrimack plant in Bow, New Hampshire, five are in New York, 21 in Pennsylvania. They pollute so much they're listed by name in the Clean Air Act of 1990.

The Acid Rain Retirement Fund, based in Portland, was a successful bidder for the right to emit 20,000 pounds of air pollution per year in the annual auction of sulfur dioxide emissions allowances conducted March 25, 2002 by the Chicago Board of Trade. With their bid of $185.00 per ton, A.R.R.F. purchased the legal right to emit 10 tons of sulfur dioxide in 2002 and every year thereafter.

Along with allowances purchased in prior years, A.R.R.F. now owns the right to emit 148,000 pounds (74 tons) of sulfur dioxide per year, plus whatever amount it has not emitted in previous years. This may not sound like much, unless one considers that one ton of sulfur dioxide makes enough acid rain to kill any lake in Maine.

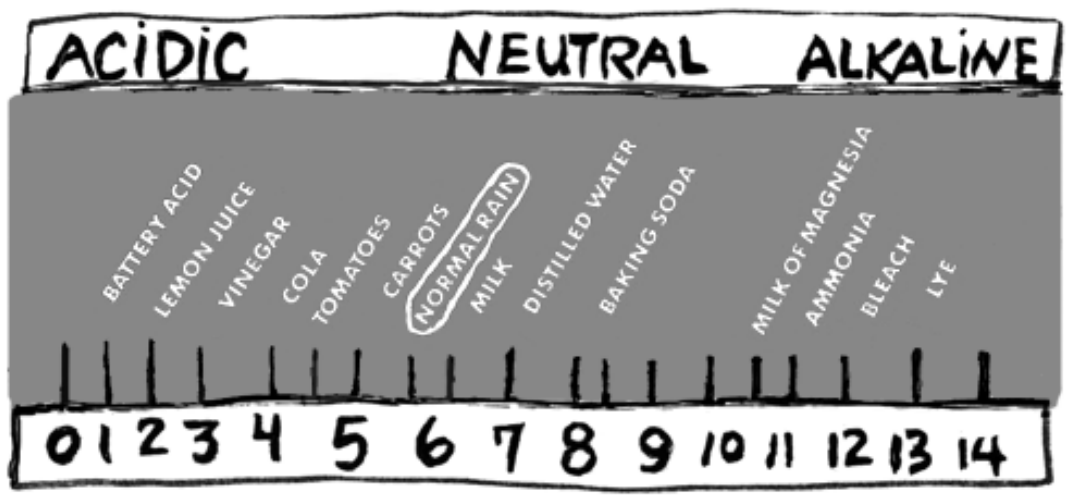
Each year the U.S. Environmental Protection Agency auctions off to the highest bidder about 250,000 pollution allowances that enable companies to emit one ton of sulfur dioxide. A non-profit, all-volunteer, community educational group, the Acid Rain Retirement Fund raises money and has bid alongside polluters for as many allowances as their funds can buy every year since 1995. But instead of using or trading them, A.R.R.F. retires them permanently, taking allowances off the market and keeping sulfur dioxide out of the air.

Because A.R.R.F. did not exercise its right to emit any pollution during 1996-2002, "banking" its emissions allowances for future use, A.R.R.F. now holds the legal right to emit a total of 580,000 pounds—or 290 tons—of sulfur dioxide in 2002. Because it will not exercise its rights, the air we breathe will be cleaner by that amount. Small actions do add up.

Examination of EPA Allowance Auction results 1993-2002 indicates 72 groups or individuals have purchased 1,101 tons of sulfur dioxide emissions allowances for purposes other than emitting air pollution. This is considerably more than the 720 tons/year given by law for the Miami Fort #5 generating unit in Ohio.

Since many purchases were made in earlier years, and unused allowances have accumulated, these groups now own the right to emit 6,892 tons of sulfur dioxide in 2002. This is more than the annual allocation of allowances for each of 32 out of the 105 dirtiest generating units in the United States. This means someday one of these plants will need emissions allowances owned by someone like A.R.R.F. who won't sell them, and they'll have to stop polluting. In the meantime, as the supply of available allowance is reduced, they will get more costly, and it will get more expensive to pollute the air.

Sulfur dioxide is the principal contributor to acid rain that falls on Maine, causing respiratory disorders, impairing visibility, harming the health of fish and wildlife, and degrading Maine lakes. "Acid rain causes tremendous damage to our health and environment in Maine," says Brian Aromando, President of A.R.R.F.



Many lakes in Maine are affected by acid precipitation. Rain is considered abnormally acidic when it has a pH below 5.0, and lakes are considered acidified with a pH of less than 5.5. According to the Maine Department of Environmental Protection, about 100 lakes in Maine have pH lower than 5.5. They say about half these lakes are naturally acidic, the other half caused by acid rain.

The pH of rain and snow in Maine varies between 3.9 and 5.0 (normal pH of rainfall is about 5.5, but a measurement of 4.5pH is ten times more acidic than 5.5pH). The pH of precipitation recorded in December 2001 was 4.6 at Acadia National Park, 4.4 at Bridgeton, 4.7 at Caribou, and 4.5 at Greenville. These readings indicate abnormal acidification.

On March 25, 2002 the U.S. Environmental Protection Agency sold allowances to emit 127,388 tons of sulfur dioxide first usable in 2002 in its "spot auction." The highest bid was for $215/ton, and the lowest successful bid was for $160.50/ton.

Another 127,388 tons worth of allowances first usable in 2009 were auctioned off for $68.00- $120.00/ton to five energy brokers and electric utilities. In total, about $31.8 million was spent on emissions allowances in these two auctions.

The Acid Rain Retirement Fund uses participation in pollution markets as a way to educate children and adults about the sources and detrimental affects of air pollution and acid rain, and actions people can take to reduce such pollution. A.R.R.F. teaches by example, providing guest speakers who are knowledgeable about acid rain and emissions allowances for primary and secondary school classes and other groups. If you need a speaker, contact A.R.R.F.

For more information, visit the A.R.R.F. website at http://www.usm.maine.edu/~pos/arrf.htm or write: Acid Rain Retirement Fund, P.O. Box 10272, Portland, ME 04104, or call Michael Hamilton at 780-4190.

To check the pH of rainfall anywhere in the U.S., see http://water.usgs.gov/nwc/NWC/pH/html/ph.html

Official EPA Auction results can be viewed at www.epa.gov/airmarkets/auctions

Michael Hamilton is founder and Secretary-Treasurer of the Acid Rain Retirement Fund, and Associate Professor and Chair of the Political Science Department at the University of Southern Maine, where he teaches several courses in environmental politics and policy.

Bush Rollbacks Threaten National Forests

by John Demos

While most of America has been caught up in the repercussions of the events of September 11th, the Bush Administration has quietly continued its assault on our environmental laws. Instead of supporting the public's desire to protect our remaining wild forests and restore degraded, the President and the Forest Service are ladling out favors to special interests and weakening the public's right to involvement and legal recourse.

The Administration has been attempting to undermine or eliminate the National Forest Roadless Area Conservation Rule, issued last year by president Clinton, which would protect up to 58 million acres nation-wide. Bush's Forest Service has reopened the comment process on the Rule, claiming that the public was not given sufficient input; ignoring the fact that 600 hearings were held nationwide and that the Forest Service received 1.6 million written comments, 95% of which favored the Rule. Timber companies have brought suit to block the Roadless Rule and the Bush Administration has failed to defend the Rule in court.

Bush has been pushing a National Energy Policy, developed by vice-president Cheney, that calls for drilling in the Arctic National Wildlife Refuge and weakens regulations concerning oil and gas developments on National Forest And Bureau of Land Management holdings. Using last summer's energy crisis and national security issues as leverage, the Administration is attempting to allow near unlimited access by energy interests onto our public lands.

The Natural Resources Defense Council (NRDC) brought a suit to force the Vice President to release documents related to his Energy Task force to uncover the extent of industry influence, including Enron Corporation, on the final policy. The Administration released less than half of the documentation in March, and what they released was heavily redacted. Continuing efforts by NRDC to force the release of all the information, and a second suit being brought by the General Accounting Office, will attempt to bring the truth to light.

Bush is also pressuring Congress to grant him "Fast Track" trade negotiating authority, and is seeking to expand the North American Free Trade Agreement (NAFTA) to cover the entire hemisphere through the Free Trade Area of the Americas (FTAA). The FTAA would undermine forests and other ecosystems by accelerating industrial clearcut logging, weaken protection from invasive species and genetically modified organisms (GMOs), and bind the hands of countries from using various policy tools for the conservation of their natural resources.

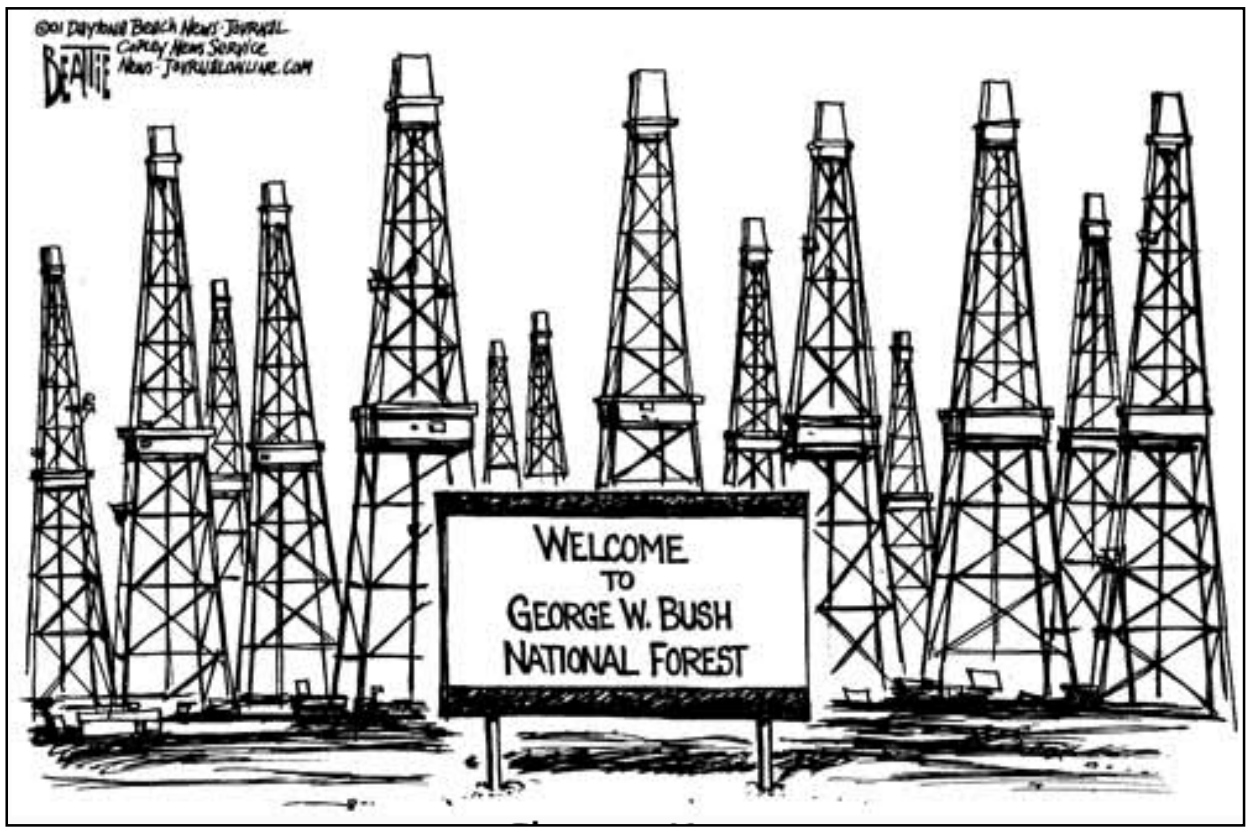
In an attempt to short circuit citizen power on public lands, the Bush Forest Service is expected to release new forest planning regulations that will make it harder for the public to get involved with agency decisions, or to take effective legal action. Recently, in a backdoor attack on current regulations, the Forest Service attempted to push through a huge, controversial timber salvage operation on Montana's Bitterroot National Forest by circumventing the Congressionally mandated public comment and appeal process. Fortunately a federal judge put a halt to the plan in January, determining the Forest Service had "elected to take the law into its own hands". In yet another action, Forest Chief Bosworth has issued a directive that would expand the use of "categorical exclusions" in order to exempt many roadbuilding, salvage logging and mining activities on our National Forests from environmental review and public involvement.

Because the Administration is so forcefully attacking our forests and the laws we use to protect them, citizens must now turn to Congress for help to stand up to the President and the Forest Service. Several critical pieces of legislation to be considered this year will have impacts for good or bad.

Congress has the opportunity this year to make the National Forest Roadless Rule permanent. A revision of the Farm Bill with harmful provisions, such as funding for biomass plants that would feed off our National Forests, needs to be amended. The National Fire Plan that directs forest-thinning operations has been misused and has to be reformed. A highly unpopular program that charges visitors access fees to our public lands should not be expanded and made permanent. Funding to regulate off road vehicle use on public lands should be increased. Phase out of the public lands grazing program that wastes taxpayer money and is environmentally harmful, must be undertaken. These actions, in addition to legislation that will address old growth preservation, forest restoration, habitat and species protection, can be accomplished if we citizens demand our leaders take action.

John Demos
Northeast Organizer
American Lands Alliance

For more information please see our website at:
www.americanlands.org



Mercury Pollution - An Environmental Health Tragedy

by Michael Belliveau

Maine suffers from the highest levels of mercury pollution in the country. Some of this is from obvious sources like the now closed HoltraChem plant in Orrington that dumped mercury into the Penobscot River and into the air for thirty years and left behind a legacy of poisoned waters and workers. However, much of the mercury shows up in high levels in the fish, loons and lakes throughout Maine that are away from any visible source of pollution.

That mercury travels on the winds from near and afar from waste incinerators, coal burning power plants, industrial and commercial boilers, and from smelting scrap metal from old cars, among other sources. The use and disposal of consumer products containing mercury are a major, easily preventable source of mercury that ends up in the waste stream and scrapped cars. Because Maine is the third most reliant state on municipal waste incineration, and because we are downwind of the major mercury sources in the rest of the U.S., mercury pollution poses a significant public health and environmental threat.

Exposure to mercury, a potent neurotoxin, threatens the healthy development of our children. Scientists have shown that mercury in fish eaten by pregnant women can impair learning, memory and attention span in developing children. Between 10% and 20% of all women of childbearing age already consume unsafe amounts of mercury, according to federal and state health agencies. The National Research Council has concluded that maternal mercury exposure at these levels may cause kids to struggle to keep up in school or require special education. Mercury is a major environmental risk factor for the seventeen percent of all U.S. children under age 18 that now suffer from one or more developmental disabilities.

Maine's loon population has the highest mercury levels in the United States. About thirty percent of Maine's Common Loon population is at "high risk" or "extremely high risk" due to mercury contamination

Mercury also poses a significant threat to wildlife, especially to fish-eating birds and mammals. For example, about thirty percent of Maine's Common Loon population is at "high risk" or "extremely high risk" due to mercury contamination, according to Dr. David Evers, a world-renowned avian biologist with the BioDiversity Research Institute in Falmouth. Loons affected by mercury are less fit, more lethargic and have much less reproductive success. These loons initiate fewer nests, hatch half as many eggs and fledge fewer young than loons at low risk from mercury exposure. Dr. Evers believes that Maine's loon population, which has the highest mercury levels in the United States, may be unsustainable and declining due to mercury poisoning. Other species are also at serious risk but have not been as extensively studied for mercury impacts as have loons.

The good news is that due to public awareness, citizen action and political leadership, mercury use in the U.S. is slowing being reduced and pollution sources are being targeted for emission controls. Nevertheless, corporate interests are working hard to avoid responsibility for completing the mercury elimination agenda. The electric utility industry continues to lobby hard against mercury reductions from coal burning power plants. And closer to home, efforts to phase out the use of mercury products are being strongly resisted by the Maine Chamber of Commerce; manufacturers of automobiles, lighting, electrical equipment, batteries, soaps & detergents and computers; and by mercury-users such as the biotech, dental, paper and semiconductor industries. Meanwhile too few people know that too much canned tuna and other fish can harm our children's health and the wildlife continue to suffer.

New State Laws Passed, But More Needed

Despite stiff opposition from these vested economic interests, the Maine Legislature has adopted several bills during the past three years that have set the pace nationally in the growing effort to prevent mercury pollution from consumer products.

Mercury escapes into the environment during the use and disposal of common consumer products (see sidebar). Mercury-containing products are one of the most preventable and significant sources of mercury pollution in Maine. Mercury products accounted for 60 percent of all mercury pollution from sources such as incinerators located in the Northeast, according to a 1996 government inventory. In Maine alone, more than 500 pounds of mercury is tossed in the trash each year and another 100 pounds or more escapes from broken products, according to estimates by the Department of Environmental Protection (DEP). Since mercury is so toxic in very small amounts, that's a lot of mercury.

Comprehensive legislation signed into law by Governor King in 2000 resulted in a ban on the disposal of most mercury-containing products in household garbage. Rather, they must be collected for recycling and the manufacturers must properly label them. In 2001, the Legislature prohibited that sale and distribution of mercury fever thermometers, required that manufacturers disclose the mercury content of formulated products like soaps and detergents, and ordered dentists to educate their patients about the risks and benefits of so-called "silver" fillings, which are actually 40% to 50% mercury.

In the recently concluded legislative session, Maine advanced the mercury elimination cause another notch. A first-in-the-nation bill sponsored by Senator John Martin on behalf of DEP holds automobile manufacturers responsible for funding a system to remove and collect mercury switches from old cars before they are scrapped. In addition, Representative Scott Cowger succeeded with his bill to phase out the sale of mercury thermostats for residential and commercial use by January 1, 2006.

Two challenges remain. First, mercury-containing products must be actually collected and recycled. Businesses and households must learn to identify these products and separate them from the waste stream for recycling after their useful life. The Natural Resources Council of Maine has developed a new consumers guide to mercury products to help in this effort (see excerpt in sidebar). The DEP and State Planning Office have funded towns and cities to set up mercury collection sheds at transfer stations and are working to expand collection programs for other household hazardous waste. About 50 mercury product recycling locations in Maine now serve about two-thirds of the population, or more than 220 communities. The NRCM web site provides good information on mercury products, safer alternatives and recycling locations at www.maineenvironment.org.

