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Empty Promises

Perspectives on Canaan Valley

The Canaan Valley Committee of the WVHC is concerned. Ever present as a vigilant observer of events effecting the Valley, a solution to ATV (all-terrain vehicle) or ORV (off-road vehicle) use on private wetland areas (owned by Monongalia Power Company) remains unresolved. Recent Committee work included corresponding with the Army Corps, Fish and Wildlife Service, EPA and the Department of Natural Resources.

It is no secret that previous recommendations for protecting the 28000 acre Valley as a part of the National Wildlife Refuge System has remained unfulfilled. Players and motives may have changed over the years but; almost without exception, the environmental threats to the area continue.

The ATV threat becomes more serious every year. ATV rallies like the Blackwater 100 (see Charleston Gazette 6-21-89) damage long sections of wetlands in the northern end of the Valley. The noise and tangible devastation of plants and soil under the wheels is an immediate danger. Long-term results of erosion extends damage to plants and mammals. Degradation of the ecotone will make restoration improbable or impossible.

Owner, Monongalia Power Company, designates the area "Recreational Use Permitted" by posting. The presence of ATV's interrupts other recreational pursuits. Damage by ATV riders — noise and/or visible physical change — may completely remove opportunities for appreciation of the aesthetic qualities intrinsic to many recreational activities like fishing and bird watching.

Canaan Valley Committee Chair, Linda Cooper Elkington, wrote government agencies requesting they state their plans for protecting wetlands, i.e. Canaan Valley. Not surprisingly, the following excerpts from their responses reflect their perspective.

The District Engineer of the Corps of Engineers, Colonel George M. Miller, Jr., replied in part: "Although I recognize that this type of activity is destructive and disruptive to wetlands, we lack the specific authority to prohibit them." He also states, "The Corps' responsibility under Section 404 of the Clean Water Act involves regulating activities that consist of placement of dredge or fill material into waters of the United States and wetlands. We have no authority to regulate or prohibit activities that do not involve placement of material into these waterways or wetlands."

The Fish and Wildlife Service, who proposed to acquire the 28000 acres in 1979 as part of the National Wildlife Refuge System, replied: "We recognize

In Defense Of The Atmosphere

Global warming is an environmental threat unlike any the world has faced. While human activities during the past century have damaged a long list of natural systems, most of these problems are local or regional in scope and can be reversed in years or decades if sufficient effort is exerted. Changes to the earth's atmosphere, on the other hand, are global and — for all practical purposes — irreversible not only in our lifetime but in our children's and grandchildren's as well.

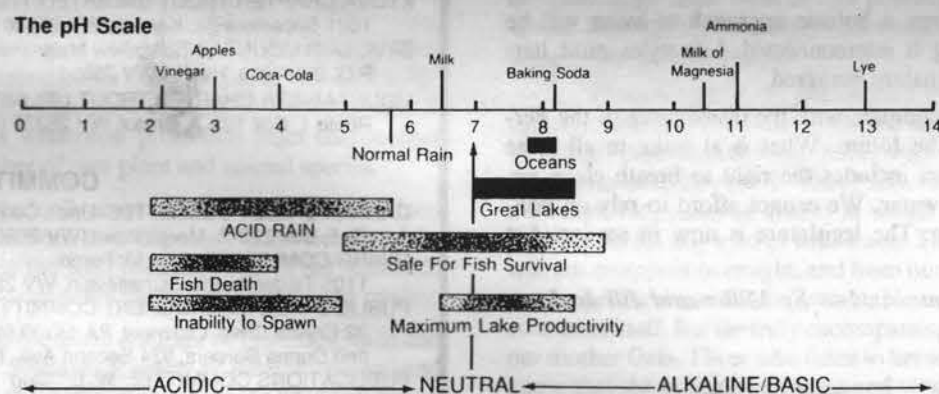
Among the unprecedented policy changes that have now become urgent are a curtailment of chlorofluorocarbon production, a reversal of deforestation in tropical countries, enactment of a carbon tax on fossil fuels, and a new commitment to greater energy efficiency and the development of renewable energy sources.

Rich industrial countries such as the United States, which have caused most of the warming so far, should logically take the lead in adopting national programs to slow it. The biggest challenge, however, is at the international level. Slowing global warming will require that countries strengthen international environmental institutions and enact strong new treaties.

Lending urgency to the problem is the fact that the chemical composition of the earth's atmosphere, normally stable for millennia, is already substantially different than it was just a century and a half ago.

While nitrogen and oxygen are still the main constituents, several more complex gases are building steadily: carbon dioxide is up 25 percent, nitrous oxide 19 percent, and methane 100 percent. Chlorofluorocarbons, a class of synthetic chemicals not normally found in the atmosphere, have added further to this warm blanket of gases that allow sunlight in but trap the resulting heat. Scientists estimate that the resulting greenhouse effect is equivalent to the heat produced by one Christmas tree light — radiating approximately one watt of energy each — on every square meter of the earth's surface.

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the problem and like you are appalled by the extent and severity of the impact . . ."

The EPA's reply urges action at the local level and promises their support. "We view such a goal as one requiring continual effort . . . agreements can take the form of a local ordinance restricting or prohibiting ORV activities in the Valley or perhaps the same can be achieved through agreements with individual landowners."

J. Edward Hamrick, III, Director, DNR, gave the agency's evaluation of their role. "It is our conclusion that this agency is without lawful authority to take any enforcement action in this matter since the affected lands are private property . . . I share your concerns for the degradation which all-terrain vehicles are inflicting upon the northern Canaan Valley. Further, Governor Gaston Caperton III has personally assumed the leadership role in shaping a future for Canaan Valley

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1990 Legislative Team

by Norm Steenstra

Legislative lobbying efforts for the 1990 session will feature a team approach. Once again, the WV Highlands Conservancy will provide the bulk of funding for lobbying efforts. The environmental priority agenda from the convention in Ripley will be the focus of our efforts. Additional environmental legislation will be closely followed. These additional bills will include Natural Heritage, bottle and packaging bills and an incineration ban bill.

The lobby "team" will once again be headed by former state senator and gubernatorial candidate Mario Palumbo. Mario will provide us with the experience and legal counsel needed to accomplish our goals.

Diane "Missy" Wooverton of Calhoun County will concentrate her efforts in the state Senate. Missy is the Central West Virginia representative of the WV Environmental Council and complements the team with a committed, low-key approach.

Andrew Maier of Hinton and President of Save Our Mountains will provide the environmental lobby with his unique blend of commitment, knowledge and "no nonsense" approach to the issues. Andrew will focus his attention on the governor's office.

Norm Steenstra, vice-president of West Virginia Highlands Conservancy will center his efforts on the House of Delegates.

A great deal of "citizen lobbying" is anticipated during the session. Volunteers are needed and lodging in Charleston is available. Information will be channeled through your regional WV Environmental Council representative.

Common Tragedy

In 1968, Dr. Garrett Hardin coined the term "tragedy of the commons" in a now classic article published in *Science* magazine. He was referring to the long-term results of individuals or individual industries acting in their own interests, without regard for the common interest. Hardin states that we are "locked into a system of fouling our own nest, so long as we behave only as independent, rational free enterprisers."

The problem of acid rain is a perfect example of a tragedy of the commons. It is, of course, cheaper for individuals to discharge their waste into the atmosphere than to contain it and treat it on-site. The atmosphere is a commons — no one owns it, no one is in charge, no one will bear alone the costs of its destruction. If we all operate in our own interests, then the common good will not be served, and in fact, the commons will eventually collapse. Short-term benefits to a few; long-term catastrophe for all — a true tragedy.

Hardin believes that individual interests must be coerced into acting for the common good — thus, the rationale for government control through environmental legislation, taxing devices, or economic incentives.

Hardin's analysis makes it clear that we must each share the cost of protecting the commons. Reducing emissions from automobiles, industries and utilities and thereby reducing acid deposition will require that all of us commit ourselves to paying the true cost of the services that these technologies provide for us.

— *Tragedy of the Commons, Dr. Candie C. Wilderman, Associate Professor of Environmental Sciences, Dickinson College, PA*

1990: Decade for the People

by Brian E. Hagenbuch and Janet K. Fletcher

*What happens to beasts will happen to man;
all things are connected
If the great beasts are gone, men will surely die
of a great loneliness of spirit*

— Chief Seattle, 1884

1990! A new year! A new decade! The 1990's — the Decade of the Environment! Initially, we embraced this idea. Yet something on a much broader scale has been occurring. A phenomena currently eluding description envelops today's environmental, cultural, political and philosophical movements. We are all touched by its reality because we are its root and foundation. Beyond the Decade of the Environment, 1990 commences the Decade for the People.

Socio-political, educational, and economic barriers are crumbling as citizens worldwide are uniting to change the course of their lives and history — farmers, laborers, housewives, artists, students, professors, professionals, liberals, conservatives, and independents. Differences are being laid aside. Regardless of gender, race or religion, "we the people" are initiating economic, environmental and political reform.

The lives of Chico Mendez, Ghandi, Bobby Sands, Andrei Sakharov, Edward Abbey, Diane Fossey, John Lennon, and Harry Chapin continue to inspire us. Revisionists in hostile times, their values and ideals continue to serve as catalysts for change. Leaders and role models for a new generation of activists, Nelson Mandela, Lech Walesa, Lois Gibb, Dave Foreman, the Chinese man who defied tanks in Tienanmen Square, Romanians who stood firm in the line of fire have motivated others to act instead of react. This list, far from inclusive, is growing day by day as many unsung heroes follow their hearts. They believe in themselves and in the freedom to choose their own destiny. Their history has yet to be written.

We do not have to travel to Berlin or Prague or Namibia to witness the reality of this movement. It is alive in the United States and in West Virginia. Although religious and personal freedoms may be established in the U. S. Constitution, we need to continue to resist the weakening of their original intent. Many dedicated, self-sacrificing citizens campaign to protect these civil liberties for all Americans.

The movement is alive in West Virginia — environment, labor, women. No longer must we be suppressed by the self-serving interests of corporate mega-machines and an impotent government. Frustrated by coal barons who rape our pristine landscape and poison our water, the logging industry which continues to clearcut our forests and threaten its biological integrity, and the chemical industry that pollutes the air and contaminates our bodies with toxic waste products, West Virginians are uniting. The voices of Mountaineers are beginning to be heard above this environmental carnage.

Years of environmental neglect and lack of social justice provide impetus for West Virginians to exercise political activism. The green in the majority of the eyes of Mountaineers is not from the currency of Franklins or Washingtons; it is the tranquil river valleys draped with pines and hemlocks and the pastoral rural landscapes that enliven this image.

If our goal constitutes environmental reform, a holistic approach to living will be required. Nothing exists in a vacuum; everything is interconnected. Life-styles must harmonize with the environment. We must live as if nature mattered.

While the past victories we claim cannot compare with the dismantling of the Berlin wall, they manifest a positive direction for the future. What is at stake in all these battles is freedom. In West Virginia, that freedom includes the right to breath clean air, inhabit a healthy land, and imbibe safe drinking water. We cannot afford to rely on politicians any longer; we must direct their thinking. The legislature is now in session. Let them know that you are a concerned individual.

"... let it begin with me ..." — Sy Miller and Jill Jackson

To Be Or Not To Be

by Norm Steenstra

In the first week of April, 1989, the WV Coal Association unwittingly gave us a priceless gift. Negotiations on the stalled Groundwater Protection Act were taking place as the session entered its final week. Gary White of the Association presented us with a take-it-or-leave-it proposal — accept their "license to pollute" bill or no bill at all. Mr. White stated that "we control the Senate" and strongly inferred that "You people DO NOT EXIST!"

You have to admire Mr. White's style — succinct, to the point and most of all, true. In industry's eyes we are only a bee in a bonnet. We win skirmishes and occasional battles but they win the wars. My reaction to Mr. White's comment on existence changed my own life and in a way, his.

A campaign to prove the existence of the environmental community was begun. The Ripley conference, the Legislative Priority Agenda and Brian's Blueprint for the Environment began to define our existence. E-DAY! 1990 on January 22nd will continue our march toward recognition. For some of us, E-DAY! stands for EXIST DAY!

The corporals of industry and the state Senate will force a decision during the 1990 legislative session. Do they acknowledge our existence during the session, or the day after the November election?

The 1990 legislative session will be followed closely by citizens. Voting records on environmental issues including key committee votes will be diligently kept and reported.

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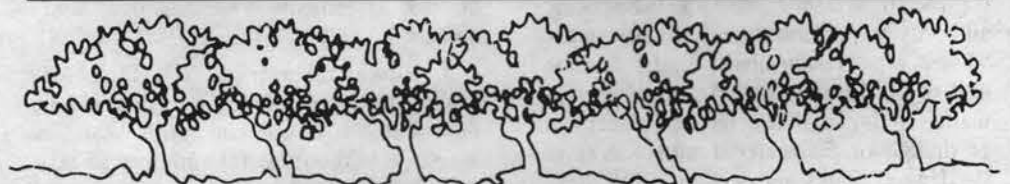
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The Last Forest, by G. McNeill, is available by mail for \$9.95 plus \$1.20 shipping from West Virginia Mountain Radio. WV residents should add .60 sales tax. A limited edition was reprinted last year. The introduction by the author's younger daughter and WV Poet Laureate, Louise McNeill, sets the tone and time and place for the collected stories —Cranberry and Williams River area from 1880-1930.



A Wilderness Manifesto

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Having sketched out some of the reasons why we need more wilderness and some of the more obvious difficulties to achieving that, we must begin to act locally within our own Allemon bioregion, which includes the West Virginia highlands, by identifying areas worthy of immediate wilderness designation or at the very least some sort of total protection. We need to find ways to protect some areas that should be preserved but are now ineligible to become national wilderness because of acreage limitations or existing developments. One possibility might be new legislation, designed to be compatible with the Wilderness Act, which would protect ecologically wild and healthy areas from all future developments but not necessarily exclude present ones. These could be called National Natural Areas, and could range in size from less than an acre to as many as 5,000 acres, which is the current minimum for national wilderness status. These natural areas would be completely protected and managed essentially as wilderness, but without necessarily the total exclusion of any human presence. Wilderness purism is basically a fine thing, but to refuse to make exceptions in worthy areas is to miss the whole point of wilderness preservation, which is to try and create a harmonious balance between human culture and the natural world, not to make little escapist parks for the well-to-do.

Future Footprints

The following then are a number of areas in the West Virginia highlands that I believe could and should be designated wilderness or natural areas. I have no doubt that every one of them, indeed any area proposed as wilderness, would meet with considerable opposition, especially from our current executive government under George Bush, who has paid political lip service to environmental preservation but who has in most cases simply continued the rip-and-run policies of Reaganism. Wilderness expansion, though clearly the right and proper thing to do, will certainly not be achieved without a long and arduous struggle. But while keeping this sobering reality in mind we should also not forget the ancient Chinese saying: 'a journey of a thousand miles begins under one's feet.'