The second challenge is to avoid using products that contain mercury whenever safer alternatives are available. New legislation should be enacted to establish a phase-out schedule for mercury products such as scientific instruments, and electrical switches used in bilge pumps in boats, sump pumps and a variety of appliances and equipment. Safer mercury-free alternatives already exist for these products, including digital electronic and mechanical models. And more legislative pressure is needed to reduce the mercury content of light bulbs from fluorescent and high intensity discharge (HID) lamps (the latter being used typically for outdoor and specialty lighting). Fluorescents and HIDs are more energy efficient than incandescent light bulbs. However, they should be recycled after use and eventually replaced entirely when even more energy efficient and mercury-free digital lighting becomes commercially available in the years ahead.

The phase out schedule for mercury products one of the last remaining pieces of the model legislation developed for the Northeastern states that has not yet been enacted in Maine. The other legislative needs are for expanded manufacturer responsibility for funding collection and recycling efforts and expanded labeling for mercury-

containing lighting. Expect further action on mercury in consumer products from the Maine Legislature in 2003.

Hospitals Leading Mercury Effort

Many institutions and individuals are acting voluntarily to eliminate mercury. The health care sector is making particular strides in becoming more environmentally responsible.

All 39 Maine hospitals have now pledged to virtually eliminate the use of mercury by 2005 through a partnership with the Natural Resources Council of Maine, Maine Hospital Association, Health Care Without Harm and Maine Department of Environmental Protection. This precedent-setting pollution prevention agreement will lead to a phase-out in the use of mercury in thermometers, thermostats, switches, blood pressure cuffs, gastrointestinal tubes and other products. The support of Maine hospitals was also instrumental in the passage of a new "right to know" law that requires makers of cleaners, bleaches and other common products to disclose the mercury content down to very low levels. This will enable hospitals to purchase products that are mercury-free thus reducing the discharge of mercury through the sewer system into our rivers and bays.

Federal Action Also Needed

Some solutions are beyond the leadership of the State of Maine alone. We need federal action to reduce mercury pollution from upwind power plants and to lock-up leftover mercury from the chemical industry. Activists are working with Maine's entire Congressional delegation in support of federal legislation to require coal-fired power plants to slash mercury and other air pollutants. Coal-fired utilities in New England, the Midwest and beyond rain significant amounts of mercury down onto the lands and waters of Maine.

Without new federal policy, millions of pounds of surplus mercury from the shuttered HoltraChem plant in Orrington, Maine and ten similar chemicals plants in the U.S. will be sold into commerce for reuse overseas. This mercury will pollute newly industrialized countries like India and come back to haunt us in the form of polluted rain and snowfall, imported mercury-containing products and mercury tainted tuna and swordfish. To end this circle of poison, a coalition of environmental groups joined together as the Penobscot Alliance for Mercury Elimination (PAME) has worked with Maine state officials, Representative Tom Allen and Senator Susan Collins to authorize the Defense Department or EPA to store leftover mercury from HoltraChem and other chemical plants along side the existing federal mercury stockpile.

The goal is a system to place surplus mercury off limits for reuse and into long-term safe storage pending the development of effective treatment and disposal methods.

Eat Safely to Reduce Mercury Exposure

While we work to reduce mercury pollution at its source, you can protect yourself and family by reducing mercury exposure from contaminated fish. The Maine Bureau of Health Council has issued a health advisory warning people to limit consumption of certain fish. The State's "Safe Eating Guidelines" include:

Women of childbearing age and young children should NOT EAT ANY:

- Fresh water fish (except landlocked salmon and brook trout – limit to 1 meal per month)
- Swordfish, shark, king mackerel and tilefish

And they should LIMIT CONSUMPTION of other fish to no more than:

- 1 can per week of "white tuna" (albacore)
- 2 cans per week of "light tuna"
- 2 meals per month of striped bass and bluefish
- 2 meals per week of all other ocean fish and shellfish

Other limits apply to people who are not in this most sensitive group. For complete guidelines, call the NRCM at 1-800-287-2345 and ask for a brochure or visit the Bureau of Health's web page at http://janus.state.me.us/dhs/bohetp/fca.htm.

Tracking Progress

Mercury reduction efforts in Maine recently received a "B" grade – the highest in the region – in a report card issued by the NRCM and the New England Zero Mercury Campaign. Three years ago the New England Governors and Eastern Canadian Premiers set a regional goal to virtually eliminate mercury releases to the environment from human causes. To achieve success will require leadership in many places. Continues must be placed on our elected officials, businesses, and public agencies to do their part. As responsible consumers, we can all avoid buying mercury-containing products, recycle what we have and join together in advocacy efforts that persuade decision makers to maintain momentum toward mercury elimination. The health of our children and the loons depends on us.

To join with NRCM and others to eliminate mercury from Maine, contact Amanda Sears at (800) 287-2345 or at asears@nrcm.org. Together we will win.

Michael Belliveau directs the Toxics and Clean Production Project for the Natural Resources Council of Maine and can be reached at mbelliveau@nrcm.org

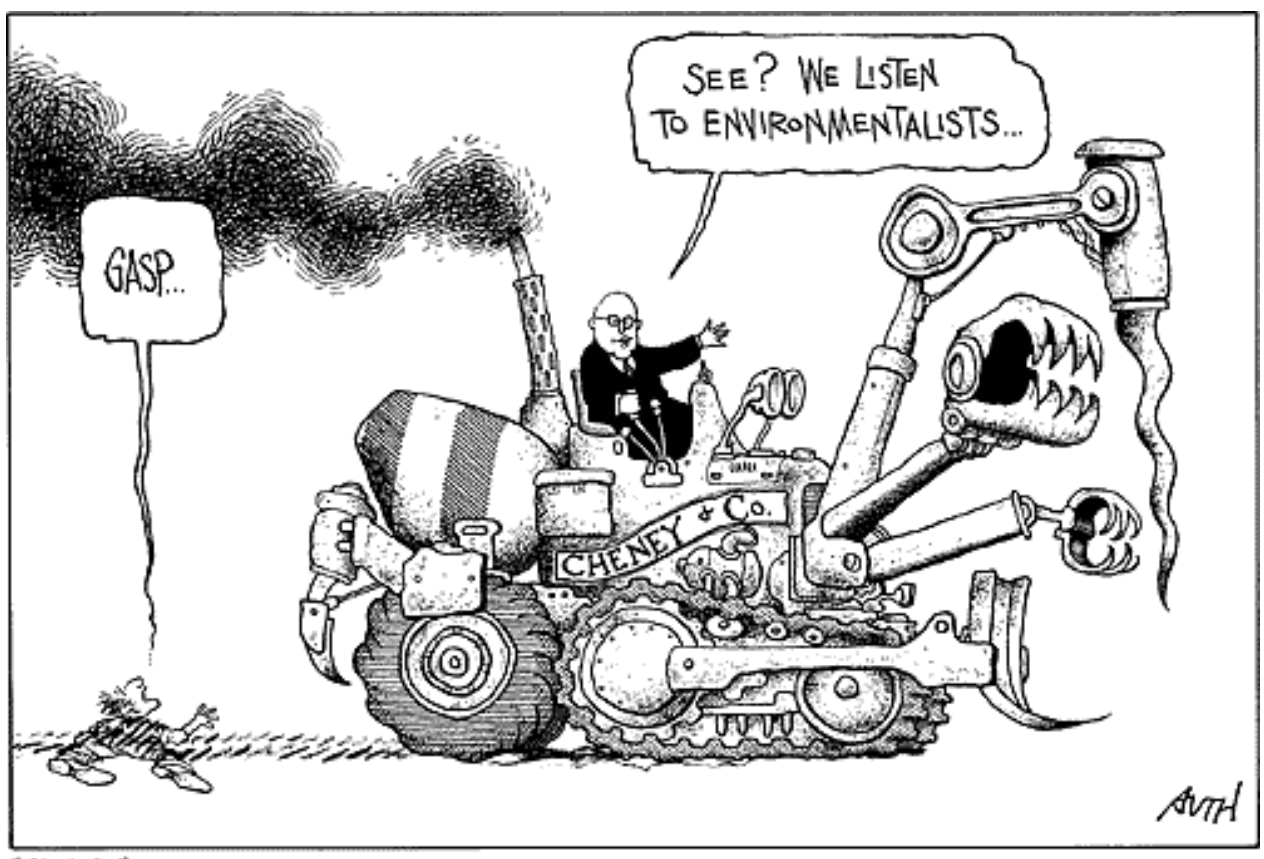
Information on Safer Alternatives

For a guide to mercury-containing products, safer alternatives and recycling options, visit the Council's web site at www.maineenvironment.org and follow the links. Maine DEP also has useful mercury information at www.janus.state.me.us/dep/mercury.

Typical mercury-containing products and some brief advice include:

- Thermometers – avoid silver-gray liquid-filled thermometers
- Thermostats – use energy-saving programmable electronic thermostats instead
- Lighting – be sure to recycle energy-efficient fluorescent lamps and outdoor lights
- Electrical Switches – often hidden in automobiles, bilge pumps, sump pumps, lap top computers, older gas-fired dryers, furnaces, older freezers and many others
- Dental Amalgam – the so-called "silver" fillings are almost half mercury
- Cleaners and Bleaches – some brands are contaminated with mercury
- Personal Care – avoid products with thimerasol (mercury) added as a preservative
- Batteries – button cell, mercuric oxide and very old alkaline (household) batteries

"It isn't pollution that's harming the environment. It's the impurities in our air and water that are doing it."
Dan Quayle



How Corporate Law Inhibits Social Responsibility
A Corporate Attorney Proposes a 'Code for Corporate Citizenship' in State Law
by Robert Hinkley

After 23 years as a corporate securities attorney–advising large corporations on securities offerings and mergers and acquisitions–I left my position as partner at Skadden, Arps, Slate, Meagher & Flom because I was disturbed by the game. I realized that the many social ills created by corporations stem directly from corporate law. It dawned on me that the law, in its current form, actually inhibits executives and corporations from being socially responsible. So in June 2000 I quit my job and decided to devote the next phase of my life to making people aware of this problem. My goal is to build consensus to change the law so it encourages good corporate citizenship, rather than inhibiting it.

The provision in the law I am talking about is the one that says the purpose of the corporation is simply to make money for shareholders. Every jurisdiction where corporations operate has its own law of corporate governance. But remarkably, the corporate design contained in hundreds of corporate laws throughout the world is nearly identical. That design creates a governing body to manage the corporation–usually a board of directors–and dictates the duties of those directors. In short, the law creates corporate purpose. That purpose is to operate in the interests of shareholders. In Maine, where I live, this duty of directors is in Section 716 of the business corporation act, which reads:

...the directors and officers of a corporation shall exercise their powers and discharge their duties with a view to the interests of the corporation and of the shareholders....

Although the wording of this provision differs from jurisdiction to jurisdiction, its legal effect does not. This provision is the motive behind all corporate actions everywhere in the world. Distilled to its essence, it says that the people who run corporations have a legal duty to shareholders, and that duty is to make money. Failing this duty can leave directors and officers open to being sued by shareholders.

Section 716 dedicates the corporation to the pursuit of its own self-interest (and equates corporate self-interest with shareholder self-interest). No mention is made of responsibility to the public interest. Section 716 and its counterparts explain two things. First, they explain why corporations find social issues like human rights irrelevant—because they fall outside the corporation's legal mandate. Second, these provisions explain why executives behave differently than they might as individual citizens, because the law says their only obligation in business is to make money.

This design has the unfortunate side effect of largely eliminating personal responsibility. Because corporate law generally regulates corporations but not executives, it leads executives to become inattentive to justice. They demand their subordinates "make the numbers," and pay little attention to how they do so. Directors and officers know their jobs, salaries, bonuses, and stock options depend on delivering profits for shareholders.

Companies believe their duty to the public interest consists of complying with the law. Obeying the law is simply a cost. Since it interferes with making money, it must be minimized–using devices like lobbying, legal hairsplitting, and jurisdiction shopping. Directors and officers give little thought to the fact that these activities may damage the public interest.

Lower-level employees know their livelihoods depend upon satisfying superiors' demands to make money. They have no incentive to offer ideas that would advance the public interest unless they increase profits. Projects that would serve the public interest—but at a financial cost to the corporation—are considered naive.

Corporate law thus casts ethical and social concerns as irrelevant, or as stumbling blocks to the corporation's fundamental mandate. That's the effect the law has inside the corporation. Outside the corporation the effect is more devastating. It is the law that leads corporations to actively disregard harm to all interests other than those of shareholders. When toxic chemicals are spilled, forests destroyed, employees left in poverty, or communities devastated through plant shutdowns, corporations view these as unimportant side effects outside their area of concern. But when the company's stock price dips, that's a disaster. The reason is that, in our legal framework, a low stock price leaves a company vulnerable to takeover or means the CEO's job could be at risk.

In the end, the natural result is that corporate bottom line goes up, and the state of the public good goes down.

> This is called privatizing the gain and externalizing the cost.

This system design helps explain why the war against corporate abuse is being lost, despite decades of effort by thousands of organizations. Until now, tactics used to confront corporations have focused on where and how much companies should be allowed to damage the public interest, rather than eliminating the reason they do it. When public interest groups protest a new power plant, mercury poisoning, or a new big box store, the groups don't examine the corporations' motives. They only seek to limit where damage is created (not in our back yard) and how much damage is created (a little less, please).

But the where-and-how-much approach is reactive, not proactive. Even when corporations are defeated in particular battles, they go on the next day, in other ways and other places, to pursue their own private interests at the expense of the public.

I believe the battle against corporate abuse should be conducted in a more holistic way. We must inquire why corporations behave as they do, and look for a way to change these underlying motives. Once we have arrived at a viable systemic solution, we should then dictate the terms of engagement to corporations, not let them dictate terms to us.

We must remember that corporations were invented to serve mankind. Mankind was not invented to serve corporations. Corporations in many ways have the rights of citizens, and those rights should be balanced by obligations to the public.

Many activists cast the fundamental issue as one of "corporate greed," but that's off the mark. Corporations are incapable of a human emotion like greed. They are artificial beings created by law. The real question is why corporations behave as if they are greedy. The answer is the design of corporate law.

We can change that design. We can make corporations

more responsible to the public good by amending the law that says the pursuit of profit takes precedence over the public interest. I believe this can best be achieved by changing corporate law to make directors personally responsible for harms done.

Let me give you a sense of how director responsibility works in the current system. Under federal securities laws, directors are held personally liable for false and misleading statements made in prospectuses used to sell securities. If a corporate prospectus contains a material falsehood and investors suffer damage as a result, investors can sue each director personally to recover the damage. Believe me, this provision grabs the attention of company directors. They spend hours reviewing drafts of a prospectus to ensure it complies with the law. Similarly, everyone who works on the prospectus knows that directors' personal wealth is at stake, so they too take great care with accuracy.

That's an example of how corporate behavior changes when directors are held personally responsible. Everyone in the corporation improves their game to meet the challenge. The law has what we call an in terrorem effect. Since the potential penalties are so severe, directors err on the side of caution. While this has not eliminated securities fraud, it has over the years reduced it to an infinitesimal percentage of the total capital raised.

I propose that corporate law be changed in a similar manner—to make individuals responsible for seeing that the pursuit of profit does not damage the public interest.

To pave the way for such a change, we must challenge the myth that making profits and protecting the public interest are mutually exclusive goals. The same was once said about profits and product quality, before Japanese manufacturers taught us otherwise. If we force companies to respect the public interest while they make money, business people will figure out how to do both.

The specific change I suggest is simple: add 26 words to corporate law and thus create what I call the "Code for Corporate Citizenship." In Maine, this would mean amending section 716 to add the following clause. Directors and officers would still have a duty to make money for shareholders,

... but not at the expense of the environment, human rights, the public safety, the communities in which the corporation operates or the dignity of its employees.

This simple amendment would effect a dramatic change in the underlying mechanism that drives corporate malfeasance. It would make individuals responsible for the damage companies cause to the public interest, and would be enforced much the same way as securities laws are now. Negligent failure to abide by the code would result in the corporation, its directors, and its officers being liable for the full amount of the damage they cause. In addition to civil liability, the attorney general would have the right to criminally prosecute intentional acts. Injunctive relief–which stops specific behaviors while the legal process proceeds–would also be available.

Compliance would be in the self-interest of both individuals and the company. No one wants to see personal assets subject to a lawsuit. Such a prospect would surely temper corporate managers' willingness to make money at the expense of the public interest. Similarly, investors tend to shy away from companies with contingent liabilities, so companies that severely or repeatedly violate the Code for Corporate Citizenship might see their stock price fall or their access to capital dry up.

Many would say such a code could never be enacted. But they're mistaken. I take heart from a 2000 Business Week/Harris Poll that asked Americans which of the following two propositions they support more strongly:

Corporations should have only one purpose—to make the most profit for their shareholders—and pursuit of that goal will be best for America in the long run.

—or—

Corporations should have more than one purpose. They also owe something to their workers and the communities in which they operate, and they should sometimes sacrifice some profit for the sake of making things better for their workers and communities.

An overwhelming 95 percent of Americans chose the second proposition. Clearly, this finding tells us that our fate is not sealed. When 95 percent of the public supports a proposition, enacting that proposition into law should not be impossible.

If business people resist the notion of legal change, we can remind them that corporations exist only because laws allow them to exist. Without these laws, owners would be fully responsible for debts incurred and damages caused by their businesses. Because the public creates the law, corporations owe their existence as much to the public as they do to shareholders. They should have obligations to both. It simply makes no sense that society's most powerful citizens have no concern for the public good.

It also makes no sense to endlessly chase after individual instances of corporate wrongdoing, when that wrongdoing is a natural result of the system design. Corporations abuse the public interest because the law tells them their only legal duty is to maximize profits for shareholders. Until we change the law of corporate governance, the problem of corporate abuse can never fully be solved.

The above article was originally published in the January/February 2002 issue of Business Ethics: Corporate Social Responsibility Report.

Robert Hinkley (rchinkley@media2.hypernet.com) *lives in Brooklin, Maine.*

What if the Code for Corporate Citizenship were enacted in Maine? How would it effect Maine's forestry industry?

by Robert Hinkley

The Code works to protect five elements of the public interest: the environment, human rights, the public safety, the dignity of employees and the welfare of the communities in which the company operates. When enacted into law in Maine, the greatest effect of the Code on Maine's forestry industry is likely to be with respect to the environment, the dignity of industry workers and the welfare of the communities that play host to industry facilities.