- Creation of a *Spruce Mountain Wilderness* to include all of Spruce Mtn. from the vicinity of Kissamore Knob south to Spruce Knob; all of Seneca Creek from White Run Rd. (CO 7) south to FS 103, and all of Allegheny Mountain from the vicinity of Lower Two Spring Run south to FS 1. Almost all of the land in this magnificent wilderness area is already federally owned, and the Seneca Creek drainage has been designated a Forest Service Pioneer Zone within the Spruce Knob-Seneca Rocks National recreation area. This may appear to give it a measure of protection, although not in the recent past from cattle grazing and natural gas surveys, but without wilderness designation it will always be at the mercy of capricious political winds.
- Creation of a *North Fork Mountain Wilderness* to include all lands within several hundred feet or more of the crest of the mountain from the Fire Tower Rd. (FS 79) north to the terminus of the mountain at the Potomac River. This mountain, one of the most striking natural features of the entire Appalachian Range, needs wilderness protection from encroaching developments, logging and as sanctuary for a number of rare plant and animal species.
- Creation of a *Shavers Fork Wilderness* to include all recent and forthcoming federal land acquisitions on Cheat and Back Allegheny Mountains from U. S. 250 south to the vicinity of the Cass Scenic RR. This area, though badly abused in the past, contains some of the highlands wildest country, and is critical for wildlife habitat, downstream flood control and water quality.
- Creation of a *Tea Creek Wilderness* to include the entire drainage of Tea Creek up to and extending down the east face of Gauley Mountain. This area is nearly all federally owned and would provide some measure of counterbalance to the recent giveaway of Big Spruce Knob to the south to resort developers, who, despite the usual claims to the contrary are virtually certain to have a negative effect on the water and scenic qualities of the upper Williams River.
- Expansion of the *Dolly Sods Wilderness* to include the entire Red Creek drainage above Laneville. This expansion would involve a substantial purchase of land currently owned by a major corporation. At present it is being left alone but that clearly could change under pressures from the explosive developments in Canaan Valley. The entire Red Creek drainage is an ecological treasurehouse that needs complete protection, not only for biodiversity but economic reasons as well since the area has become heavily dependent on tourism and any type of degradation of current wild areas would very likely have an adverse effect on the local economy by destroying one of the primary reasons why people now flock to it; the hauntingly beautiful wilds of the Dolly Sods.
- In addition to these areas proposed as national wilderness, there are as mentioned many other areas deserving of complete protection. These include, but are certainly not limited to: portions of Canaan Mountain, portions of the Horseshoe Run drainage, portions of North Fork Mountain south of FS 79, portions of the Laurel Fork valley below the current wilderness boundary, portions of Cheat Mountain north of FS 92, portions of Allegheny Mountain east of the Greenbrier Valley, the new unprotected lands of the former Cranberry Backcountry, and the high plains south of the Dolly Sods Wilderness, including the Flatrock Plains, the Red Creek Plains and the Roaring Plains, which together constitute one of the most outstanding wilderness areas in West Virginia, but are currently unprotected because of a pipeline and microwave tower.

To gain any kind of protection for any of these areas we will clearly need some kind of legislative action, and to that end we could push for a new, comprehensive West Virginia wilderness bill that would include, at the very least, Spruce Mountain, North Fork Mountain, the Shavers Fork and Tea Creek. Although we shouldn't have to justify additional wilderness by any monetary standard, protecting these areas (and many more) is quite logical from the standpoint of promoting tourism, for without the 'Wild' there would far less of the 'Wonderful' in West Virginia.

I realize that the proposals will not exactly inspire a torrent of support from most government officials, neither local, state or especially federal. The Forest Service has long had a history of opposing wilderness. In the latest Monongahela Forest Plan all of one paragraph of one page of a very thick book was devoted to wilderness, and that to inform us that there would be no more wilderness. And as if to reinforce the point the Forest Service has recently been roading and logging many areas adjacent to existing wilderness areas. Obviously when the primary managers of the wilderness are also its principal destructors there is a serious conflict of interest. Thus any opinions rendered by the Forest Service concerning wilderness need to be viewed with much suspicion. This is too bad because many fine people work for the MNF, but until the bureaucratic hierarchy in Washington is supplanted with truly Eco-logical administrators we have no choice but to work around them.

Fortunately most legislators, whatever their motives, will listen to thoughtful communication, especially from constituents. All of us who believe in the necessity of wilderness, and I assume that includes most members of the WVHC, owe it to ourselves and our children and this wondrous earth which has given us life to work for the preservation of wild land. Write your congresspeople, tell stories of wilderness beauty to your neighbors, and vigorously support any piece of legislation that would help to make a difference, such as the U. S. House of Representatives bill H. R. 1268, the National Biological Diversity Conservation and Environmental Research Act, which would make biodiversity a national priority and require federal agencies to manage their programs by such principles. Similar legislation that deserves support in the Senate is S. 201, the World Environment Act.

Ecological Diversity

Although the foregoing proposals might seem to involve a large amount of land, it needs to be said here that the current amount of designated wilderness in the state of West Virginia is .05% of the total area of the state, and that even if all of these suggested areas were made wilderness immediately there would still be only around 150,000 acres of protected land, or still only about 1%, which would leave 99% of the state open for 'multiple-use.' Clearly wilderness designation for these areas cannot possibly have a major economic effect upon the state as a whole, although the long-term effect would certainly be positive in many ways because of the preservation of bio-diversity.

Those who now control the land, mainly the government and various corporations, are certain to oppose even the least of these suggestions, because, although they often claim to have everyone's best interests at heart they seem incapable of extending their vision past the tunnel of short-term monetary profit. This, I believe, is not so much a fault of individual people as it is of our relentless economic system in which voracious consumption is the ruling principle and justification for any kind of land abuse. This formidable barrier to ecological harmony clearly will not disappear overnight, and from our vantage point in, as it were, the belly of the beast it may appear to be an almost immutable reality, destined to consume everything until at last it consumes itself. But the truly encompassing reality of our life on this planet is the Earth herself, our mother Gaia. Those who listen to her songs of mountains and rivers and plants and animals know that she possesses a power and wisdom by her unity that our human-wrought systems never have or ever will have. It is true that all creatures look to their own daily survival first, as they must and should, but it is also true, with rare exceptions (often human-induced, such as gypsy moths) that they do not destroy their own habitat, but rather, simply by the way they live tend to preserve it and diversify it. In this is the most compelling reason for wilderness preservation, as well as the proper method for doing so, which is in its essence not a process at all but a flow, as streams of earth-energy spiral through us, blossoming in our minds and setting seed by our actions.

Many people still seem to believe that those who advocate wilderness preservation are essentially selfish, and that wilderness itself is essentially negative because it no longer contributes to human culture in a monetary sense. Obviously even the establishment of far more wilderness will not overcome these misconceptions. Only by working together to free our natural wild instinct can we attain the truly ecological consciousness that is the real solution to so many of our problems. And by natural wilderness I do not mean the unbridled greediness and bestial violence that most now would associate with that term, but the calm peacefulness that creatures living in symbiotic balance with the earth almost always have, through no effort of their own but simply following their natural ways. So by preserving and protecting at least some of the land as wilderness we will not only be giving the land the freedom to grow, but also ourselves that freedom, for our wild nature is also our true nature. If we seem to have lost it that is only because we have tried to separate ourselves from the natural world, tried and ultimately failed. Not only is wilderness still alive on the earth, there is still abundant wilderness within us as well, still clear streams and green forests and pure blue skies, waiting only for us to open our minds and let them grow.