The forestry industry's effect on Maine's environment has been well documented. Trees have been harvested at rates that are unsustainable, clear cutting has ruined parts of the landscape and eliminated biodiversity and mills have emitted toxic chemicals into our air, water and land.

Under the Code, the industry will no longer be able to engage in forestry practices that are unsustainable or that eliminate biodiversity. All manufacturing facilities will need to be upgraded to eliminate toxic emissions.

Failure to change a company's operations in this manner will result in the company, its officers and directors being held personally liable for any damage that such violation causes. The prospect of such liability will cause directors and officers to change their company's operations in advance rather than risk spending all their time defending lawsuits.

The Code's provision with respect to the dignity of employees will entitle every employee to a living wage. The Code will act to make the bargaining power between a company and its employees much more equal than it has been in the past. In addition to wages, companies will have to start recognizing the dignity of employees in negotiations regarding severance benefits, involuntary overtime, eliminating unsafe working conditions and others.

Finally, the Code will prohibit companies from simply closing large facilities that are the economic engine of some of our communities. Too often, decisions have been made in the past in far away corporate headquarters to close mills in Maine without any thought of the effect on our local communities. After the Code is adopted, such decisions will come at a cost designed to compensate the community for the economic displacement such closure will cause. This provision will force corporate managers either to negotiate just compensation with the local community prior to the announcement of a closing or refrain form closing the plant (either by continuing to operate it itself or selling it to a third party).

The California Heritage Tree Preservation Act

by Dan Hamburg

The Citizen's Campaign for Old Growth Preservation (CFOG) is a grass-roots coalition that was created for the purpose of placing on California's statewide ballot an initiative that would protect old-growth trees on California's non-federally owned forestlands. In order to qualify the Heritage Tree Preservation Act initiative for the statewide ballot, CFOG must collect 419,260 valid signatures.

Additionally, CFOG must field the best efforts of the timber industry to derail this initiative campaign. On Friday, February 8th, a Superior Court judge for Sacramento County ruled against the first such attempt by the California Forestry Association (CFA).

The assertions made by CFA in their suit were completely false and designed only to obstruct. They claimed, for example, that the words "old growth," "heritage," and "protects," used in the initiative's official Title & Summary, were "political rhetoric" that created prejudice in favor of the initiative. Their suit also accused the author of the official Title & Summary, Attorney General Bill Lockyer, of "violating his public duty," and claimed that "he should have taken more time" in preparing the documents. If the court had ordered a new Title & Summary, CFOG would have been forced to print thousands of new petitions and would have been set back a month in meeting the initiative's qualification deadline.

CFA may still appeal the Superior Court's ruling. "What will they come up with next?" asks Susan Moloney, CFOG's campaign coordinator. "Why is it that the timber industry doesn't want the voters to decide the fate of the last 3% of our old-growth trees?" (Both Moloney and CFA know the answer to the latter question quite well: opinion polls throughout the state have indicated that the majority of Californians would vote in favor of the initiative.)

The Heritage Tree Preservation Act defines "old growth" as trees that were alive in 1850, the year California became a state, and defines "forestlands" as lands capable of growing a crop of trees of any commercial species, including state-owned forests and private property.

photo by Paul Donahue

Old-growth Coast Redwoods in northern California.

This ancient-tree protection initiative will present California's voters a clear choice between the short-term profits of timber executives and the long-term welfare of future generations. Please find out how you can help to get the Heritage Tree Preservation Act initiative onto the ballot by visiting CFOG's website at http://www.ancienttrees.org.

A Few Questions & Answers regarding the Heritage Tree Preservation Act

1. What does the California Heritage Tree Preservation Act actually do?

Protects "heritage trees" as trees on non-federal forestlands that were standing prior to 1850 and that meet species-specific minimum diameters.

Provides for forest practices protective of heritage trees, and public noticing of heritage trees cut or included within construction and timber harvesting plans.

Provides exceptions for roads, power lines, disease and insect infestation, protection of homes, prescribed burns, fire prevention and emergencies.

Provides for enforcement and for penalties to be deposited in the Heritage Tree Preservation Fund established with the Wildlife Conservation Board for the acquisition of heritage trees.

Provides for citizen actions enforcing Forest Practice Act and amendment by the legislature.

2. How many trees are we actually talking about here?

About one tree in 200 on commercial timberlands in California. While this is not a large number of trees, these are generally the most important trees to preserve for restoring biodiversity and habitat to our damaged forests.

3. How can we have a construction industry without cutting big, old trees?

Very little construction lumber is still milled from big, old trees. Large beams, and other materials that traditionally were made from large trees, are now being replaced by better performing composite materials such as glue-laminated beams, engineered beams and oriented-strand board that are readily made from smaller trees. Only a small portion of the cost of housing is attributable to lumber.

4. Does this initiative protect Oaks?

This initiative protects old-growth trees of any species on non-federal forestlands, including Oaks. This initiative amends the Forest Practices Act whose authority does not extend beyond timberlands. The protection of old-growth trees on agricultural lands, suburban and urban settings is left to the local control of cities and counties.

5. What's so important about allowing trees to become old anyway?

Besides their obvious aesthetic appeal, old trees provide benefits that young trees cannot. Some organisms are dependent upon high, large diameter branches or nesting holes that only old trees have. Lichens necessary to add nitrogen to the rain passing through the canopy often take hundreds of years to grow up into the canopy. After old-growth forests are cut down and second growth becomes mature, the forest does not see the return of many species. The remaining old growth becomes the only source for reestablishing many species.

6. How do I get further information on the initiative?

Go to our campaign website at
http://www.ancienttrees.org

Dan Hamburg is the executive director of Voice of the Environment and an advocate for old growth preservation.

"If you take one step with all the knowledge you have, there is usually just enough light shining to show you the next step."

Mardy Murie

Luna - 17 Months Since Being Cut, and Still Doing Well

by Paul Donahue

When Julia Butterfly Hill's tree, Luna, was cut two-thirds of the way through by unknown angry loggers in late November 2000, the prospects for the tree's survival did not look good. The severity of the chainsaw cut made Luna very susceptible to being toppled by the strong winter winds that can rake the ridge above Stafford, California where she stands, and also endangered the upward transport of essential moisture to the upper foliage during the dry summer months.

My wife, Teresa Wood, and I were part of the medical team that went to Luna's rescue in the days following Thanksgiving 2000, and we were horrified by what we saw when we arrived at her base. Still, we all went ahead with the work, doing the best we could to insure that Luna would make it through the winter. There was nothing that could be done about the water transport

photo by Paul Donahue

Luna's crown - November 2001.

problem, but at least we could try to stabilize the tree to help her deal with the winds to come. (That effort is described in "The Cabling of Luna" in the spring 2001 issue of *The Maine Woods*.)

Miraculously, Luna survived the winter winds, then she survived the dry summer months. Late this past November, one year to the day from the discovery of the cut, a group of us climbed back up the ridge to check on the tree. Teresa and I joined Julia, Claudia Thompson, one of Julia's former ground support people, Stuart Moskowitz and Jimmy Freal of Sanctuary Forest, the land trust that holds the deed of covenant for the protected land around Luna, and Kristin Rothballer and Rea Inglesis, two friends and associates of Julia's.

Stuart had been checking on Luna regularly over the year, so knew what to expect. However, Teresa and I had

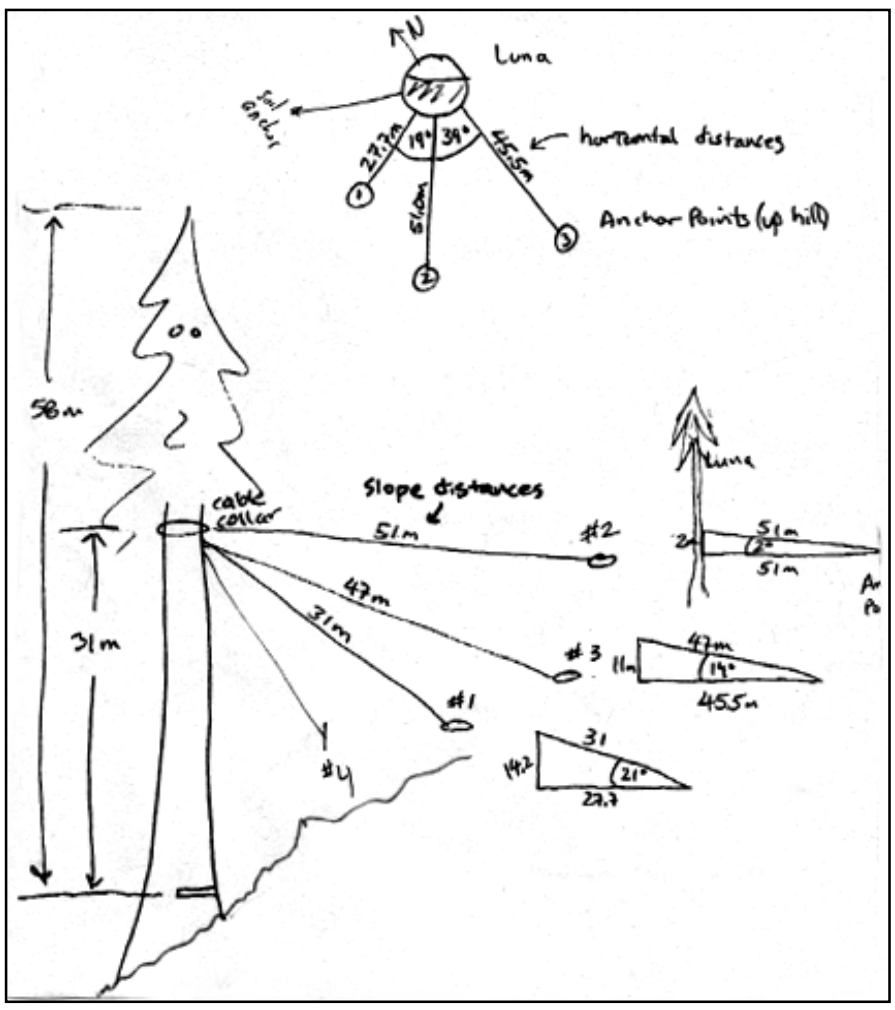
photo by Paul Donahue

Julia Butterfly Hill and Stuart Moskowitz at the base of Luna - November 2001.

not been at the tree for a year, and Julia had not been there since February 2001. To our amazement, Luna looked GREAT! Except for a tiny bit of dieback on the tips of the upper branches, something Julia said happened during both dry seasons she was in the tree, her crown looked perfectly healthy.

Luna has now survived a second winter and all is still going well.

In Julia's words as she sat at Luna's base, "This tree continues to be a miracle….She's been struck by lightening, she's been burned out by a fire underneath, she's unfortunately surrounded by clearcuts, everywhere, but this particular area and this particular tree seem to continue to be a never-ending story of the impossible becoming possible.



Structural engineer Steve Salzman's sketch of the cable system helping to keep Luna upright.

Model Forest Herbicide Ordinance

SUMMARY
Pursuant to 22 M.R.S.A. section 1471-U, Maine municipalities may enact Ordinances that apply to pesticide storage, distribution or use. In order to safeguard the public's health, safety, and welfare, as well as to insure the protection of the natural resources of the Town of _____, the following Ordinance is adopted to meet these
goals.

PROHIBITION
The aerial and ground application of herbicides for forestry purposes is prohibited at all times throughout the Town of _____ except as outlined below.

EXCEPTIONS
Proposed variances or exemptions to the above Ordinance must be approved by a two-thirds majority vote of a Town Meeting or by two-thirds majority vote by registered voters of the Town of _____.

ENFORCEMENT AND PENALTIES
This Ordinance shall be enforced by the Town's Code Enforcement Officer, according to the policies governing enforcement of municipal ordinances of the Town of _____. The Town of _____ may apply to any court of competent jurisdiction to enjoin any planned, anticipated or threatened violation of this Ordinance.

EFFECTIVE DATE
This Ordinance shall take effect on the date upon which it has received any required approval by a majority vote of a Town Meeting or by vote of a majority of the registered voters of the Town of _____. This Ordinance shall remain in effect until terminated or amended by a two-thirds majority vote of a Town Meeting or by two-thirds majority vote by registered voters of the Town of _____.

Model Right-of-Way Herbicide Ordinance

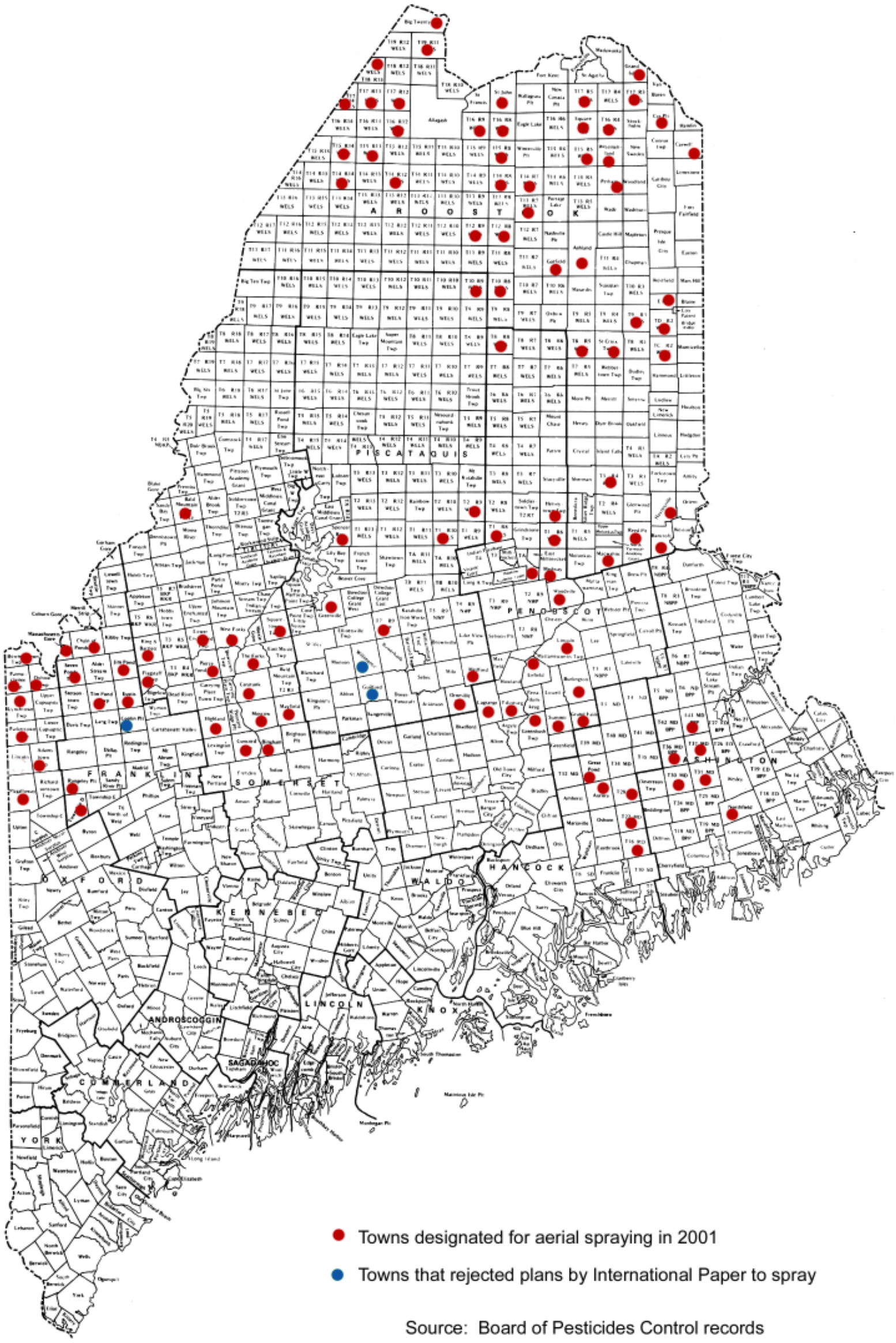
SUMMARY
Pursuant to 22 M.R.S.A. section 1471-U, Maine municipalities may enact Ordinances that apply to pesticide storage, distribution or use. In order to safeguard the public's health, safety, and welfare, as well as to insure the protection of the natural resources of the Town of _____, the following Ordinance is adopted to meet these goals.

PROHIBITION
The use of herbicides for the control of vegetation along roadside rights-of-way, utility rights-of-way, and railroad rights-of-way is prohibited in the Town of _____, except as outlined below.

EXCEPTIONS
Proposed variances or exemptions to the above Ordinance must be approved by a two-thirds majority vote of a Town Meeting or by two-thirds majority vote by registered voters of the Town of _____.

ENFORCEMENT AND PENALTIES
This Ordinance shall be enforced by the Town's Code Enforcement Officer, according to the policies governing enforcement of municipal ordinances of the Town of _____. The Town of _____ may apply to any court of competent jurisdiction to enjoin any planned, anticipated or threatened violation of this Ordinance.

EFFECTIVE DATE
This Ordinance shall take effect on the date upon which it has received any required approval by a majority vote of a Town Meeting or by vote of a majority of the registered voters of the Town of _____. This Ordinance shall remain in effect until terminated or amended by a two-thirds majority vote of a Town Meeting or by two-thirds
majority vote by registered voters of the Town of _____.