Blueprint for the Environment

West Virginia Environmental Council

Brian E. Hagenbuch, Editor

"WE ALL LIVE ON A DOT!" This was the motivational force behind the First Statewide Environmental Convention held this year in Ripley. What is a dot? A dot refers to a place on the map; a place where groundwater is contaminated by acid mine drainage; a place where agricultural runoff has damaged streams to the point where they cannot support aquatic life.

A dot is a landfill leaching toxins into your drinking water supply: a strip mine causing irreparable damage to your home, or a chemical plant spewing hundreds of tons of toxic emissions into the air you breathe.

A dot may symbolize critical habitat for an endangered species jeopardized by proposed development or a coal-fired power plant sited in a tranquil rural area. Every county in West Virginia has dots and the number of dots is escalating at an alarming rate.

The problems discussed at the Convention are symptomatic of much greater "diseases"; years of environmental abuse and governmental neglect.

Remedies developed to treat these ills not only will require innovative approaches from government and industry, but also modifications in individual lifestyles.

Only when we as a society collectively realize that the environment is our life-support system and that pollution is a poison, will we be prepared to save our state, country and planet for generations to come.

The existence and development of an intelligent, informed, and empowered citizenry in West Virginia — a citizenry concerned about the local and global environment — can create a balance to counteract irresponsible developers and polluters who threaten to despoil our state.

Healing the environment must begin with our own lives. As citizens or environmentalists, we need set a good example — promote the positive, teach the children, and act instead of react. The objective of the Blueprint for the Environment is to provide the initiative for environmental reform through education and positive action.

Air Quality Toxic Clouds In The Forecast?

Industry reports show that at least 169.9 million pounds of toxic chemicals were released into West Virginia's environment in 1987. The unique combination of weather patterns and concentration of chemical industries has resulted in poor air quality and has caused very serious health problems.

Industry is currently reducing its own emissions on a voluntary basis. Serious flaws exist when regulatory agencies cannot monitor industry at times of emission spikes (especially at night). Most toxic emissions are completely unregulated and those few that are regulated are under the jurisdiction of a severely understaffed and underfunded West Virginia Air Pollution Control Commission (APCC).

Acid rain is caused by the release of sulfur dioxide and nitrogen oxide from burning of fossil fuels such as coal and

oil. Acid rain deposition is higher in West Virginia than in any other state. Already, spruce and fir decline is evident in our mountains and 25% of our trout streams are endangered. In some areas, the pH of summer rains is as acidic as cola.

Ozone, a reactive gas which causes a host of adverse health effects, is a serious problem in the Huntington area according to the EPA. Only three areas in the United States are listed as having worse ozone problems, yet the APCC is inadequately regulating industrial and automobile emissions, the major precursors of ozone.

WEST VIRGINIA AIR POLLUTION CONTROL ACT — The APC Act must be revised, updated, and amended. Foremost is the need to pass laws which are more stringent than Federal regulations. Because the chemical industry is primarily located in inversion prone valleys where toxic emissions concentrate rather than disperse, the APCC should be able to set restrictions on toxic emissions that are not regulated by EPA. APCC amendments should include the following:

- Augment APCC staffing, inspection and enforcement efforts through increased permitting fees and fines.
- Require industry to use best available technology (BAT) to limit toxic emissions.
- Place limitations on compliance for interim status and number of times permits can be resubmitted.
- Develop protective regulations for highly toxic emissions which are released from burning chemical wastes as boiler fuel.
- Require environmental impact studies, including public comment, for siting of new power plants.
- Allow adequate time and notification for agency and public review of permit applications.

Regulations also need to be developed for sources of air pollution problems such as hazardous and medical waste incineration, auto emissions, and trash burning.

AGENCY ACCOUNTABILITY — Commitment and accountability of the APCC needs to be increased. Citizen input is necessary to the Commission, which should include a liability for incompetence of job performance. A registry of respiratory illnesses needs to be developed to assist health officials and the public about the adverse effects of air pollution on human health.

Water Quality Don't Drink The Water

Approximately 53% of all West Virginians get their drinking supply from ground water. In rural areas, 93% depend on groundwater as their only source of dependable potable water. Almost all 20th century activities adversely impact groundwater. Among the greatest threats are chemical manufacturing, mineral extraction, oil and gas production, and leaking underground storage tanks.

By far, the number one water quality problem in Northern West Virginia is acid mine drainage (AMD) which kills fish

and sterilizes streams. Almost all mining in the northern part of the state results in long-term AMD. Rust-colored rocks in streams are an obvious indicator of AMD problems.

In southern West Virginia, lack of sewage treatment is the primary problem. Many small communities including two county seats, Sutton and Welch, do not have modern sewage treatment plants.

Serious water degradation problems also occur from non-point sources such as nutrient, pesticide, and feed-lot runoff in agriculture, salt contamination from oil and gas wells and highways, and siltation from clear-cutting timber, strip mining, and construction.

West Virginia laboratories conducting water quality analyses for NPDES permittees ranked last in the region in an EPA evaluation. As a result, monitoring tests may mean absolutely nothing over 50% of the time. A Laboratory Certification Program is needed to insure labs can perform analyses accurately.

GROUNDWATER PROTECTION ACT — Simply put, groundwater is defined as water below the surface and includes well water, springs, and aquifers. The goal of protection is a non-degradation policy that would maintain groundwater at existing qualities for current and future beneficial uses.

Actual groundwater contamination is severe in many areas of the state, particularly the Kanawha and Ohio River Valleys and Eastern Panhandle. Other areas are not as endangered but worthy of strong protective measures.

Protection would also include the improvement of contaminated areas where it is shown that man-made pollution caused the low existing quality. A non-degradation policy takes the responsibility of proof of contamination from individuals and puts it on the potential or suspected polluters.

Groundwater is currently regulated by six different agencies. A comprehensive compliance division needs to be created which would review all permitting and enforcement, the non-point and industrial siting programs, implement solid and hazardous waste bills, and provide overall accountability to groundwater protection. In order to support the program, a funding mechanism needs to be developed such as increased fines, permit fees, and increased appropriations.

SOIL EROSION AND SEDIMENT CONTROL ACT — Mandatory erosion and sediment control plans need to be required for all major urban land-disturbing activities. Such plans should consider construction effects on soil erosion, uncontrolled stormwater runoff, land slips and subsidence, flooding, and reclamation and vegetation failures. The act would also reduce sediment pollution in streams and rivers, filling of ponds and reservoirs, and costs of water treatment for industry and human consumption.

Solid Waste Trashing Of West Virginia

A huge overcapacity of landfill space is currently proposed for West Virginia. If these proposals are permitted, huge amounts of out-of-state garbage can be expected in our state.

Class A landfills, those which accept 10,000 or more tons per month, are currently proposed in at least six counties. As many as 12 landfills have been proposed for McDowell County; providing more than twice the capacity to handle the 4,200 tons Mountaineers generate per day in that County alone. Permitting of these landfills will make West Virginia the trash dump of the east coast and an oasis of profit for out-of-state garbage haulers.