AROOSTOOK
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PENOBSCOT
WASHINGTON
HANCOCK
WALDO
KNOX
LINCOLN
SAGADAHOC
ANDROSCOGGIN
KENNEBEC
SOMERSET
FRANKLIN
OXFORD
CUMBERLAND
YORK
Towns designated for aerial spraying in 2001
Towns that rejected plans by International Paper to spray
Source: Board of Pesticides Control records

More Oil Wars -
The Bush-Cheney Oilygarchy's Idea of a Responsible Energy Policy for the 21st Century

by Paul Donahue

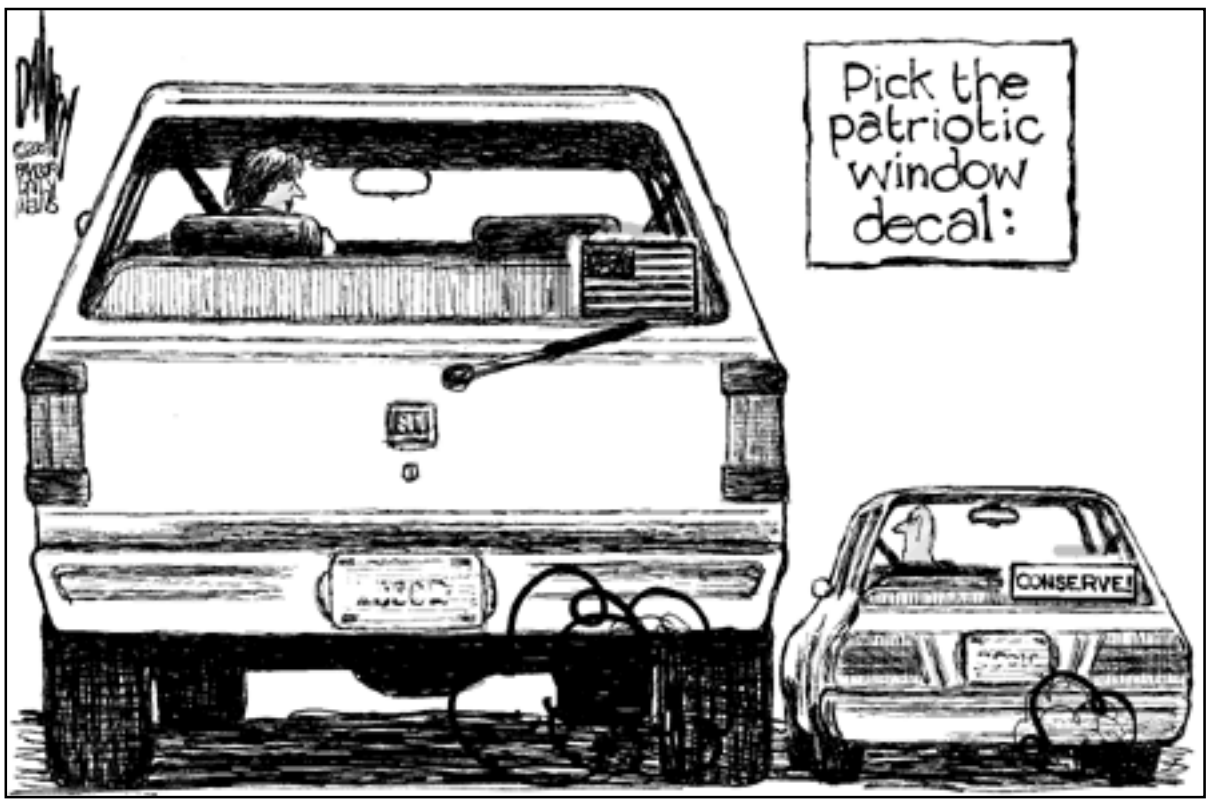
There has been much in the news of late about the Bush-Cheney oilygarchy's energy plan, particularly in regard as to whether or not the large energy corporations played a major role in its formulation through their influence in the secretive energy task force of Dick Cheney. The Bush-Cheney oilygarchy is even defying a court order to release documents pertaining to this issue. However, despite all the talk about the energy plan, how many Americans have actually read it? It's such a long, tedious document that, in reality, few of us will ever read through the entire plan. Fortunately, we at FEN have been able to get our hands on the yet-to-be published *Reader's Digest* version of it. It goes like this, "Drill everywhere, bomb or imprison anyone who gets in the way."

All joking aside, that does not seem to be far from the truth. The Bush-Cheney oilygarchy's idea of a sensible energy policy for the U.S. seems clear:

• drill more oil wells, regardless of the pristine and critical natural habitats that may be irreparably despoiled (fortunately, they have been thwarted, for the moment, from drilling in the Arctic National Wildlife Refuge);

• import more oil from far-flung countries around the globe, regardless of the tremendous social cost to the local inhabitants, even if it means going to war to procure access to the oil;

• and burn as much oil as possible, in total disregard of the climate change warnings from the vast majority of the world's climatologists, biologists, and other reputable scientists.



The issues of forest and environmental health, global warming, national energy policy, international policy and even war, are all intimately linked. A warming of Maine's climate will be bad news for our forests. A national energy policy that ignores renewable energy and conservation measures means more global warming. If renewable energy and conservation measures are ignored in our energy plan, it means we will have greater dependence on foreign oil. If we depend more on foreign oil, it will mean more US aggression abroad to secure those oil supplies. More US aggression abroad means increased spending on the military. More of our tax dollars going to the already obscenely huge Pentagon budget means fewer tax dollars available for vital environmental programs and agencies, such as the Environmental Protection Agency.

Back in the Fall 2001 issue of *The Maine Woods*, in an article titled "Another War for Oil", I outlined the numerous connections between the Bush-Cheney oilygarchy and the plan to construct a pipeline across Afghanistan to access the rich oil reserves of the Caspian Basin. Since then, evidence has continued to mount suggesting that, at the very least, the Bush-Cheney oilygarchy had advance warning of the September 11th attacks, or, at worse, that it even played a facilitative or instigative role. We have been told that because of the September 11th attack, we were justified in waging a war of unspeakable terror on the poor people of Afghanistan, a country in which one in every six children dies in the first year of life, 88 percent of children have no access to safe water, and one in every four children suffers from malnutrition.

But what if, instead, the events of September 11th had been orchestrated to provide cover for the procurement of an oil pipeline route across Afghanistan? It is a very scary thought, but the known facts, as well as the evidence that has emerged provide plenty of reason for having grave suspicions about the events surrounding September 11th and the so-called "War on Terrorism". I must confess up front to being obsessed with this whole issue since last September. I have been obsessed partly because of the environmental reasons outlined above, partly because I would like to think that I lived in a world where mass murderers can not escape justice, whoever they are, and partly because I strongly believe that my tax dollars should not be used to drop bombs on babies, whatever the excuse.

Below is a summary of the known facts and reports that have come to light. Unfortunately, labeling such a set of facts, connections, and coincidences as "conspiracy theory" has become an automatic way of dismissing uncomfortable realities we would prefer not to have to think about or face. For thirty years many Americans have been perfectly content to believe that John Kennedy was shot by a lone assassin from behind. Over and over they have watched film footage of the shooting, seeing Kennedy's head jerk backwards, purportedly in response to the bullet from Oswald's gun, but in total defiance of a basic principle of physics - for every action there is an equal and opposite reaction.

• The unfortunate reality is that there are a lot of greedy, nasty, evil, and powerful people in the world who will go to whatever lengths necessary to accomplish their goals. That should be obvious enough from the thousands of years of recorded human history. What may not be so obvious to many Americans is that our enemies have not cornered the market on these bad traits, no more so than we in this country have cornered the market on goodness and kindness.

This list of details below is long, but necessarily so, to put the events of September 11th into perspective.

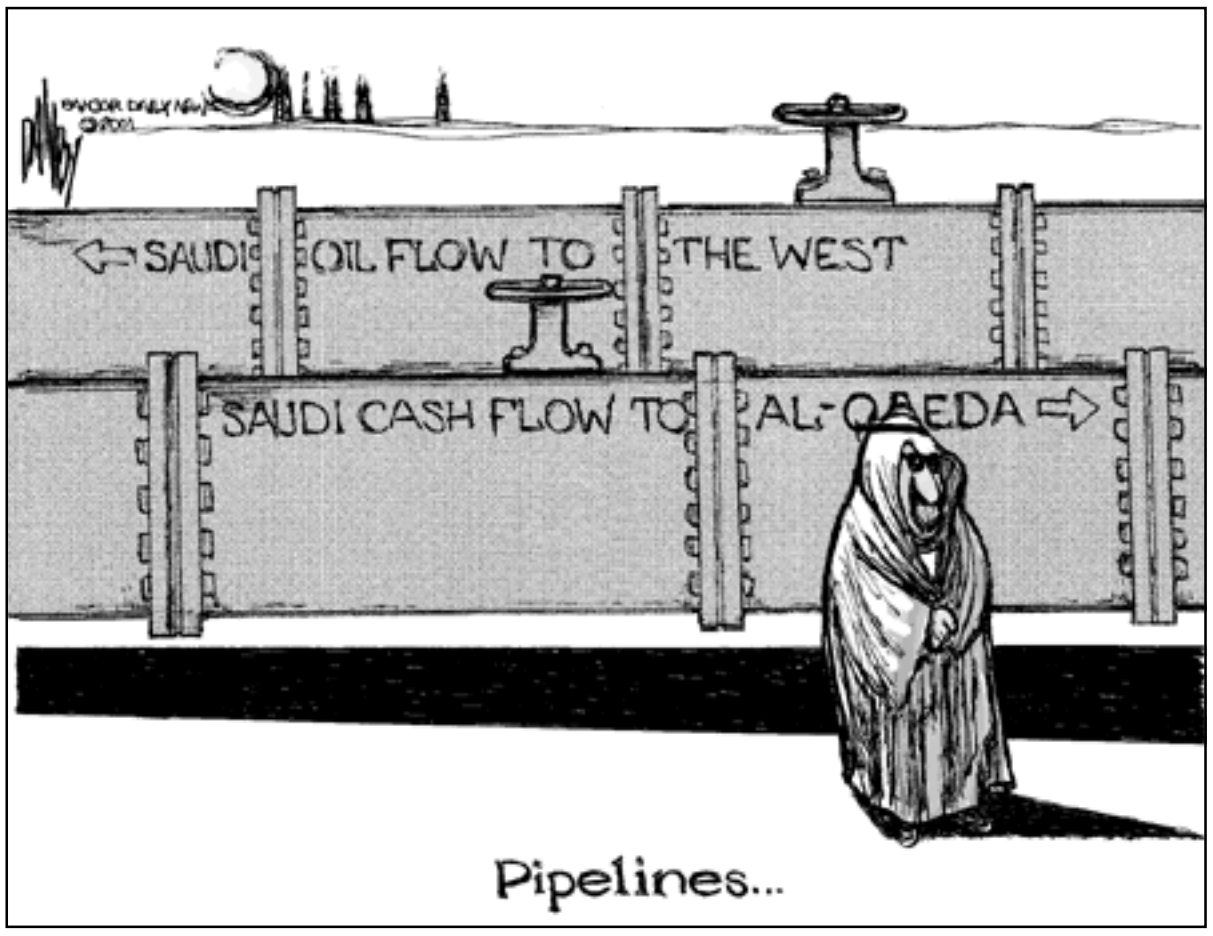
• The United States is the world's largest consumer of oil. With less than 5% of the world's population, the US accounts for over 25% of the world's oil consumption. At present, due to our extremely bad national energy policies, the commodity is absolutely vital to the survival of our economy - in fact, it is the single most important commodity. But the US is resource poor when it comes to oil, with only 3% of the world's known oil reserves. Imports account for 60% of America's daily oil consumption, with13% of that coming from the Persian/ Arabian Gulf States, which produce 18% of the world's supply of oil.

• The Caspian Basin and the countries of the former Soviet republics of Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan, to the north of Afghanistan, have the second largest known oil reserves in the world. The region could hold as much as 200 billion barrels of oil, estimated to be worth $4 -5 trillion dollars. Uzbekistan and Turkmenistan also have enormous quantities of natural gas worth another trillion dollars or so. US oil companies have been jostling since the early 1990's for access to this goldmine. Six US oil company giants - Unocal, Total, Chevron, Pennzoil, Amoco and ExxonMobil -have all invested heavily in the massive oilfield potential.

• Access to these oil and gas resources requires pipelines. "Those who control the oil routes out of Central Asia will impact all future direction and quantities of flow and the distribution of revenues from new production," said energy expert James Dorian in *Oil & Gas Journal* on September 10, 2001. The only existing export routes from the Caspian Basin lead through Russia. Investors in Caspian oil and gas are interested in building alternative pipelines to Turkey, Europe and Asia. Afghanistan occupies a strategic position between the Middle East, Central Asia and the Indian Subcontinent and lies squarely between Turkmenistan and the

lucrative, desirable and growing markets of India, China and Japan. Afghanistan also plays a key geographic role in a plan to construct a 1,005 mile oil pipeline to a tanker-loading terminal in Pakistan's Arabian Sea port of Gwadan.

• From 1994 to1997, the Clinton administration negotiated with the Taliban for an oil pipeline across Afghanistan. Representatives of the Taliban visited the Texas headquarters of Unocal in December 1997 for negotiations regarding this pipeline. In February 1998, Unocal Vice President John J. Maresca – later to become a Special Ambassador to Afghanistan – testified before the House of Representatives that until a single, unified, friendly government is in place in Afghanistan, the needed trans-Afghani oil pipeline will not be built.



• During the pipeline negotiations the Taliban actually hired a PR representative in Washington, Laila Helms. Helms was well-versed in the ways of U.S. intelligence agencies because her uncle, Richard Helms, was a former director of the CIA.

• Until recently, the talks with the Taliban were thought to have collapsed in December 1998, when Unocal pulled out, citing civil unrest. However, soon after coming to power in January 2001 the Bush-Cheney oilygarchy resumed the flagging oil pipeline negotiations with the Taliban, believing they could be trusted to support the pipeline. The now infamous Enron corporation was another party to the pipeline negotiations, having done the feasibility study on the oil pipeline. According to one report, Enron had intimate contact with the Taliban. The energy giant's much-reviled Dabhol project in India was set to benefit from a hook-up with the pipeline. In May 2001 the US gave $43 million in aid to the Taliban regime. The pipeline negotiations finally collapsed in early August 2001, when the Taliban asked the US to help reconstruct Afghanistan's infrastructure and provide a portion of the oil supply for local needs. This was only five weeks before the attack on the World Trade Center.

• The Bush-Cheney oilygarchy is heavily-laden with former oil company people, including Dick Cheney of Halliburton, National Security Adviser Condoleeza Rice of Chevron, Treasury Secretary Paul O'Neill, Commerce Secretary Dan Evans, and, of course, Bush himself. Before joining the Bush team, Cheney and Rice were both directly involved in negotiating the deal for an oil pipeline across Afghanistan. While with Halliburton, Cheney made strong public statements about the strategic significance of the Caspian Basin's oil reserves.

• In January 2001 the Bush-Cheney oilygarchy ordered the FBI to back off investigations involving the Bin Laden family and the attacks on the US embassies and the USS Cole. According to Jean-Charles Brisard and Guillaume Dasquie, the authors of a best-selling book published in France in November and titled *Bin Laden, la Verite Interdite* (*Bin Laden, the Forbidden Truth*), one of the FBI's leading counter-terrorism agents, deputy director John O'Neill, resigned in July 2001 in protest over the Bush Administration's obstruction of his investigation into Osama Bin Laden. O'Neill had linked Bin Laden to our Saudi Arabian allies, and Bush was reluctant to offend them. Brisard and Dasquie interviewed him before he was killed on September 11th at his new job as head of security for the World Trade Center. Brisard claims O'Neill told him that, "the main obstacles to investigating Islamic terrorism were U.S. oil corporate interests and the role played by Saudi Arabia."

• The FBI was on the trail of other members of the Bin Laden family for links to terrorist organizations both before and after September 11th. In particular, they were investigating the relationship of Abdullah Bin Laden and Omar Bin Laden with the World Assembly of Muslim Youth, WAMY - a suspected terrorist organization. The two brothers lived in Falls Church, Virginia, a short distance from the WAMY headquarters. Just three blocks down the road from the WAMY headquarters is where four of the alleged hijackers that attacked New York and Washington are listed as having lived. Interestingly, Abdullah and Omar's home was also within about five miles of CIA headquarters. On October 10th, FBI agents were ordered to curtail their investigation of the September 11th attack.

• Early in 2001 US Army Rangers were training special troops in Kyrgyzstan, to the north of Afghanistan. There were also unconfirmed reports that they were training Tajik and Uzbek special troops.

• Very disturbing is the recent revelation that one of the flight schools at the Venice, Florida airport, where the alleged pilots of the doomed flights trained, has a fairly strong link to the CIA. The alleged pilots actually trained at two different flight schools at the Venice airport. Both schools were owned by Dutch nationals, and both owners purchased their schools just shortly before the alleged pilots began their training. One of these flight school owners was Rudy Dekkers of Huffman Aviation. Brittania Aviation is a small airplane maintenance company working out of one of Dekkers' hangars at Huffman Aviation. They are also working under Dekkers' FAA license. During a contentious bid by Brittania Aviation for a maintenance contract at an airport in Virginia, it came out that Brittania is apparently a dummy company with virtually no assets, employees, or corporate history. It was revealed that their only claim to fame was that they had been providing aviation maintenance services for Caribe Air, a Caribbean carrier. Caribe Air just happens to be a notorious CIA proprietary airline. Among other scandals, Caribe Air had its aircraft seized by federal officials at the Mena, Arkansas, airport a decade ago, after the company was accused by government prosecutors of having used as many as 20 planes to ship drugs into this country.

• According to a DEA source, Brittania Aviation has been given a "green light" by the DEA. He also said the local Venice Police Department had been warned to leave them alone. Interestingly, the Venice airport also surfaced briefly during the Iran-Contra hearings because of allegations of gun running to the Contras from the airport.

• Michael Springmann worked for the US government for 20 years with the foreign service and consulate. In interviews on both CBC radio and BBC television he described a CIA operation he was involved in while working in the US Consulate office in Jeddah, a port city in Saudi Arabia. After having US passports issued to them in Jeddah, the CIA brought hundreds of people from the Middle East to the US, and then trained them to be terrorists. The CBC radio interview can be heard at: http://www.straightgoods.ca/ViewNote.cfm?REF=1267

• According to a flurry of stories between September 15th and 17th in the *Washington Post*, *Newsweek*, and Knight-Ridder newspapers, as many as six of the alleged terrorists involved in the September 11th hijackings, including ringleader Mohammed Atta, also received training at US military facilities. The story in the Knight-Ridder newspapers was the most specific, stating Mohamed Atta had attended International Officers School at Maxwell Air Force Base in Montgomery, Alabama.

• In June of 2001 an Indian magazine reported that, "India and Iran will 'facilitate' US and Russian plans for 'limited military action' against the Taliban." The story indicated that the fighting would be done by US and Russian troops with the help of Tajikistan and Uzbekistan.

• Especially distressing is a report published in the French newspaper *Le Figaro.* The newspaper reported that while in a Dubai hospital receiving treatment for a chronic kidney infection last July, Osama Bin Laden met with a top CIA official. This meeting, held in Bin Laden's private suite, took place at the American hospital in Dubai at a time when Bin Laden was a wanted fugitive for the bombings of two US embassies and the attack on the USS Cole. Yet on July 14th Bin Laden was freely allowed to leave Dubai on a private jet for Quetta. The CIA agent in question returned to CIA headquarters in Virginia on July 15th, the day after Bin Laden's departure.

• Most distressing of all are the details of the United States' negotiations with the Taliban for the oil pipeline across Afghanistan, reported by Brisard and Dasquie in *Bin Laden, la Verite Interdite*. Brisard a private intelligence analyst, was until the late1990s the Director of economic analysis and strategy for the French conglomerate Vivendi. He also worked for French secret services, and in 1997 wrote for them a report on the Al Qaeda network. Dasquie is an investigative journalist and publisher of Intelligence Online, a respected newsletter on diplomacy, economic analysis and strategy, available through the Internet. Unfortunately, their book, published in France, has yet to be released in an English edition. Brisard and Dasquie report that Pakistan's former foreign minister Niaz Naik has claimed that Tom Simons, the U.S. representative at the oil pipeline negotiations, openly threatened the Taliban and Pakistan. ''Simons said, 'either the Taliban behave as they ought to, or Pakistan convinces them to do so, or we will use another option'. The words Simons used were 'a military operation','' Naik claimed. Brisard and Dasquie state that at one moment during the negotiations, the U.S. representatives told the Taliban, "Either you accept our offer of a carpet of gold, or we bury you under a carpet of bombs."

• Naik reports further that in July 2001 three American officials, Tom Simons (former U.S. Ambassador to Pakistan), Karl Inderfurth (former Assistant Secretary of State for South Asian affairs) and Lee Coldren (former State Department expert on South Asia), met with Pakistani and Russian intelligence officers in Berlin and told them that the U.S. was planning military strikes against Afghanistan in October. Naik made these same claims in an interview published in *The Guardian* newspaper of London on September 22nd.

• The weapons-grade Ames strain of Anthrax that first showed up in the offices of Senate Majority Leader Tom Daschle (D-SD) has been shown to have come from a US Army laboratory. Daschle was one of the most outspoken Senate critics of the Bush-Cheney oilygarchy's Patriot Act, the legislation that strips away many of our civil rights for the sake of the so-called "War on Terrorism" and the Anthrax appeared in his office shortly before the Senate was to vote on the draconian legislation. The second congressional Anthrax letter was sent to Senate Judiciary Committee Chairman Patrick Leahy (D-Vt.). Coincidentally, it was received right after Leahy announced hearings on the Bush-Cheney oilygarchy's military tribunals directive.

• The US Army's Dugway anthrax proving facility in Utah is where the only virtually identical Ames strain of silica-impregnated "hyper-weaponized" anthrax was found. The Battelle Memorial Institute, a contractor for both the CIA and the Pentagon, administers and supplies the Dugway facility. The Battelle Memorial Institute is also a partner with Bioport for the sole production of anthrax vaccine in the United States. Bioport is owned in part by the Carlyle Management Group, the multinational investment firm and defense contractor of which past President George H.W. Bush is a director.

• Through the Carlyle Management Group, the 11th largest defense contractor in the U.S., George Bush, Sr. had financial ties with the Bin Laden family. In 1995 the Bin Laden Group bought a $2 million share in the Houston, Texas-based Carlyle Management Group. The Bin Laden Group divested their holdings in the company on October 26, 2001. In addition to George Bush, Sr., the other principals of the Carlyle Management Group include James Baker, the former president's Secretary of State, and former Defense Secretary Frank Carlucci.

• Among the Carlyle Group's many contracts was one to build the missile launching systems for US warships that earlier this year were firing missiles into Afghanistan, purportedly in an effort to eliminate Osama Bin Laden.

• During the first 10 days of September 2001, two U.S. aircraft carrier battle groups arrived on station in the Gulf of Arabia just off the Pakistani coast - as close as ships can get to Afghanistan. This coincided with a British military exercise in Oman involving 23,000 troops.

• Between September 6th and September 10th, 2001 highly abnormal levels of put options were purchased on the stock of United Airlines, Merrill Lynch, Morgan Stanley, AXA Re(insurance), which owns 25% of American Airlines, and Munich Re. All of these companies were directly impacted by the September 11th attacks. Many of the United Airlines put options were purchased through Deutschebank/AB Brown. Until 1998 that firm was managed by the current Executive Director of the CIA, A.B. "Buzzy" Krongard. The CIA and other intelligence agencies use highly advanced software to monitor stock trading and would have easily detected the abnormal change in those stocks.

• Reuters news service reported that in August 2001 the FBI in Boston arrested an Islamic militant linked to Osama Bin Laden. French intelligence sources confirmed that the man was a key member of Bin Laden's network. The FBI learned that he had been taking flying lessons, and at the time of his arrest the man was in possession of flight manuals and technical information on Boeing aircraft.

• Another warning of the impending attack was delivered by Russian President Vladimir Putin who ordered Russian intelligence to warn the U.S. government "in the strongest possible terms" of imminent attacks on airports and government buildings. Still other, even more specific, warnings about the attack came from Germany, Iran, and the Cayman Islands. All these warnings sent in advance of September 11th have prompted Representative Cynthia McKinney (D-GA) to call for a Congressional investigation into what the Bush-Cheney oilygarchy knew and when they knew it. In her words, "There was adequate warning. There were people who failed to act on the warning. And that's what ought to be investigated. But instead of requesting that Congress investigate what went wrong and why, we had President Bush…placing a call to Majority Leader Senator Tom Daschle asking him NOT to investigate the events of September 11th."

• In late January, Bush personally asked Senate Majority Leader Tom Daschle to limit the congressional investigation into the events of September 11th. He asked that only the House and Senate intelligence committees look into the potential breakdowns among federal agencies that could have allowed the alleged terrorist attacks to occur, rather than a broader inquiry that some lawmakers have proposed. Dick Cheney also called Senator Daschle to ask him not to investigate the events that lead to September 11th.

• Osama Bin Laden was blamed almost immediately by the Bush-Cheney oilygarchy for the September 11th attack, and the intent of his capture was used as the primary excuse for the US attack on Afghanistan. The oilygarchy claimed that it had plenty of proof linking Osama Bin Laden and Al Quaeda to September 11th, but they still have not presented it to us. All we have been shown is a couple of videotapes of suspicious origin, while US media outlets were asked not to broadcast in the US parts of another tape of Osama Bin Laden that was seen around the world. Now we are being told by the oilygarchy that Osama Bin Laden's role really wasn't very important after all.

• In any case, the Taliban did not plan or execute the attack on September 11th and not a single Afghani was among the19 alleged perpetrators. On top of that, a point quickly dropped by the US media, is that shortly after September 11th the Taliban actually offered to turn Osama Bin Laden over to a neutral country, but the Bush-Cheney oilygarchy declined! Given those facts, can anyone explain to me, really explain to me, how somehow our mission in Afghanistan magically morphed from one of seeking Osama Bin Laden and the Al Quaeda members responsible for planning the attack on the World Trade Center into one of overthrowing the Taliban regime?

• On the other hand, a majority of the alleged perpetrators were citizens of Saudi Arabia, our presumed ally, and major funding for Al Quaeda comes from Saudi Arabia. On top of that, the Saudis have been very uncooperative in our new "War on Terrorism". Have you heard anybody in the Bush-Cheney oilygarchy breathe a whisper about sending Special Forces ground troops into Saudi Arabia, or maybe a doing bombing run over Riyadh? I guess that stuff about being either with us or against us is only for countries that don't have huge amounts of oil that they're willing to sell to us at a reasonable price.

• On September 11th there were two entire squadrons of combat-ready fighter jets at Andrews Air Force Base. Their job was to protect the skies over Washington D.C. They failed to do their job. Despite over one hour's advance warning of a terrorist attack in progress, not a single Andrews fighter tried to protect the city. Knowing that four simultaneous airline hijackings had occurred, the National Command Authority waited for 75 minutes before scrambling Air Force fighter jets to intercept.

• The only private plane flying in the days immediately following September 11th was a special charter flight that whisked 11 members of Osama Bin Laden's family off to Saudi Arabia.

• On Sunday, October 7, 2001 the Bush-Cheney oilygarchy and the US military began their bombing campaign on the poor people of Afghanistan. On October 10, 2001 U.S. Ambassador Wendy Chamberlain paid a call on the Pakistani oil minister. The oil pipeline from Turkmenistan, across Afghanistan, to the Pakistani coast, was, "in view of recent geopolitical developments," back on the table.

• On December 25, 2001, Hamid Karzai, a former paid consultant for Unocal, was appointed as Afghanistan's new Prime Minister. Nine days later Bush appointed Zalamy Khalilzad, another former employee of Unocal and lobbyist for the Taliban, as a special envoy to Afghanistan. In early February Afghani Prime Minister Karzai and Pakistani leader General Musharraf announced their agreement to "cooperate in all spheres of activity", including the proposed Central Asian oil pipeline.

Activists for the environmental group Greenpeace hang a banner from a smokestack in Porto Alegra, Brazil, February 1, 2002. The banner, depicting a thermometer with President Bush at the top, is to bring attention to global warmiknng and the US environmental policy to participants in the 5-day World Social Forum.

• If the oil pipeline route is superimposed on a map of the new, permanent US military installations we are constructing in Afghanistan, you find that the US bases are spotted along the pipeline's route. It should seem clear enough that the purpose of these military bases is not to rout out the last remnants of Al Qaeda or the Taliban, but to protect the pipeline. Some analysts are projecting a post-war Afghanistan where the US military is used as "pipeline police." Now, it seems that Halliburton, Dick Cheney's former company and one in which he still holds considerable stock, will receive the contract to construct the Afghanistan oil pipeline. Why am I not surprised?

So, how is your coincidence meter doing? If you've been paying attention, it should be well over into the red zone by now. Why is the US media almost completely ignoring all of this? Why are all these reports only being looked at seriously by media outside the US? Good questions! Motive, means and opportunity - aren't those the things that police detectives look for when investigating crimes? Try stacking up the above facts and reports against the available evidence that has been presented for Osama Bin Laden and Al Quaeda being the primary force behind the September 11th attack. It's not even a close contest, but, unfortunately, the evidence depicts a scenario that launches most Americans into fits of denial. Am I suggesting that I know what happened and who is responsible for September 11th? No, of course not. But what I do know for a fact is that the Bush-Cheney oilygarchy's official story line just doesn't wash. There are way, way too many suspicious coincidences for their version of events to be true.

However, as horrible as US involvement in the September 11th attack would be, it would not be the first time that a US administration has manufactured or orchestrated an excuse to go to war. It would not even be the second or third time. Back in the 1960's, "Operation Northwoods" was a plan actually designed by the US Joint Chiefs of Staff to commit domestic terror on Americans to whip them into a war hysteria, to support war efforts by the government. Sun Tzu (circa 400-320 B.C.) in "The Art Of War", comments that all war is based on deception. The people of an invading nation have to be deceived into thinking that they act in their own self defense; that they are the ones to have been attacked. …..It's nice to know that some things never change.

Now, leaving Afghanistan behind for the moment, let's look at what else our military has been up to around the world, still using September 11th as cover. ALL of the countries where we have sent troops or contemplated sending troops since September 11th have one thing in common. Can you guess what it is? If you guessed oil, than you just won a free tank of gasoline for your SUV.

• Since October, the US has moved to extend its control over the Caspian Basin. We have established open-ended military presences in Uzbekistan, Kyrgyzstan and Tajikistan. The Bush-Cheney oilygarchy is now understood to be negotiating with Kazakhstan's President Nursultan Nazarbayev to send Kazakh troops to Afghanistan and to construct a military base. "It is clear that the continuing war in Afghanistan is no more than a veil for the US to establish political dominance in the region," a Kazakh government source said. "The war on terrorism is only a pretext for extending influence over our energy resources."

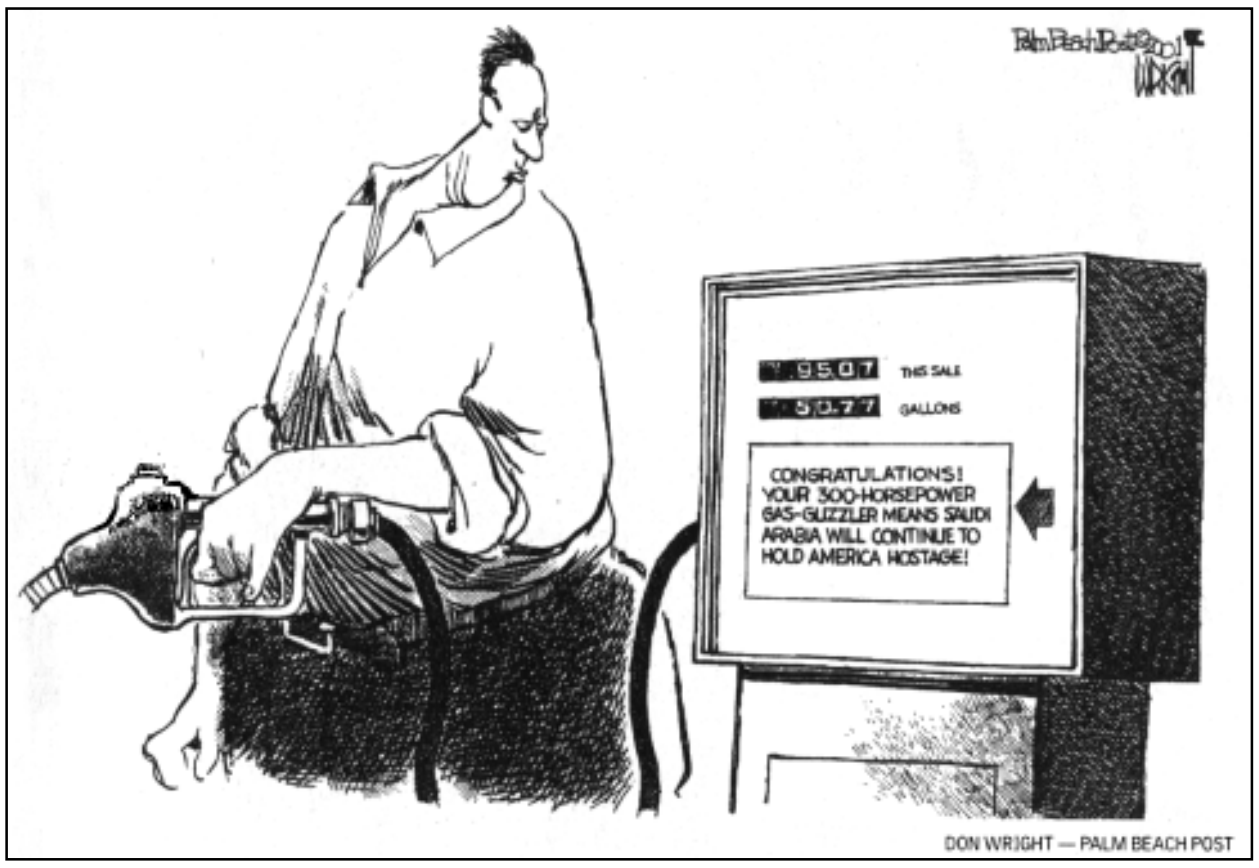
• We have sent US Special Forces into the Philippines. According to the US Energy Information Administration web page on the Philippines, "the Malampaya gas field is estimated to also contain 50 million barrels of recoverable oil. Shell Philippines Exploration (SPEX) is conducting a well test that, if successful, could mean a project investment of $450 million and potential crude production of 35,000-50,000 bbl/d by 2003. Trans-Asia Oil and Energy Development Corporation has conducted exploratory drilling at the San Isidro well in the East Visayan Basin. This area may contain as much as 60 million barrels of oil according to some estimates. The Philippine government cites estimates of up to 246 million barrels in NW Palawan and 37.4 million barrels in the Minduro-Cuyo basin. "

• We have sent Special Forces trainers to the republic of Georgia. Georgia lies along an important transit route for oil and gas pipelines from the Caspian region.

• The Bush-Cheney oilygarchy plans to send some 100 military advisers to Yemen to help the army assert control over heavily armed tribal areas that have always resisted central control. Again, according to the US Energy Information Administration, "Yemen is important to world energy markets because of its oil and

natural gas resources, as well as its strategic location at the Bab el-Mandab strait linking the Red Sea and the Gulf of Aden, one of the world's most active shipping lanes."

• The Bush-Cheney oilygarchy has made rumblings about making desperately poor Somalia one of the next stops in the so-called "War on Terrorism". Again, courtesy of the US Energy Information Administration, oil exploration activities have been focused in northern Somalia, where Agip, Amoco, Chevron, Conoco and Phillips held concessions. These firms all pulled back following the collapse of the central government. Exploration activity remains hindered by the internal security situation, and the multiple sovereignty issues.



• We have recently stepped up our military involvement in Colombia. Masquerading as a war on drugs, for years we have been supporting right wing paramilitaries and an army with a horrific human rights record, while our true purpose in Colombia was to fight leftist guerillas and protect our oil interests. It seems the guerillas figured out that blowing up oil pipelines was a good way to get attention for their cause. Through "Plan Colombia", US-supplied helicopters spray deadly herbicides over the countryside, destroying peasants' food crops along with coca fields.

• In February, emboldened by its high approval ratings since September 11th, the Bush-Cheney oligarchy pledged to provide the Colombian military with $98 million in 2003 to protect the Cano Limon oil pipeline operated by the US company Occidental Petroleum. It is the conduit from Colombia's second-biggest oil field. Syndicated columnist Arianna Huffington described the aid package as "a shameless handout to a poor-little-me corporate mendicant." She likens the deal to the level of US government corruption exposed by the Enron scandal.

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• Calling for a ''unified campaign against narcotics trafficking and terrorist activities,'' the administration in March requested more than $500 million in supplemental spending to expand US military assistance in Colombia to counterinsurgency. The new aid for Colombia, being considered on Capitol Hill, would for the first time allow the US military to help and train forces in the battle against the Revolutionary Armed Forces of Colombia, or FARC, the largest Colombian guerrilla group, which controls about 40 percent of the country. Previously, US law has limited American assistance to the Colombian government to fighting the drug trade.