West Virginia Environmental Council

REGIONAL COORDINATORS

Northern Panhandle	Martha Huffman/ Herbert Heiss	Halt Out-Of-State Garbage	455-5206 455-3668
North Central	Jim Kotcon/ Mary Wimmer	WV Sierra Club	594-3322 598-0136
Eastern Panhandle	Suzanne Offut	WV Audubon Council	258-4730
Highlands	Cindy Rank	WV Highlands Conservancy	924-5802
Central	Missy Woolverton/ Steve Himes	Action For A Clean Environment	655-7170
Capitol	Norman Steenstra/ Jim Tatterson	WV Citizens Action Group	346-5891 965-3973
Western	Brian Hagenbuch/ Janet Fletcher	Huntington Tri-State Audubon Society/ Greenbottom Society	522-7557
Southern	Andrew Maier/ Carol Jackson	Save Our Mountains	466-5701

West Virginia — 1990

MORATORIUM ON CLASS A LANDFILLS — The Solid Waste Bill passed by the 1989 legislature was an important step in combatting the trash dilemma. County Solid Waste Authorities (CSWA) are required by law to develop comprehensive solid waste plans by July 1, 1990. Governor Caperton is to be commended for instituting a temporary moratorium on permitting of Class A landfills, thus allowing CSWA's time to develop solid waste plans. The moratorium should be extended to become permanent with a size cap on existing landfills.

Several obstacles exist within the SWA structure that impede progress on solid waste proposals. The State SWA has not provided leadership, guidance, direction, and information to CSWA's, resulting in difficulties completing county plans. Another critical problem is that vacancies still exist and need to be filled on CSWA boards.

Long term waste reduction needs to be pursued officially, including a commissioned study on waste stream analysis. Waste reduction strategies such as recycling would translate into an actual lowering of tonnage at local landfills.

The State currently has no modern regulations regarding the packaging of materials. Packaging legislation is needed to restrict or eliminate environmentally harmful materials such as styrofoam from the marketplace. Styrofoam contains ozone-depleting chlorofluorocarbons and is not recyclable. Many state and local governments are now acting on eliminating styrofoam from their areas.

A tax on disposable items such as razors, plastic bottles, and other throw-aways would provide funding for development of solid waste alternatives. Passage of a bottle bill, requiring a deposit for all glass and plastic containers, would encourage recycling and alleviate some of the problems with roadside litter.

Energy and Mining Legacy of Despoiled Land

In 1988, national and state environmental groups and citizens organizations filed suit against the WV Department of Energy (DOE) and U.S. Department of Interior in response to the failure of DOE to enforce the Federal Surface Mining Control and Reclamation Act. The suit charged DOE with enforcement failures in virtually every aspect of the regulatory program.

As a state, we must begin to face the hard facts about coal's troubled future. Our economy has been tightly wrapped around coal and we are unprepared to meet the shift away from use of fossil fuels. As a result, we should be a leading state in promoting independent and unbiased research, education, and discussion on the global role of coal.

MINING and DOE — The major concern with the mining industry is the DOE's outright failure to protect the environment. Given the fact that DOE's mission is to promote and booster coal while also vainly attempting to regulate

the industry, changes will be hard to implement. The present state of government inaction towards coal abuses is a dispiriting travesty that demoralizes ordinary citizens and lays waste to our natural heritage. Change in DOE politics and policies is essential.

The following list of reforms are necessary to correct some of the most egregious flaws within the DOE:

- Establish an independent, citizen-responsive compliance and auditing office to monitor and correct DOE performance.
- Establish an independent prosecutorial office to seek out and prosecute mining law violations.
- Substantially increase professional engineering, geological, and hydrological staff at DOE and raise coal permitting fees to pay for these increases.
- Restore concurrent DOE and DNR jurisdiction to enforce environmental law violations for off-site damage.
- Increase penalties and fines for law violations by a factor of ten, to change the present situation where coal companies have absolutely no disincentive to pollute.
- Require proper reclamation and accountability by operators, through enforcement, regulation, and bonding at much higher levels than present, with increased liability of mineral owners.
- Increase scope and effectiveness of permit-blocking to penalize persons and companies who violate mining laws.

for comprehensive planning. Failure to comply would result in state-imposed plans.

INDUSTRIAL SITING LAW — Various projects which have considerable negative environmental impact are currently being considered including coal-burning power plants, wood treatment plants, waste incinerators, huge landfills, and paper and pulp mills. Few laws exist to regulate development of such projects and economic considerations often far outweigh environmental concerns. A siting law would protect environmental and community values and provide investors and industry proponents information on potential areas for development.

An industrial siting law under the jurisdiction of a broad-based siting authority including environmentalists and industrialists would develop regulations for those facilities which are deemed so substantial in impact that state-wide interests are affected. Minimum standards for the siting process need to be developed which would pertain to all industries.

Into The 21st Century A Clean and Healthy West Virginia

Many environmental problems discussed at the Convention focused on the ineffectiveness of State agencies responsible for protecting the environment. Examples included lack of DOE strip mine enforcement around homes on Soak Creek, siting of a medical waste incinerator in Roane County, out-of-state garbage in Wetzel and Barbour Counties, land-disturbing projects in Canann Valley and Greenbottom, health-threatening situations such as air pollution in the Ohio Valley and groundwater contamination statewide.

WV ENVIRONMENTAL POLICY ACT — Development of a West Virginia EPA, analogous to the National EPA (NEPA), along with a Division of Environmental Protection (DEP) to enforce the Act is THE vital step toward responsible environmental protection in West Virginia. Many of our present dilemmas turn into major controversies because of lack of public involvement.

Currently, the public is forced to react to instead of act on project proposals. Many state-sponsored projects require no public input before implementation. A WVEPA would: 1) insure that environmental information is available to citizens before decisions are made and actions are taken; 2) be designed to help public officials make decisions based on an understanding of the environmental consequences; and 3) allow agencies to take actions to protect and restore the environment and enforce all environmental laws.

The DEP, analogous to the Federal EPA, would be responsible for all monitoring, inspection, and enforcement of state environmental laws. The agency would combine regulatory aspects of DNR, DOE, and APCC, under one umbrella.

Land Use Management Land of Many Abuses

A contributing factor to West Virginia's environmental, economic, and social problems is the absence of comprehensive land use and management planning. West Virginia possesses limited land resources due to its terrain which requires that we treat our land space as a finite resource.

Our unique natural environment, including sensitive natural areas and invaluable air, land and water resources, requires a means of identification, evaluation, protection, and conservation of critical areas.

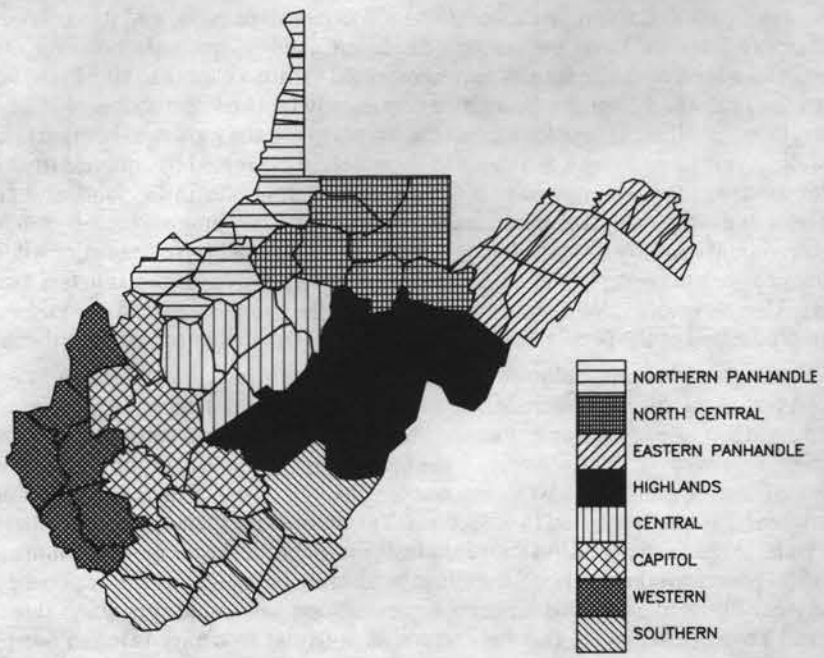
COMPREHENSIVE LAND USE MANAGEMENT ACT — State laws need to be reviewed and revised pertaining to local land use planning and zoning. Lack of state and local direction in land use management has created serious abuses in the permitting, monitoring and enforcement areas.