• On April 18th, in testimony before the House Appropriations Committee, Deputy Secretary of State Richard Armitage said, "Al Qaeda supporters have been active in the tri-border area of Colombia, Peru, and Ecuador." However, he did not specify what evidence the United States had to support the allegation. I have spent quite a bit of time in that region of South America myself, and while I can not recall ever having seen anyone there that looked to be of Islamic descent, I 've seen quite a few big "gringos" wearing cowboy boots and talking with Texas accents. That's because it's not Al Qaeda that's active in the region, it's oil companies - lots of them. That portion of the western Amazon Basin is rich in oil. It's why Peru and Ecuador have gone to war over the border, and you can bet your last petrochemical dollar that it is why the Bush-Cheney oilygarchy would like a bigger military presence there.

• And then, of course, there is Iraq and Saddam Hussein, the nemesis of the Bush-Cheney oilygarchy. One last time, courtesy of the US Energy Information Administration, "Iraq holds more than 112 billion barrels of oil - the world's second largest proven reserves (after Saudi Arabia). Iraq also contains 110 trillion cubic feet of natural gas." Iraq exports 4% of the oil exported on world markets, amounting to 1-2 million barrels a day. That says it all, doesn't it? Are we really supposed to believe that the Bush-Cheney oilygarchy's concern is over weapons of mass destruction? Who's been bombing whom for the past ten years? Remember those oil figures when the experts start talking about the "complexities" of the situation with Saddam.

• Last but not least, there is Venezuela, our third largest supplier of oil, where democratically-elected President Hugo Chavez was overthrown in a short-lived coup on April 12th. As they say in Latin America, there has never been a coup in the US because there's no American embassy there. Though we will probably never know the full story, as more details emerge, it seems fairly clear that the Bush-Cheney oilygarchy played a role in the coup. Of all the democratically-elected leaders in the western hemisphere, Bush was the only one who did not condemn the coup - but then Bush wasn't democratically elected. Venezuela has 77 billion barrels in proven reserves, the most of any country outside the Persian Gulf-Caspian Sea Basin area. The Chavez government's populist and nationalist rhetoric combined with its role in urging OPEC members to cut production has made it a target of Washington's wrath. In particular, the US government and the big oil companies are hostile to its vow to prevent the privatization of the national oil corporation.

In the end, the choice is ours. Do we want to live in a world where might makes right, and our nation is constantly at war to procure the oil it needs to keep its industrial engine cranking? Or do we want to live in a world where nations are at peace and our needed energy comes from renewable sources available to everyone? Do we want to live in a beautiful green world with a stable climate? Or do we want to live in a world fouled by petrochemicals, with a climate getting warmer and more unstable by the year as carbon emissions fill the sky? These are our choices, and they are choices we had better make soon, before the point of no return is passed.

The information in the above essay has come from many sources. I owe a special debt to the information provided by:

essays on the Common Dreams website at http://www.commondreams.org

the *Drillbits & Tailings* online journal at http://www.moles.org/ProjectUnderground/drillbits/

the reports by Daniel Hopsicker and others in the *Online Journal* at http://www.onlinejournal.com/Special_Reports/special_reports.html

and the reports by Michael C. Ruppert of *From The Wilderness Publications* at http://www.copvcia.com/ and http://www.fromthewilderness.com/

In the end, however, I take responsibility for any factual errors that may have crept into the final product.

Bush Vows to Remove Toxic Petroleum From National Parks

WASHINGTON, DC—Vowing to “restore the pristine splendor of America’s natural treasures,” President Bush Monday unveiled “Project: National Parks Clean-Up,” an ambitious program to remove all toxic petrochemical deposits from national parks by 2004.

“Places like Yellowstone and Yosemite were once pure, unspoiled wilderness,” Bush said at a White House press conference. “But over the course of the past 10 million years, we have allowed them to become polluted with toxic fossil-fuel deposits, turning a blind eye to the steady build-up of vast quantities of dangerous pollutants. It’s time to end this terrible neglect.”

Continued Bush: “A comprehensive survey of our parks, conducted by a team of top geologists specially commissioned by me, has discovered giant pockets of petroleum, coal, and other ‘fossil poisons’ beneath an alarming 38 percent of our national parks’ surface area. Though a majority of these poisons are buried under several million tons of rock strata, should they ever seep to the surface and spread into the surrounding areas, they would spell disaster for the parks’ precious ecosystems.”

To underscore the severity of the crisis, Bush produced a chart illustrating survey results for Yellowstone National Park, where a “staggeringly huge” toxic-petroleum deposit was discovered.

“This amount represents the equivalent of 40,000 supertankers worth of oil,” said Bush, gesturing toward a line on the chart. “To put the dangers into perspective, consider this: If these ‘petro-poisons’ should ever spill out into the park itself, the resulting environmental disaster would be 40,000 times worse than the damage caused by the wreck of the Exxon Valdez.”

“We cannot allow such a thing to happen,” Bush said. “We must remove this oil now, before it’s too late.”

Under the Bush plan, 7.2 billion tons of toxic petroleum would be removed by the target date of January 2004.

Unlike other federal environmental clean-up initiatives, administration officials say the plan would pay for itself, offsetting costs through the sale of petroleum byproducts produced as a result of the clean-up process.

The clean-up, EPA chief Christine Todd Whitman said, may even prove profitable, a prospect that has attracted the participation of private industry. Already, many U.S. companies have expressed interest in lending assistance, and it is hoped that these companies will carry out much, or perhaps all, of the clean-up effort.

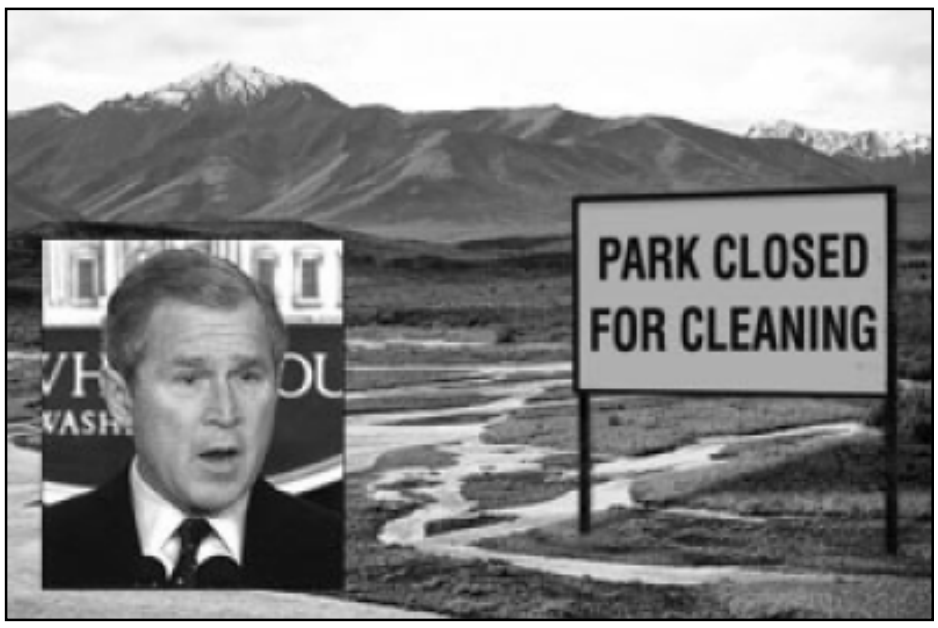
Though “Project: National Parks Clean-Up” represents Bush’s first major environmental initiative since taking office, supporters are quick to point that he has been a longtime champion of petroleum removal.

“As governor of Texas, Bush fought tirelessly to protect the state’s subterranean environment through a series of massive petrochemical-deposit clean-up projects,” Secretary of the Interior Gale A. Norton said. “Under his governorship, more tons of petroleum-based subterranean environmental contaminants were removed in Texas than in all the national Superfund clean-up sites combined. The Democrats talk a good game about the importance of cleaning up the environment, but when it comes to actually eliminating the threat of enormous oil deposits lurking under the surface of our nation, no one can hold a candle to George W. Bush.”

Thus far, reaction has been mixed. Some have said it is unrealistic for the president to try to remove so much petroleum so quickly. Others, such as Sen. Bob Smith (R-NH), have charged that the president is caving in to pressure from environmentalists, arguing that the government’s energies would be better directed toward improving the military.

But despite such criticism, Bush stressed that the urgency of removing the oil deposits should take precedence over everything else.

“Nothing is more important than the legacy we leave future generations,” Bush said. “The costs of this project pale in comparison to the importance of safeguarding our planet’s ecosystem. Our primary mission must be to protect and foster our nation’s most precious natural resource: oil. I mean, the environment.”



Alaska’s Denali National Park, one of the many wildlife refuges temporarily closed by

The above report is reprinted from The Onion

http://www.theonion.com

An EPA oil-removal pump begins preliminary cleaning of Kings Canyon National


“Clearcut America” reads the slogan on the shirt of a participant at the 2002 Oregon Loggin Conference.

Something Stinks in Maine: Fighting Toxic Sludge in our Communities

by Maggie Drummond

Ask Nancy and Mac Morris what stinks in their rural neighborhood in Livermore Falls bordering on the Leeds town line, and they'll tell you of warm spring days when they couldn't go outside their home because of the noxious sludge smell coming from fields down the road.

Odor isn't the only problem with sludge; it contains lead, mercury, arsenic, other heavy metals, dioxin, pesticides, and dangerous pathogens. This grayish toxic goop is being dumped in 116 towns on 226 fields across the state. The land application of sludge in Maine effectively distributes pollutants from large towns and cities to rural areas, far from where they were originally produced.

Sludge, often referred to with the industry-coined term "biosolids," is the residual from wastewater treatment plants. In other words, everything dumped down the drain and flushed down the toilet, including industrial waste, eventually ends up in sludge after the water is cleaned.

Sludge used to be classified as "hazardous waste" and disposed as such: in the ocean, in landfills or incinerated. Under-sea dead areas were eventually created from sludge dumping and due to public outcry, Congress Passed the Ocean Dumping Act in 1992, which banned the ocean dumping of sludge. Wastewater treatment plants and the emerging waste industry pressured the EPA into reclassifying sludge as "fertilizer," thereby severely relaxing standards for disposal. Thus the EPA, formally against the land-application of this toxic material, became both a promoter and regulator of sludge.

Recently, due to substantial information regarding abutting residents becoming sick from sludge, the EPA has changed its position from a promoter of sludge to a more neutral stance.

Many ask where sludge should go if it is not dumped on fields. The real question is, how can we eliminate the spreading of toxic pollutants on our land and how can we eliminate these contaminates from our wastewater treatment plants so that human waste becomes a truly safe and useful commodity?

Because sludge contains toxic chemicals and other pollutants, the best solution to our sludge problem is reducing these contaminants at their source. By dramatically reducing the use and disposal of industrial and household toxic chemicals we can greatly cut the chemical levels in sludge.

Until the long-term goal of eliminating the use and disposal of toxic chemicals is achieved, the state should:

1. Ban the use of sludge that contains industrial discharges.
2. Require the strictest level of pathogen reduction.
3. Broaden and strengthen sludge testing and toxic limits.
4. Allow municipalities to enact ordinances that are more stringent than the state's regulations through the town meeting or a town-wide vote problem.
5. Provide for the long-term pH maintenance and metal monitoring of sludge sites

In addition to statewide protections, municipalities should also enforce their own protections through strong ordinances controlling sludge. It is, after all, local communities that are most threatened by sludge spreading. Unfortunately, however, Maine municipalities lost home rule on solid waste issues in the late 1990's, due to extensive lobbying from the waste industry.

Nancy and Mac fear that more sludge will be spread this spring—this time, across the street from their home. Public health, the aquifer for much of central Maine, and the Dead River will all be threatened if this new site is permitted. The Morrises hope that the DEP and Leeds Planning Board will place the importance of public and environmental health above an easy dumping site and will not allow any more sludge to be dumped in the area.

For more information, contact Harris Parnell, (207) 871-1810 or harris@toxicsaction.org. Our report, *Toxic Sludge In Our Communities: Threatening Public Health and Our Farmlands* is available online at www.toxicsaction.org.

David can beat Goliath: by teaching the children the truth.

by John F. Borowski

Corporate America's expenditure of nearly $100 billion per year to further its "engineering of consent" is winning the battle for the American mind. Nowhere is this more apparent than in recent positions of the environmental community. This expensive indoctrination is causing doubt in the minds of those who know the indisputable facts re: environmental damage caused by industry.

A decade-old blitz of doublespeak, word-smithed by the slickest PR purveyors of misinformation, has environmental activists retreating and redefining their agenda. It is a recipe for disaster. Instead of what is "right" the motto is now, "take what we can get."

As an educator, I was asked recently to be part of a campaign to broaden the outreach of environmental education. I sat almost numb as I listened to a group of intelligent, ecologically fluent environ-mentalists swallow the lure of corporate benevolence. Buzz phrases were all familiar: win-win scenarios, compromise in the name of "furthering the agenda", pragmatic and reasonable approaches... ... oh, and industry's favorite opiate: "consensus and compromise."

The question begs a national dialogue. How can the industries that rape and pillage nature have the arrogance to suggest "compromise" on issues ranging from deforestation to species extinction? Why do we allow these industries into our schools? How can mainstream environmental organizations accept "dirty money", or allow corporate flacks a seat on their boards? The bar of expectations has been lowered to the point of negative returns.

This "bar", conjured by PR shills, is now entrenched in the minds of many activists and in the perception of the general public.

The true extremists here are not those who call for swift action to protect our environment. It is those who clearcut forests, drive species to extinction, destroy local economies in the name of free trade, and flood our schools with lies disguised as "teaching tools."

Yet, instead of mounting a campaign driven by the faces and futures of our children, some in the environmental community (education and activism) have bought into this co-option. Could it be they are in search of dollars from these "corporate citizens"? Nature's despoilers are buying "cooperation" from environmental organizations that once led the charge against them.

Educators rightly lament the lack of funding for environmental education, so corporate America steps in and offers to fill the void. Weyerhauser has clearcut over 4 million acres of forests, yet here they are, teaching educators at forest retreats. Tobacco executives, who perjured themselves during Congressional hearings on tobacco and nicotine, are here building community relationships through blood money. Yet, when I point this out and demand that overt and pernicious advertising by corporations be booted out of our schools, my actions are seen as fearmongering, radical or extreme. How can this be? Have the bold and visionary days of the early environmental movement been entirely dulled by industry's massive ability to "manage the outrage"?

We are at the most significant fork in the road in our brief history on this planet. The sheer magnitude of the challenge is mind-boggling. The extinction of 75 species a day; the deaths of nearly 35,000 children daily due to starvation; the rapacious consumption of resources to feed an insatiable and unsustainable economy of "needs". Is complacency the intelligent response?

Ironically, we have answers to almost all these problems. These answers are ecologically sound and would generate jobs. They would provide cultural, aesthetic and spiritually rewarding futures for our children. But, this won't happen under the pretense of the "win-win scenarios" offered us by industry and politics as usual.

These times call for accountability. Those who poison our waters and slice away at our life-support system should be recognized as the extremists, the radicals. It is time to draw a line in the sand, and that line is not negotiable. Process is built on consensus and compromise, but the protection and wise use of resources is based on science and built on a set of rules that applies to all. Timber, chemical and extractive industries are not exempt.

Carl Sagan once stated that we have no assurance that there is enough nature left to ensure our continued survival. We have been blindly withdrawing our interest and now are openly having a spending orgy with the Earth's capital. My children's health will not be a bargaining chip in this new and perverse game of "Let's Make A Deal." I am a mother grizzly bear when it comes to the safety of my girls, and I consider all children as my extended family.

I urge environmental organizations to refuse "dirty" money. They should demand what is right, not accept what is expedient.

John Borowski is a teacher at North Salem High School in Salem, Oregon.

Forestry Ecology Network
Announces Second Annual
SCHOLARSHIP CONTESTS FOR MAINE HIGH SCHOOL STUDENTS

Essay contest on the subject of
THE FUTURE OF MAINE'S ENVIRONMENT

Scholarship Prize: $2000

Topics: Various themes might be addressed such as:

- **an analysis of threats to Maine's environment;**
- **present state of Maine's environment and what can be done to improve it;**
- **the relationship between a healthy environment and healthy communities;**
- **what future state of the environment should Maine citizens work for;**
- **the ecological relationship between forests, watersheds, fishing grounds, communities;**
- **the harvesting of Maine's resources and environment's sustainably;**
- **how to mobilize people to be concerned about the environment;**
- **the consequences if impacts on the environment are ignored.**

Essays will be judged on their understanding of ecological interrelationships and originality in analysis or in providing novel solutions to environmental problems or conceptions of the future for the Maine environment.
Essay length: 1000 to 2000 words

Photo contest on the subject of
THE HEALTH OF THE EARTH

Scholarship Prize: $2000

There are examples all around us of the wanton misuse of the earth. There are also good examples of positive ecological relationships with the earth. FEN is offering a scholarship prize for the best submission of two photographs - one illustrating a positive ecological relationship and the other an example of the misue of the earth. These photographs can be of, but not limited to, the ocean, shore, watershed, rivers, lakes, forest, land, flora, birds, animals, atmosphere, etc.