In 1959, legislation was passed for urban and rural planning and zoning. Although amended in 1969, these laws need to be revised and updated to reflect current land use demands and proposals. Lack of a state model or policy and inadequate lines of communication between agencies have created widespread confusion to laws and environmental abuses.

A comprehensive state mandated plan must be developed in each county and include: 1) broad public input at the local level, 2) state criteria and guidelines, and 3) coordination between state and local regulatory agencies.

Incentives created for counties in compliance should include the authority for local governments to charge impact fees which could be used to promote income

West Virginia Environmental Council



The West Virginia Environmental Council (WVEC) acts as an umbrella agency facilitating information exchange, organizing efforts and legislative action. The state is divided into eight (8) regions. For up to the minute legislative updates and environmental news call your regional representative. The WVEC is currently networking with 70 groups across West Virginia.

Copies of the complete BLUEPRINT may be obtained by sending a self-addressed stamped envelope, plus \$1 per copy to WV-CAG, 1324 Virginia St. E., Charleston, WV 25301.

A Wilderness Manifesto

by Robert Stough

25th Anniversary

1989 marks the 25th anniversary of the passage of the Wilderness Act, which has resulted in the preservation of, to date, some 90 million acres of wild land. On first hearing this sounds like a lot of ground, and certainly those whose hard work and dedication made it possible deserve the highest praise for their efforts. Virtually every individual wilderness area that has been established was the scene of a pitched battle between conservationists and developers, with those developers often claiming that the 'locking-up' of even those small parcels of the land would be calamitous for the economy. Now at least we have succeeded in planting the seeds of wilderness not only upon the land but in the minds of many of the people. So we have reason for modest celebration and good feeling. Yet we must also have a renewed determination, for all that has been done so far really does amount to the planting of a few seeds. We must tend and nurture the growth of those seeds, and plant many more, because our health as a species has come to depend upon it, for only large expanses of truly healthy land will suffice to restore the ecological balance our consumptiveness has so sadly upset. And there is no management plan or technological miracle that we can concoct that would magically regrow our forests and purify our air and water, for we cannot 'make' healthy land, we can only give the land the freedom to grow in peace.

90 million acres does indeed sound like a lot of ground, but when we consider where it is located and what it encompasses we can see that the real work of wilderness preservation is just beginning. For instance, of that 90 million acreage, 62% is located in Alaska, which certainly should have that much and far more besides. Alaskan ecosystems, however, are unique to Alaska and other far northern areas, and the preservation of not only amounts of land but diversity of ecosystems is critical to creating a healthy wilderness system. So after we subtract Alaska's total, we find the acreage of the contiguous United States to be only about 34 million acres, of which about 30 million are located in 11 western states. Again, a much greater expansion of western wilderness areas needs to occur, especially since much of that 30 million acreage is so-called 'rock and ice,' which though scenic and inspiring hardly reflects a diversity of ecosystems. But as much as we need more wilderness in Alaska and the West there is no less a need here in the East, and particularly the Appalachian Range where we truly need a major expansion of the wilderness system that is critical to preserving and promoting biodiversity. To achieve this we must first come to an understanding of what should constitute an eastern wilderness, and also overcome a number of misconceptions and outright falsehoods perpetrated by exploitive interests regarding the general disposition and use of public lands.

Eastern Wilderness

To some 'eastern wilderness' is a contradiction in terms, for by western standards the size of roadless areas in the east is quite small, and there are vanishingly few areas that do not bear the scars of the heavy hand of modern man. While it is understandable to desire vast pristine areas of wilderness, that natural bias has cost us dearly in the east by imposing standards of qualification that few areas can match. Many potential eastern wilderness areas have been denied protection or even consideration because of utility swaths, limited-access roads or recent logging activities, and frequently in being denied protection are then handed over for further exploitation. While I am not suggesting that we relax our general standards for wilderness, exceptions can be made, and indeed must be made if we are to achieve protection for entire ecosystems. We must work towards wilderness boundaries that are defined by streams and mountains rather than roads and pipelines, and create compromises, on a case by case basis, that would allow existing developments to remain at least until the expiration of their right-of-way leases, after which time no human works of any kind would be permitted. It would certainly be preferable if large unbroken tracts of wilderness still existed in the east, but the reality is that they do not, and most likely never will unless we face up to that reality and begin to protect areas that have been up to now bureaucratically ineligible for wilderness status. We need to remember that the primary reason for establishing wilderness is not after all human recreation but biodiversity, which can only come about, to reiterate, by giving the land the freedom to grow and mature and establish, in its own ways, a symbiotic balance of species. Biodiversity within a given ecosystem is essential for its long-term survival, in the same way and for the same reasons that cultural diversity is necessary for the growth of human societies. You do not have to look very hard in this day and age to see the terrible results of monoculture systems; global warming, acid rain, ozone depletion, soil erosion and urban social degradation are only the most obvious effects of Earth's rapidly diminishing biodiversity. Virtually all of our major problems of today are rooted in our refusal to accept this most basic tenet of life on earth; that all species must be in balance with their environment or they are ultimately doomed. So we can see that giving wilderness protection to still-healthy areas of land, in any way that we can, is something that we must begin to do on a far larger scale, for our own health as well as the health of the earth itself demands it.

At this time, regardless of what we should do, and is clearly right to do, there are a number of practical obstacles that must be overcome before we can create a healthy wilderness system. Foremost among these is the political fallacy of 'multiple-use' of our national forests,

where most potential wilderness land is located. Multiple-use is the sort of thing that looks good on paper and keeps many bureaucrats on the government payroll, but in practice has almost always meant the 'use and abuse' of the land for the benefit of already wealthy corporations and their legislative cronies. The most glaring example of this is the notion that we need to harvest large amounts of timber on national forest lands. The truth of the matter is that far more marketable timber, especially in the east, can be found today on private forest lands, and it is often considerably easier to log out. There is, in reality, little economically logical reason to log most of the public lands in the east, at least by the standards of a free-market economy. The reason that they are logged is to provide a noxious form of welfare payments to the wood-products corporations. They are welfare payments simply because the owners of the national forests, the American people, sell the timber to those corporations at a very marginal profit or even, unbelievably, at a loss, while those same corporations turn around and sell that wood at top-dollar prices. We need to keep in mind that most of the land we are talking about is not 'owned' by the forest service but by the citizens of the United States. This is a fact that seems amazingly difficult for government administrators to remember, but is true whether they like it or not. All government workers, from the President on down, are the elected servants of the people, not our overseers. If we, the rightful owners of the land, demanded a fair market profit for that timber we would quickly see the virtual end of logging in many national forest areas because of the considerably greater difficulty and expense in extracting the trees in those usually mountainous regions. If welfare payments are wrong for the poor, as so many power brokers self-righteously claim, then they are all the more wrong for already rich corporations who have proven time and again in the past that they put their own profits ahead of any and all other considerations, even the health and welfare of the people and the planet which sustains them. The only really significant effect of taking them off the public dole, since there would still be an abundance of timber available, and market demand would provide the jobs to harvest it would be an increase in the price of wood products and paper, which although not in itself a good thing, might at least have the effect of helping us to curb our grossly wasteful use of wood products, which is certainly a very bad thing for the environment.