Photographs may be in black and white or color, and they should be submitted as prints, at least 4 x 6 inches in size. They should be matted, but unframed.

photo by Jonathan Carter

Who is eligible: The contest is open to high school juniors and seniors (during 2001-2002 school year) residing in the state of Maine.
Submission deadline: July 3, 2002 - Forest Interdependence Day
Announcement of Awards: September 15, 2002

photo by Paul Donahue

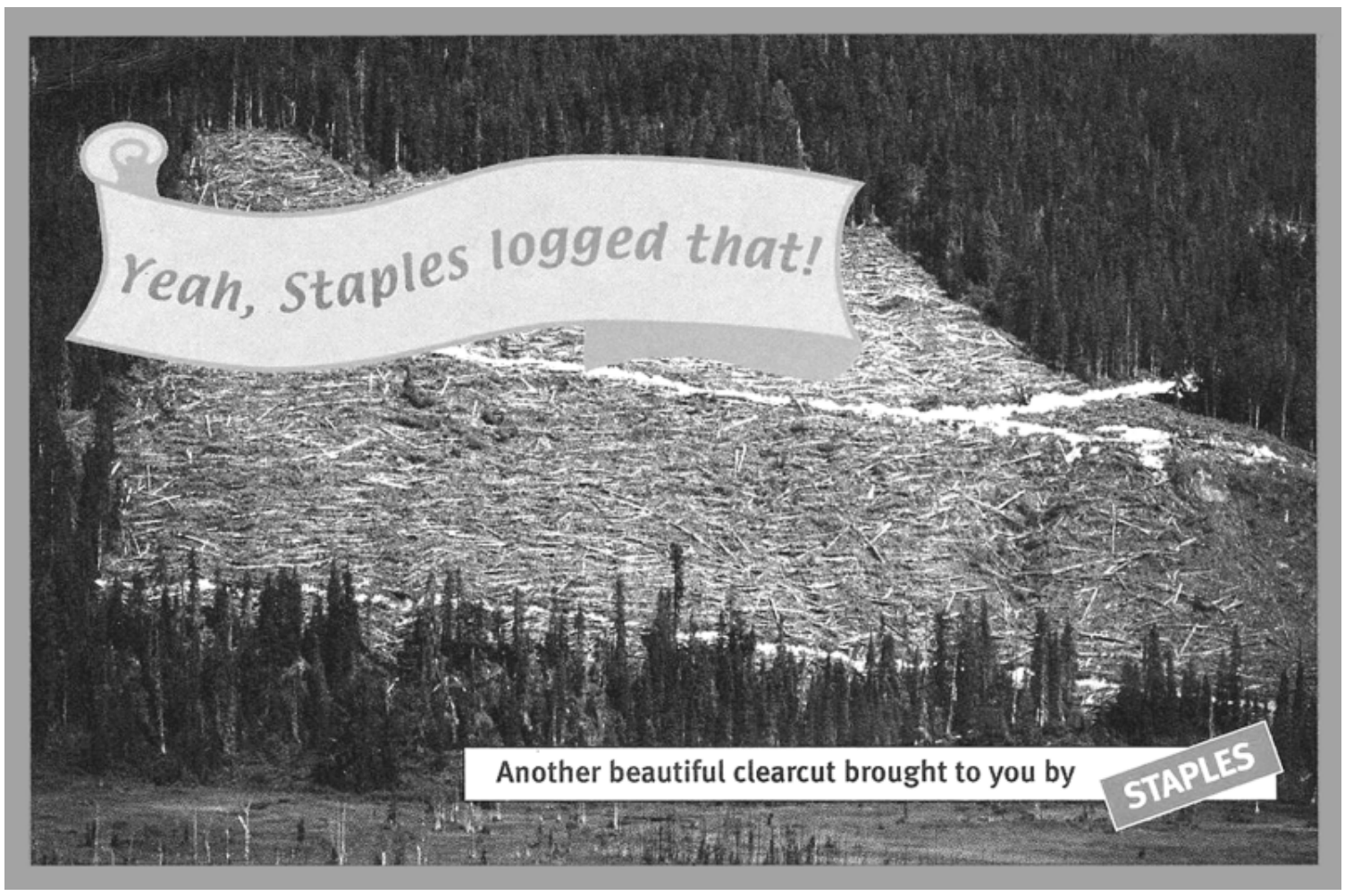
FEN reserves the right the use all essays and photographs submitted in its work

To request contest applications, or if you have questions or need further information, contact:
Dorothy Carter
Forest Ecology Network
P. O. Box 2118
Augusta, ME 04338
207-628-6404
fen@powerlink.net

The Staples Campaign

That innocent-looking Staples store down the street is actually one of the world's largest liquidators of the world's forest. Because Staples is such a massive (and growing) retailer of non-recycled paper products and they refuse to clean up their act, they are the poster child for the destructive timber barons that destroy our forests.

Many environmental groups, both campus-based and nation-wide are participants in this growing campaign, which has been in progress since last semester, but began with the highly successful Home Depot boycott from a few years ago. Our goal is to publicly humiliate Staples and force them to make a commitment to change their behavior. To stop the further destruction of our Forests, we are demanding the following commitments from Staples:



- Immediately phase out all wood and paper products made from old growth fiber.

- Immediately phase out all wood and paper products made from trees growing on U.S. public lands (and thereby set a precedent for other countries to protect their own public lands).

- Commit to achieving 50% post consumer content for all paper products within two years and begin an immediate phase out of all products that are 100% virgin wood fiber.

- Make 100% post consumer paper and paper that is made from agricultural fiber available by allocating permanent shelf space and stocking it in all stores or other points of sale.

- Educate all employees, customers and suppliers about the benefits of recycled paper, recycling, the availability of alternative fibers, and the benefits of healthy forest resources.

For the past year, many small school groups like your own have put pressure on Staples. This is the type of grassroots activism your school group can add to the crushing weight of public pressure that is currently on Staples. Even if your group is small, each retail outlet that is publicly humiliated is another memo that lands on the Desk of Staples' CEO. The coalition protesting Staples is multiplied in strength with each voice added to the choir.

Protests, letters to the editor, direct communication to the CEO of staples, petition drives, local boycotts - all are tactics that the coalition is using. One group even got especially creative and showed that Staple "struck out" on it's environmental record. There will be national "days of action," on which date your groups should be active participants. As a member of the SSC's National Forest Protection and Restoration Campaign, your group will be kept aware of these important dates, usually through email. For Staples materials, like nifty postcards you can have signed at protests and the baseball cards seen here, contact Jim Steitz or Dave Westman (1-888-JOIN-SSC).

Call, Fax, and email the Staples CEO!
Publicrelations@staples.com Fax: 508/253-8955
Phone: 508/253-5000

TIPS & IDEAS FOR YOUR STAPLES CAMPAIGN:

Take your case to the manager before and after - the manager will likely be in communication with his/her supervisor in the Corporate headquarters, taking your message to the highest ranks of the Staples corporation.

Watch out for their greenwash - Lately, Staples has advertised heavily its 20-30% post-consumer recycled paper, and put out signs and fact sheets about its recycled products. Maybe you can grab a copy of this sheet before-hand and make a mock-copy that you can hand out at your protest.

The managers have generally tried to stay low-key during protests - not confronting protesters, not speaking to the media, etc. Plan your protest and media work accordingly - silence is incriminating.

Staples seems to be a very top-down organization. The individual managers are not able to deliver, but the upper management is. Keep this in mind when messaging.

The anti-Staples coalition holds regular "days of action" to coordinate our pressure in large, powerful bursts. Watch for these and schedule your group's protest at your local store to coincide.

Use unscheduled in-store visits. Arrange for a few friends to drop by Staples and ask for recycled paper, then express disappointment at its absence (and don't be fooled by that fake-o stuff that is only 30% recycled fiber). Managers face strong incentives to maximize revenue, and a few impromptu customer complaints will keep the pressure up, even on non-"days of action."

Are there any local stores you can hold up as counter-examples to Staples? Any stores that have committed to recycled and/or old-growth free paper? (Note: Kinkos has announced a no-old growth policy. Though the details are still being flushed out, each store is free to make its' own decisions, unlike Staples.) If you can hold up another copy/staionary supply outlet as the environmental alternative to Staples, you gain an ally and craft a better message. By providing consumers with a clear alternative, the pressure is turned up a notch on Staples to avoid losing customers - commercial peer pressure! Perhaps even a press conference to announce the isolation of Staples is in order.

Are there smaller institutional users that you can use as secondary targets, e.g. other retail stores in the community that buy office supplies from your local Staples? Try going around your local main street, dropping off literature on the environmental destruction that Staples is causing. Perhaps you could commemorate the commitment of stores that choose to buy only environmentally responsible products with a small sign stores can hang in their front window that reads: "This Store is Old Growth Free"

More information on the Staples campaign can be found on the Rainforest Action Network's website at http://www.ran.org

5R Project Update

The 5R Project Director, Steve Swift, recently gave a presentation at the Maine Recycling and Solid Waste Conference at the Samoset Resort. Steve explained how the 5R Project was inspired by Julia "Butterfly" Hill. He
went on to discuss the focus of the 5R Project on small business recycling in Maine. One important statistic that was brought up at the convention was that 50% of what is in landfills is PAPER. The convention was an excellent opportunity to network with people involved with recycling. Several new contacts were made with people who can give valuable advice and information to advance the 5R Project..

If you would like to meet with business owners in your town to explain how 5R sponsorship will help them and the environment, please contact us! We will provide you with the information and support you need to sign up several businesses. An hour or two a week can make a big difference. We are looking for students, retirees, and anyone with an interest in helping lessen our impact on the planet.

Please call Steve Swift at Swift Arrow, 207-872-2078 or email activist@5Rproject.com

Illustration from Julia Butterfly Hill's new book *One Makes the Difference*. See the review in this issue.

5R PROJECT PLEDGE
RESPECT-RETHINK-REDUCE-REUSE-RECYCLE

This organization has pledged to practice the 5R's and agreed to implement the standards listed below. Our actions, however small, are cumulative and will reduce the use of trees for paper while increasing the demand for forest friendly solutions.

1. Copiers will use recycled paper containing a minimum of 30% post consumer waste.

2. Computer printers will use recycled paper containing a minimum of 30% post consumer waste.

3. A full recycling program will recycle all office paper, plastic, magazines, and cans, when local facilities exist.

Forest Ecology Network News

FEN'S DIRECTOR SUCCESSFULLY BECOMES NATION'S FIRST CLEAN/GREEN GUBERNATORIAL CANDIDATE

Jonathan Carter, FEN's Director, has successfully become the nation's first Clean/Green gubernatorial candidate. In perhaps the most intensive signature collection drive in Maine's history, the Carter for Governor Campaign collected 2900 Green Independent signatures to place Jonathan on the November 2002 ballot. Jonathan also submitted over 3500 $5 donations to the Maine Clean Elections Fund to qualify him as a Clean Elections candidate, which will make him eligible to receive up to $900,000 in public financing.

Maine was the first in the nation to pass a Clean Election Act. This Act takes PAC, corporate, and special interest money out of politics. Jonathan believes that the Clean Election Act allows candidates to run beholden only to the people of Maine. Jonathan has been quoted as saying, "If we look at almost any issue from health care to forest destruction, it is clear that public policy is not dictated by citizen opinion, but by the influence of special interest money - lobbyists, PACs, and corporations. Most people understand that the massive clearcutting, overcutting, and toxic herbicide spraying occurring in Maine's forests takes place because the paper corporations own Augusta. This campaign will provide an opportunity to get our ideas into every household in the state. While we have every intention of winning, the educational value of the campaign can not be overstated. It is time we take back the Blaine House for the people."

At this point, Jonathan will continue to make FEN his top priority, but may take a leave of absence next fall in order to direct all his energy into the campaign.

FEN KICKS OFF LECTURE SERIES AT CONNECTICUT COLLEGE

In February, Jonathan Carter, Director of FEN, was invited to be the kick off and keynote speaker of a lecture series at Connecticut College in New London, Connecticut. Connecticut College, one of the nation's premier liberal arts colleges, has a strong commitment to social, environmental, and economic justice. Jonathan lectured in several classes and addressed the faculty and student body on the issue of Corporate Power and Environmentalism. Jonathan described his experiences in Maine in fighting the paper corporations destructive forest practices. He illustrated how the big money of the large paper corporations in Maine has been used to undermine forest protection and to perpetuate forest practices which are destroying the ecological health of forests as well as the economic well being of local communities. He also outlined Bob Hinkley's (a FEN member from Brooklin Maine) Corporate Code of Ethics which states that corporate citizenship mandates environmentally friendly activity, support for health and safety, promotion of worker's rights and livable wages, and a commitment to community well being.

FEN CONTRACTS WITH DEVELOPMENT CONSULTANT, KEN BLONDER

FEN is very fortunate to have the services of development consultant, Ken Blonder. Ken, a resident of Casco, received an undergraduate degree in Environmental Conservation from the University of N.H. and a Masters degree in Urban and Environmental Studies from Rensselaer Polytechnic Institute. Ken has worked as park ranger, Environmental Protection Specialist for the U.S. Coast Guard, an electric and gas utility policy analyst, an environmental planner for the Androscoggin Valley Council of Governments, and a middle school special education teacher. His strong environmental background and excellent technical skills will be very helpful in FEN's effort to build a sound financial base. Ken will be working with Jonathan and Daisy Goodman, FEN's Herbicide Project Director, in an effort to raise foundation support. We thank Ken and welcome him to FEN.

FEN director Jonathan Carter at a stop at Bates College to collect signatures and five-dollar contributions for the Cllean Elections Fund.


Brian Keegstra, Paul Lindberg, Olga Lang, John Herrick, George Appell and Daisy Goodman at a recent FEN board meeting at the offices of Lindberg Engineering in Augusta.

FEN Field Trips

This summer and fall FEN will be offering educational and informative field trips. FEN members, friends, and family are invited. There is no charge. Please let us know early if you are interested in participating.

A Semipalmated Sandpiper on its way south in August. This is one of the many species of migrating shorebirds that we should see on the Coastal Birds and Forests field trip in August.

Big Spencer Mountain
Saturday, June 8th, 2002

This outing will take you to the most recent state acquisition in the heart of what we hope will become the Maine Woods National Park and Preserve. While this hike will provide an opportunity to view the devastating impact of industrial forestry, it will also, weather permitting, offer an unparalleled view of the area proposed for the Park and Preserve.
The trip will start in Greenville, with the meeting time and place to be announced..
Trip naturalist: Joanthan Carter

Kennebec Highlands
Saturday, July 6th, 2002

Central Maine has recently protected 5,000 acres of forest land. The trip will offer an opportunity to experience and view this truly signifigant land protection effort.
Meeting time and place to be announced.
Trip naturalist: Warren Balgooyan

Coastal Birds and Forests - Part 1
Sunday, August 25th, 2002

This field trip is planned to coincide with the southward migration of shorebirds along the Maine coast. We'll begin with an exploration of the rocky shoreline and coastal spruce-fir forests of Quoddy Head State Park. This is one of the most spectacular stretches of the Maine coast. The park also includes a boardwalk through a coastal raised bog, with Pitcher Plants, Round-leaved Sundew, Bog Rosemary, Labrador Tea, Baked-Apple Berry, and other typical bog plants. We should encounter some small flocks of migrating warblers, and with some luck, we may spot a Minke or Finback Whale out in the Grand Manan Channel.

Shorebird-watching is tide dependent, and in early afternoon, when the extensive South Lubec mudflats begin to be exposed by the falling tide, we'll move up there. The diversity of migrating shorebirds reaches its peak in Maine in late August, and we should easily be able to locate 12-18 species of plovers and sandpipers along the South Lubec sandbar and its associated mudflats. This is one of the best shorebirding spots in Maine and shorebird numbers at this date should be in the thousands.

Bring warm clothing, because even in summer this area can be quite chilly when the fog rolls in.
Meeting time and place: 9:00 am in the parking lot at Quoddy Head State Park, Lubec
Trip naturalists: Paul Donahue and Teresa Wood

Herbicides in Action
Saturday, September 7th, 2002

This field trip will attempt to coordinate a day of action in response to herbicide spraying. Participants will be able to examine past herbicided sites, and currently slated or recently sprayed sites. The ecological and health effects of herbicides will be discussed. This trip will take place in western Maine, with the meeting time and place to be announced.

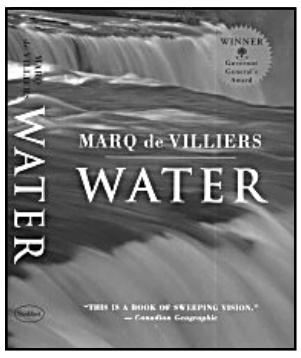
Coastal Birds and Forests - Part 2
Saturday, October 5th, 2002

The location for this field trip is still a bit tentative. The last week of September and the first week of October is the peak of the fall migration of hawks down the Maine coast. However, the phenomenon is very weather dependent, as participants on last year's hawk-watching field trip can attest. For the present, we will plan on visiting Morse Mountain Preserve in Phippsburg to explore the coastal deciduous and Pitch Pine forests and to search for migrating waterfowl and landbirds. If at the last minute, however, it looks like October 5th is going to have the necessary northwest winds to start the hawks flying, then we may contact the participants and re-locate to a site that will provide a better vantage point for observing the migration.
Meeting time and place: 9:00 am in the parking area for the Morse Mountain Preserve along Route 216 in Phippsburg
Trip naturalists: Paul Donahue and Teresa Wood

The Forest Ecology Network Bookshelf

Water

by Marq de Villiers
Paperback - 368 pages
2000
Stoddart Publishing Co. Limited,
Toronto, Ontario, Canada
ISBN: 0618127445



"You don't know what you've got 'til it's gone"....a popular folk song refrain, even a worn out cliché. Never has it seemed so true until reading Marq de Villiers' *Water.* As I write this there is fighting in the Middle East, Israelis versus Palestinians in an internecine war that at its base is a war over resources, in particular, water. Other potential fights between nations in numerous parts of the world could also be attributed to the problem of water distribution as much as to religious and political differences. Despite the fact that the mainstream media almost totally ignores the vital issue of water, the rest of us can not afford to do so.

Indeed, after reading Marq de Villier's book entitled *Water* I am more amazed that the evening news reports do not pay more attention to water issues globally. This well-written book points out very graphically the challenges "developed" and "developing" nations all share concerning water resources. As a caveman might be able to demonstrate easily, we can do without petroleum products, but we can not survive without water.

Luckily, water is a resource that generally has not required much careful consideration for those of us who live in the Northeast. We have had abundant snow in the winter and adequate rain in the spring and summer to recharge homeowners' wells and deeper, municipal aquifers, and to keep rivers flowing, and lakes full. However, recently this seems to be changing. Winters are warmer with less snow, rain comes when the ground is still frozen and can not be absorbed by the ground. In general, there has been less precipitation. Although the newspapers in Maine this winter and spring have been full of headlines using the words drought and decline and shortage, most of us truly do not have an inkling of what it means to genuinely suffer from a lack of water. For that we must look to the drier parts of our nation and beyond, to countries where peoples' very daily existence revolves around the search and procurement of water with which to drink, cook and clean. Marq de Villiers helps us do just that as he reports his findings from worldwide journeys.