Profits and the Public Good

Another fundamental obstacle to wilderness expansion is the ridiculous assertion by government officials that there is no money for the purchase of additional federal lands for wilderness or anything else. It is ridiculous of course because the government, and particularly the Reagan-Bush oligarchy of recent years has been slavishly willing to shower money on all sorts of bloated weapons systems and half-baked development schemes that have usually benefitted only the already super-rich while dumping more and more debt on the backs of the working people. I suppose if we could only somehow convince the government that undeclared wilderness areas are like bankrupt Savings and Loans we would then be given all the money we want and never have to account for it. Seriously, though, we really don't need any additional government expenditures, simply the proper distribution of the Land and Water Conservation Fund, which was one of the fairest and most far-sighted pieces of legislation ever produced by the U. S. Congress. The basic purpose of this act was to provide money for the purchase and preservation of park and forest lands, including wilderness expansion, and it was funded by revenues from offshore oil leases and sales of other federal lands. Apparently, however, this was too good an idea for Ronald Reagan, who never seemed to miss a chance to take from the poor to give to the rich, and he and his henchmen consistently blocked distribution of those funds during his terms in office, except for repeated attempts to use the money to help make up his budget deficits. Fortunately he was at least to some degree prevented by congress from doing this, with the result that we now have a 6.5 billion dollar surplus in the fund, and current proposals for its distribution involve freezing the principal and spending only the interest, which would still amount to nearly a billion dollars a year and clearly would enable a major wilderness expansion program to be implemented. So money for wilderness expansion is in fact available and in considerable quantity. What seems to be lacking is the moral integrity of our leaders, who, sworn to do the will of the people, have so far, at least in this matter served only themselves.

These examples are, unfortunately, but two of the impediments to the sanity of wilderness preservation. Others include oil and gas corporations and mining consortiums, both of which are often as bad or worse than the logging companies, and various special interest lobbies who are always ready, it seems, to wave the red flags of resource or job shortages which they think wilderness designation would encourage. No doubt some of these people are sincere, if short-sighted, in their opposition to wilderness. Yet all too often their opposition is based not on their belief in the public good but their seemingly insatiable desire for more and more profits and political power for themselves. So without belaboring the point any further I believe it is eminently fair for us to assert that wilderness preservation has an indispensable value to our culture and physical well-being that far exceeds its potential monetary value to our present economy. We are not, after all, advocating vast amounts of wilderness in proportion to developed land, merely that there be a healthy balance between the two, which is far from the case at the present time. The fact that the true value of wilderness cannot be quantified in strictly short-range economic terms is not, it seems to me, a failing of wilderness supporters but of those who would degrade and destroy what they do not understand for their own personal gain.

(Continued from Page 8)

Theoretically, humans could continually plug up artificially produced ozone molecules in hopes of raising stratospheric levels. Using the water analogy, this would correspond to pouring another stream into bucket. But the artificial stream would not necessarily raise the water level because the laws of physics require that the amount leaking out the bottom must increase as the flow into the bucket grows.

To raise the net water level, humans would have to create an artificial stream nearly as big as the natural stream — in other words, to add almost as much ozone as the sun's energy creates. Such a task would require an energy source that rivals the sun — something clearly out of the human league, Rowland says.

(Continued from Page 1)

Some have suggested that 'greenhouse effect' and 'global warming' are mild terms for a coming era that may be marked by heat waves that make some regions virtually uninhabitable. Frequent droughts could plague areas of North America and Asia, imperiling their ability to meet food needs. Wetter, more violent weather is projected for other regions. Many forests could be at risk as climate zones suddenly shift. And many low-lying areas with dense population or extensive agriculture will be threatened by rising seas.

The world energy system is responsible for more than half of the greenhouse effect, releasing not only 21 billion tons of carbon dioxide to the atmosphere annually but substantial quantities of two other important greenhouse gases as well — methane and nitrous oxide. Carbon-containing fossil fuels provide almost four-fifths of the world's energy, and their use continues to grow 3 percent annually. Reversing this trend and moving the world gradually away from its massive dependence on fossil fuels are essential to stabilizing the climate. In fact, global warming has emerged as the most important limit facing the world's energy system; if the use of fossil fuels continue to grow, the earth will become uninhabitable long before all of its fuel reserves are exhausted.

"Slowing Global Warming: A Worldwide Strategy"
Christopher Flavin, *Worldwatch Paper 91*, October 1989

(Continued from Page 1)

which encompasses both the conservation of the Valley's natural heritage and compatible economic development activities which will enhance the area's quality of life . . . It is my belief that our best hope for protecting the Canaan Valley from the activities which you have described as well as other abuses is entirely dependent upon the success of Governor Caperton and his initiatives . . ."

In establishing their response to ATV use in Canaan Valley, each agency logically identified their individual significance and capacity and directly or indirectly, acknowledge their role in relation to other authorities. One can only hope that a similar recognition — the part in relation to the whole — may become a sensitivity developed into successful stewardship of ecologically unique areas like Canaan Valley.

Question: How can humans reverse the loss of stratospheric ozone caused by chlorofluorocarbons?

Answer: The only realistic way to raise ozone levels is to plug up some of the holes in the bucket. "That's what we're trying to do by banning [chloro]fluorocarbons," Schoeberl says.

Chlorine levels in the atmosphere have grown significantly since CFCs first reached the market in the 1930s. Today, natural sources such as sea salt contribute only about a third of the chlorine in the stratosphere. The rest comes from CFCs and other industrial chemicals.

Chlorine's destructive power lies in its ability to act as a catalyst. Relatively few chlorine atoms float around in the stratosphere, but a little goes a long way. A single chlorine atom can split 100,000 ozone molecules over the course of a year. Scientists say ozone's only hope lies in lower chlorine levels.

To that end, an international treaty went into effect this year limiting production and consumption of CFCs and related chemicals called halons, which contain destructive bromine. By the end of the century, participating nations must reduce CFC use to half the 1986 levels. But even this will not stabilize the growing chlorine levels in the stratosphere, and many countries now lean toward a full ban on CFCs as early as possible. Other industrial chemicals, such as methyl chloroform and carbon tetrachloride, also release chlorine

into the stratosphere, and the Environmental Protection Agency wants to limit these as well (SN: 6/10/89, p.367).

In a sense, humans can set the ozone level of the stratosphere, by deciding how much chlorine and bromine to leak into the air. But the protective layer will be a difficult patient to revive. Even if all emissions of these pollutants were to cease today, it would take hundreds of years for chlorine and bromine levels in the stratosphere to return to preindustrial amounts.