Villier's easily read book on the state of water resources worldwide is a sobering text. It reports what we have done historically to use and abuse water from the earth's rivers, lakes, ponds and wetlands, and increasingly, from underground aquifers. The author explains the hydrological cycle, the global distribution of water resources, and the pressures on the system, such as contamination and pollution, from rapidly growing, increasingly industrialized populations around the globe. de Villiers does an excellent job of describing how politicians, farmers, ranchers, and industrialists from southern Africa to northern Russia, North and South America, the Middle East, the Indian Subcontinent and China have wrangled historically over water rights. He continues right up to today's headlines, chronicling global conflicts, some taking place in board rooms, others in government offices, yet others in the streets of desperate communities. Fortunately, we have often been able to negotiate solutions to our differences and have not always resorted to warfare and subterfuge.

Marq de Villier's book, *Water,* eloquently explains why there is so much conflict over water rights. This text puts in perspective and explains many current and potential conflicts in the world. The author quotes scientists, businessmen and politicians on both sides of water resource issues, using anecdotes about these persons and the places they care about to make the stories flow smoothly. His descriptions of the earth's arid locations make you feel as if you are there with him as he visits a massive pumping project in Libya or the dried-out polluted shores of the Aral Sea or a California reservoir.

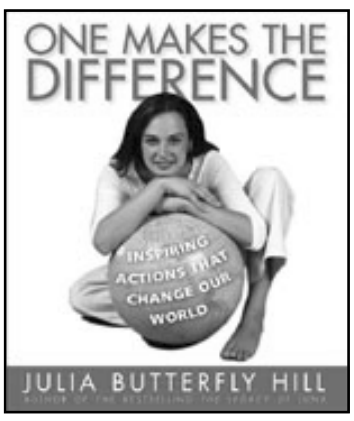
His conclusions in this riveting book are dire, so I hope that the last chapter and afterword, which are optimistic in tone, come to pass. In my own view, it seems obvious that we will continue our fights in the coming decades over who gets how much water and whether it is potable. Even worse, the potential certainly exists for the escalation of these water wars.

I highly recommend this very engaging and thought provoking book.

Teresa Wood
Machias, Maine

One Makes the Difference

by Julia Butterfly Hill and Jessica Hurley
Paperback - 198 pages
March 2002
Harper San Francisco
ISBN: 0062517562



Environmental activist, writer, poet, artist and founder of the Circle of Life Foundation, Julia Butterfly Hill is the young woman who inspired so many by living for two years in the ancient Coast Redwood named Luna to protect it from loggers. Following her record-breaking two-year tree sit, Julia has ceaselessly continued her efforts to promote sustainability and ecologically-minded ways to save not only the old-growth redwoods she acted so valiantly to protect, but also the rest of our fragile planet. Here Julia offers ideas for saving the planet that can be followed by anyone, young or old, answering the question she hears so often from her fans and supporters: What can I do to help?

One Makes the Difference is a hands-on guide full of her advice on how to promote change and improve the health of the planet, all distilled into an essential handbook. Packed with information, conservation facts, inspirational stories of ordinary people who have made a difference, and common-sense actions, *One Makes the Difference* provides easy-to-follow guidance for everyone who wants to help save their environment. Covering such topics as recycling, air pollution, environmental justice, land use, and other topics, she presents brief background and statistics, motivating quotes, inspirational activities, and lists of organizations. It shows how simple choices, such as buying "green products" like organic or locally-grown food and hemp clothing have more of an impact that you might imagine, and stresses how individual responsibility is critical if we are to protect what is left of our natural world. This book is accessible to both adults and young people who look to Julia as an example of how one person can change the world.

One Makes the Difference is printed on paper made from 100% post-consumer recycled fibers and is processed in a totally chlorine free process using soy-based ink. A percentage of the author's proceeds are being donated to the causes that are highlighted in this book.

Julia's words - Pointing fingers

We have become so good at pinpointing what is wrong in the world, and yet these problems are reflections of our actions and behaviors. With so much of our cultural and natural world being destroyed, mutilated, and oppressed, everywhere we look we can catalog the issues that urgently need to be addressed before it's too late. But every time we point out the damage being done, there are still three fingers pointing right back at us. When we point at what is wrong, we must take responsibility and try to embody and enact what is right. For me, these digits pointing in our own direction stand for power, responsibility, and love in our daily life, community life, and global life.

The first finger represents power. We are all powerful beyond our wildest imaginations. We have been conditioned, numbed, and manipulated over time into giving our power away to name brands, corporations, and governmental officials, just for starters. It's time we take the power back!

We have the power to change the world. Everything we do and say does change the world. Even our inactions have impact. If I had walked away from the destruction of the redwoods without trying to stop it, my inactions would have had as much adverse impact as my decision to live in a threatened ancient redwood tree. In every moment of every day we make choices, and every choice has an impact, positive or negative. We are moving either toward the problem or toward the solution.

The second finger stands for responsibility. Because we are beings of tremendous power and energy, we have the responsibility to choose carefully, compassionately, courageously, and consciously. We have become addicted to, and transfixed by, our right and freedom to choose. Yet, all the while, we accept less and less of the responsibility for the impact of our decisions and how those decisions ripple out and affect the planet, its people, and the future. Every time we do not take responsibility for our choices, some other person or place is paying the price for it - and that price is high.

Compound interest is not just an economic reality; it is inherent in the equation of life.

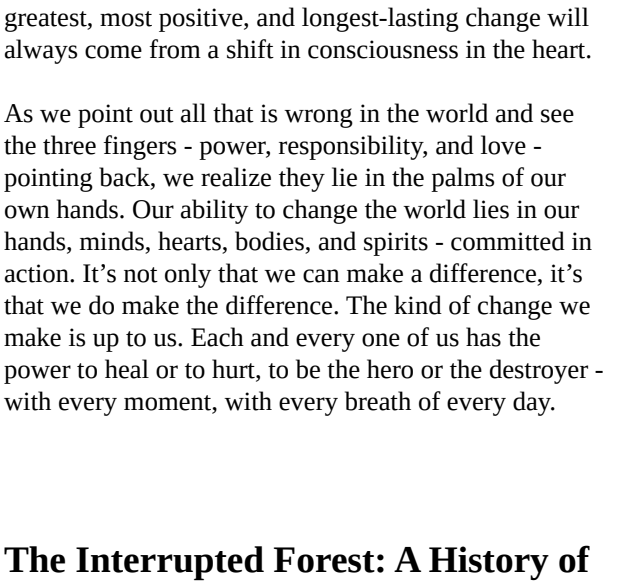
The third finger symbolizes love. Why love? Why not! What else would we want to do with our lives than offer them in loving joyous service to the Earth and all its inhabitants? With love, hatred and anger transform into fierce compassion; struggles and challenges become opportunities for growth and strength. Responsibility transforms from drudgery and necessary evil into a newfound happiness in our ability to respond. The greatest, most positive, and longest-lasting change will always come from a shift in consciousness in the heart.

As we point out all that is wrong in the world and see the three fingers - power, responsibility, and love - pointing back, we realize they lie in the palms of our own hands. Our ability to change the world lies in our hands, minds, hearts, bodies, and spirits - committed in action. It's not only that we can make a difference, it's that we do make the difference. The kind of change we make is up to us. Each and every one of us has the power to heal or to hurt, to be the hero or the destroyer - with every moment, with every breath of every day.

The Interrupted Forest: A History of Maine's Wildlands

by Neil Rolde, Kristen Read Boettcher (illustrator) and Rosemary Mosher (illustrator)
Paperback: 402 pages
November 2001
Tilbury House Publishers
ISBN: 0884482340

More than half of Maine has never been settled and lies in what is called the Unorganized Territories, millions of acres of quasi-wilderness. Add to this the thousands of farms that have grown back to woods since the Civil War, and you have the most forested state, percentage wise, in the United States. But the "uninterrupted forest"



Cover art features "Mahoosuc Sunrise", a panoramic photograph © Scott Perry

that Henry David Thoreau first saw in the 1840s was never exactly uninterrupted, for loggers had cut it severely even before the Concord iconoclast's trip, settlers had gnawed into it, and the Indians, much earlier, had left their mark.

This is the story of these lands, wild then and, in many places, wild still, and the humans who used them and shaped them and fought over them. It is a story that starts in the present with the current controversies over land sales, clear-cutting and spraying, proposals for a gigantic National Park, the future of the pulp and paper and lumber industries, and no less than a secession movement in Northern Maine, and then seeks to answer the question: "How did this extraordinary region come into being?"

We go deep into geologic time to understand the land and the trees that grow on it, and then come the stories of people and events that have shaped it further: Native Americans, French, English, Puritans, settlers, loggers, speculators, great proprietors, surveyors, soldiers, squatters, industrialists, game poachers, conservationists, philosophers, artists, writers, sportsmen (and women), nature lovers, property rightists, preservationists, hermits, mystics, and picturesque characters of every stripe that have created and still create their own legends. Here is the background to see the Maine Woods—its wildlands—in perspective.

About the Author

Neil Rolde, a historian and former legislator, is the author of The Baxters of Maine, An Illustrated History of Maine, Maine: A Narrative History, So You Think You Know Maine, and other books.

North America Facing a Biodiversity Crisis

by Robert Melnbardis

MONTREAL - At least 235 North American animal species such as the monarch butterfly and northern codfish are threatened by pollution, human encroachment on their natural habitats, and aggressive harvesting practices, says an environmental agency set up under NAFTA.

A broad study by the North American Commission for Environmental Cooperation, a Montreal-based agency created under the North American Free Trade Agreement comprising the United States, Canada and Mexico, says the continent faces a "biodiversity crisis" in which threatened species could disappear. That harms evolution and depletes the natural environment humans depend on to survive.

Half of North America's most biodiverse eco-regions are severely degraded, says the report, which will be formally released to the three governments today.

"Our report shows that over the past few decades, the loss and alteration of habitat has become the main threat to biodiversity," said Janine Ferretti, executive director of the commission. "A significant proportion of the plant and animal species of North America is threatened."

The monarch butterfly, which migrates from Canada to Mexico, faces a number of threats, including coastal development in California, deforestation of fir forests in Mexico, and the use of pesticides on milkweed plants, its main food.

The report notes that some experts believe humans are "fishing down the food chain" in over-harvested stocks such as salmon, cod, halibut and swordfish. That means catching fish that are needed to rebuild depleted species.

Freshwater species such as crayfish, 48 percent of which are at risk, are even more vulnerable to extinction because they cannot escape to new ecosystems when their own habitats are degraded by pollution.

An apparent inability to develop North America's economies while sustaining its environment not only threatens biodiversity, but imperils people's future, the report says.

"At the turn of the millennium, North Americans are faced with the paradox that many activities on which the North American economy is based impoverish the environment on which our well-being ultimately depends," the report says.

It notes that the poor are the hardest hit by environmental problems.

In an interview, Ferretti said the United States, Canada and Mexico had made progress in creating refuges for wildlife, protecting species, and gathering data on biodiversity. Much more was needed to reverse the degradation of biodiversity, she said, adding that she hoped the commission's report, "The North American Mosaic," would become a key resource for planning and policymaking.

"It's a panoramic view of the state of the environment in North America, and it's the first time that information from all three countries has been collected on such a broad sweep of issues," Ferretti said.

Future studies would focus on a core set of indicators to provide a snapshot of the state of the environment, she added.

The current report raises alarm bells on a number of fronts, including the effect of modern transportation systems on the environment, the overuse of water resources and rising threat of drought, and bio-invasion, the spread of nonnative species imported into North America.

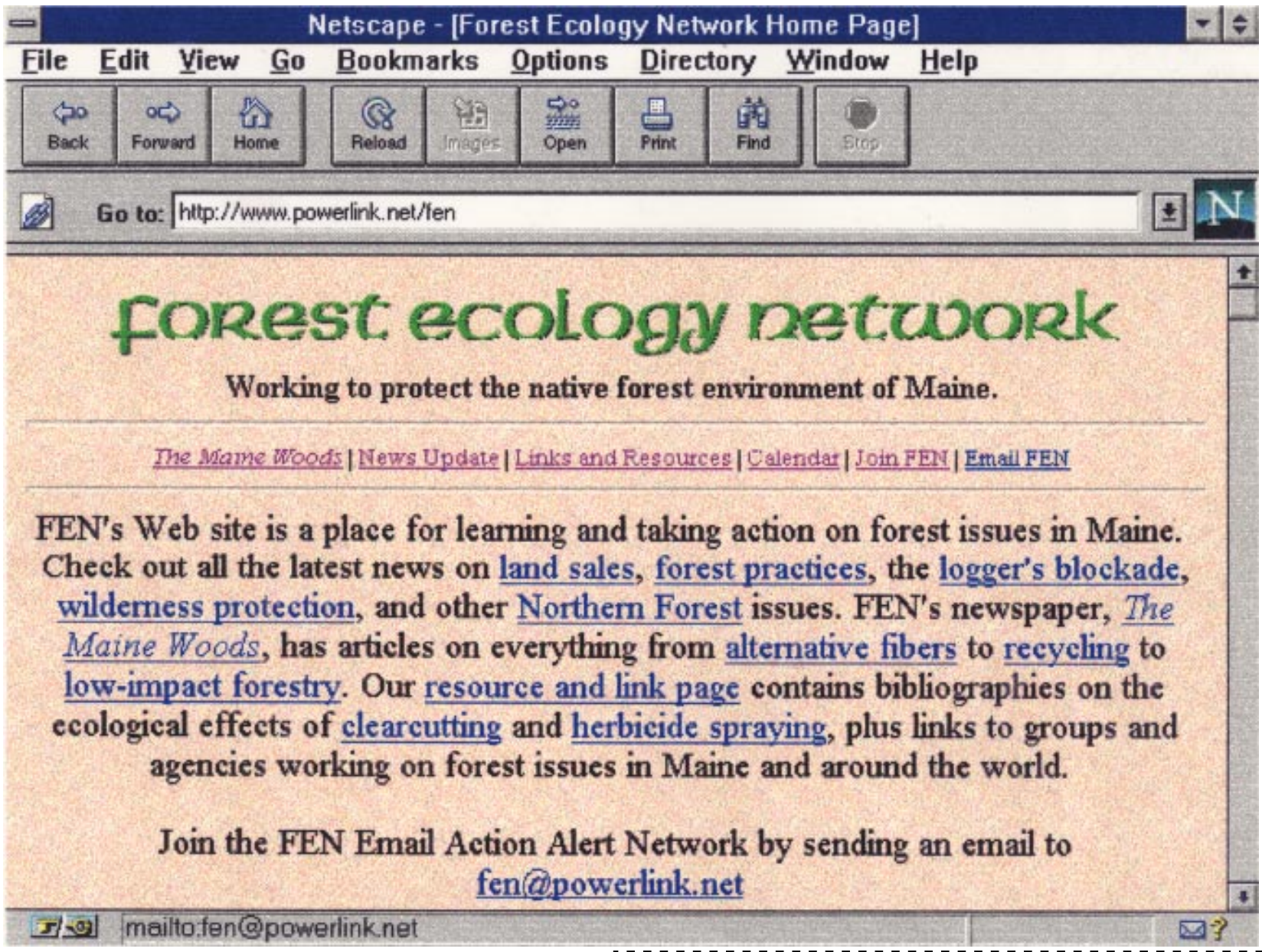
"Bio-invasion, that is something that wasn't in our lexicon 10 years ago. The magnitude of this threat is quite significant," Ferretti said.

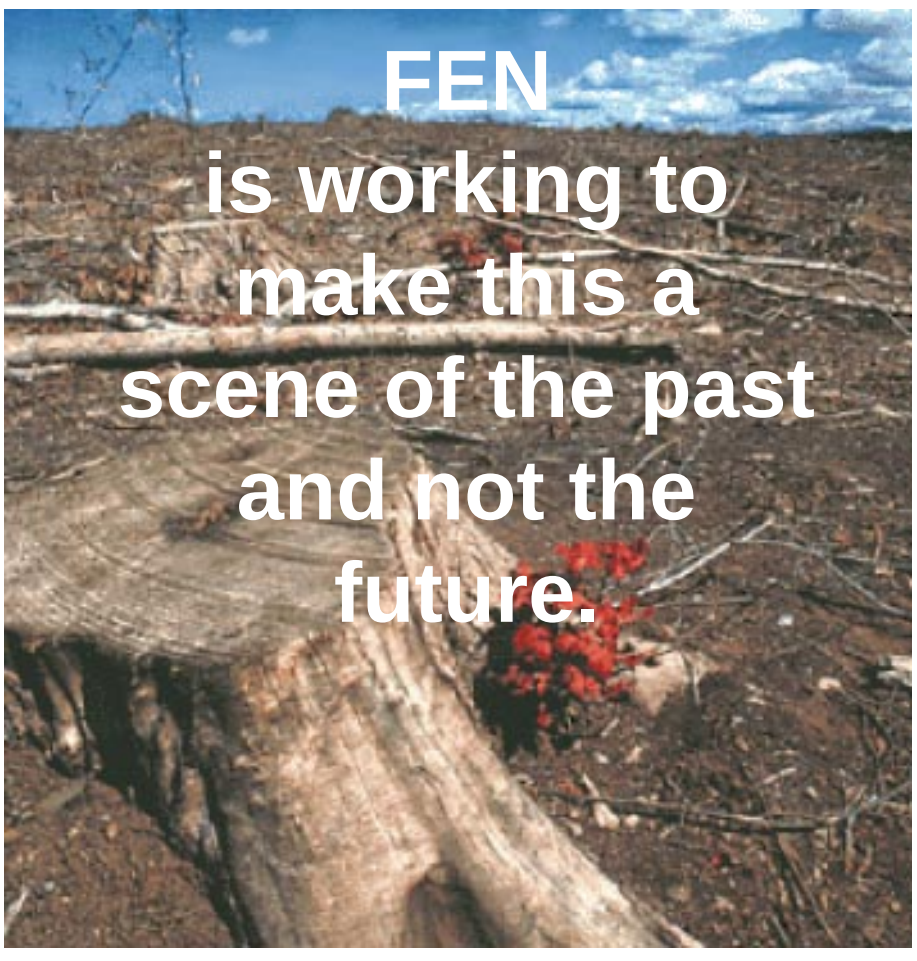
Agriculture and thermoelectric power generation account for about 80 percent of water withdrawals in North America. Irrigation is a particular threat. The Ogallala Aquifer underneath the Great Plains has water resources equivalent to Lake Huron, but it is being depleted by irrigation faster than it can recharge, the report says.

The above report was published on January 7, 2002 by Reuters.

"Polite conservationists leave no mark save the scars upon the Earth that could have been prevented had they stood their ground."

David Brower





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