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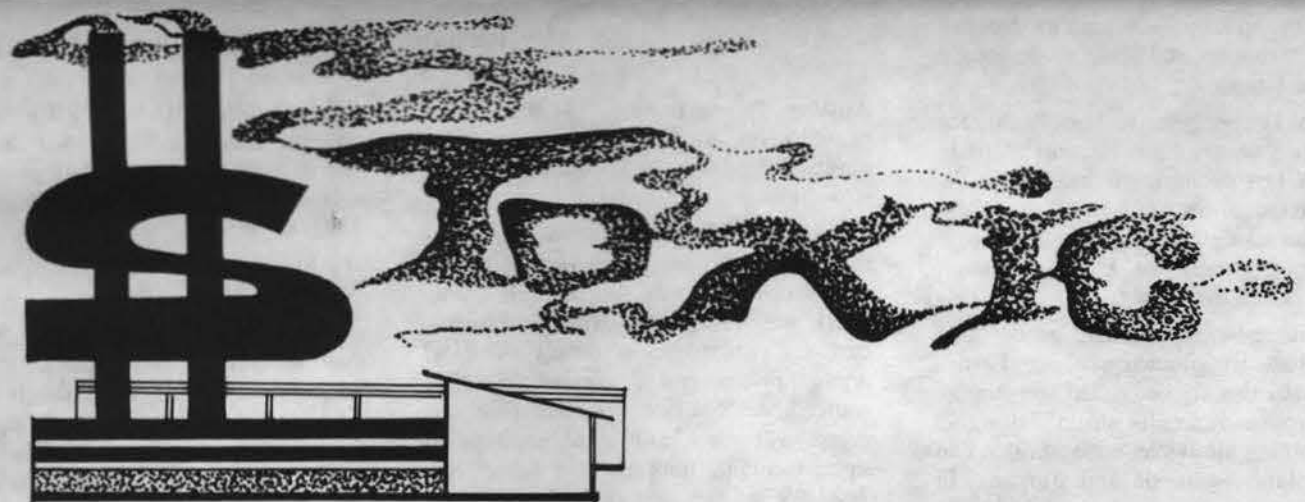
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Weekly legislative updates to follow the progress of environmental bills will be available through your regional representative of the WV Environmental Council (WVEC).

Shortly after you read this an important date will occur. February 3rd is the last day to file as a candidate for the House of Delegates and State Senate. Several incumbents with atrocious environmental records are seeking re-election. Some members of the environmental community have announced their intention to run for office. If you should be inclined to seek office or are aware of viable, environmentally sane potential candidates, now is the time to act. Your regional representatives of the WVEC can provide you with the information needed and resources available to candidates.

We of the environmental community, are currently chipping away at environmental abuse in this state. We no longer have time to chip. Real sanity in this state will occur only when a majority of elected officials understand what "green" means. The 90's will be the Decade of the Environment — catch the wave!

Thanks, Gary!



Reasons To Join WVHC

The West Virginia Highlands Conservancy is a private, non-profit environmental organization started in 1967. Its objectives are "to promote, encourage, and work for the conservation—including both preservation and wise use—and appreciation of the scenic, historic, open space, wilderness, and outdoor recreation resources of and related to West Virginia, and especially the Highlands Region . . ."

Members include people and organizations diverse in their personal interests and professions but united by a common interest. Most WVHC members are West Virginians but many live outside the state.

The Highlands Voice, a monthly 8-page

newspaper, is sent to all Conservancy members. It is filled with environmental news on topics of interest and concern to members as well as articles about trips and outings.

The Conservancy sponsors two special weekends each year. These are usually at some scenic spot in the highlands and feature speakers, outings and board meetings.

Your contribution to WVHC is tax deductible and joining is as simple as filling out this form and returning it to the office in Charleston.

Join today and become part of an active organization dedicated to preserving West Virginia's natural resources.

WVHC Membership Categories (Circle One)

Category	Individual	Family	Organization
Senior/Student	\$ 12	\$ —	\$ —
Regular	15	25	50
Associate	30	50	100
Sustaining	50	100	200
Patron	100	200	400
Mountaineer	200	300	600

Name _____ Phone: _____

Address: _____

City/State/Zip _____

Make checks payable to: West Virginia Highlands Conservancy

Mail to: P. O. Box 306, Charleston, WV 25321

Membership Benefits

- 1-year subscription to **The Highlands Voice**
- Special meetings with workshops and speakers
- Representation through WVHC's efforts to monitor legislative activity.

The West Virginia Highlands Conservancy is a non-profit organization. Your contribution is tax-deductible. Please keep this for your records.

Date _____

Amount _____

Check number _____

Lobbyist for the Earth

By Dale Russakoff

Washington, as everyone knows, is aswarm with lobbyists. Stand in a congressional office building on a busy day, and it seems that all the world has one. Food groups, energy sources, diseases, waste products, rich people, poor people, high tech, low tech, animals, vegetables, minerals.

It is as if the country has splintered into millions of pieces, each with its own narrow interest and lobbyist to represent it.

And then there is Rafe Pomerance. At 43, with his rangy walk and lanky frame, with his late-'60s look in this late-'80s town, he appears outside the fray, even above it, almost orbiting it. And for good reason. His client is planet Earth.

Pomerance is Washington's longest-working lobbyist against the greenhouse effect, a subject of global alarm at the Paris economic summit, through which the Earth is expected to warm noticeably by the early 21st century as industrial gases trap heat rising from Earth's surface.

Actually, Pomerance is a lobbyist only in spirit, in that he lobbies the political process to bring his issue to public attention. But to be technical about it (since everything in Washington eventually gets technical), he is a "congressional liaison" — employed by a policy research center, the World Resources Institute, which strictly avoids lobbying for legislation.

He was hired four years ago to try to draw the attention of policymakers to the group's highly technical studies. "At the time, I was thinking: On the one hand, this is a great idea. On the other hand, can this Pomerancian energy really be harnessed in a research center context?" recalled James Gustave Speth, the institute's president.

It was a legitimate question. Pomerance was for almost 10 years an officer and president of Friends of the Earth, an activist environmental group with a reputation for rearing back and swinging hard at anything in its way. He also was a founding coordinator of the National Clean Air Coalition, the environmental movement's premiere lobbying force for the Clean Air Act.

He was known at the time as something of a media hound, given to asking reporters to mention him and his organization in their articles. But a transformation already had begun, ever since a bruising legislative fight over amendments to the Clean Air Act in 1977.

Fearing a burnout, he stepped back from it all by burying himself in scientific studies of acid rain. In the process, he read a study by Gordon MacDonald, chief scientist at

the MITRE Corp., saying that the use of coal and other fossil fuels would warm the planet — an early greenhouse warning, all but unnoticed in Washington.

"I was astonished by that — the simple fact that human beings were warming the Earth," Pomerance recalled. "This was so much more profound than the issues I'd been working on. I remember thinking: What right does this generation have to warm up the Earth?"

Pomerance spent several hours with MacDonald. Then the lobbyist in him took over. He took MacDonald to meet Speth, then chairman of President Jimmy Carter's Council on Environmental Quality. Speth, immediately impressed, commissioned a scientific report on the problem. It became one of CEQ's most requested studies. Then Pomerance took MacDonald to the National Academy of Sciences, which did a study, also concluding that global warming was inevitable.

Throughout the Reagan administration, Pomerance plowed familiar vineyards in Congress, stimulating interest among key members of the House and Senate environmental committees that he had lobbied in the old days. Most notably, he was a catalyst for hearings held in 1986 by Sen. John H. Chafee (R-R.I.), which are now seen as a watershed awakening for the nation that put political pressure on the White House to act.

"Without Rafe's involvement, it absolutely would not have been possible to get as much political attention as the issue has," said MacDonald. "A lot of good technical work can be done, but unless it's carried to the people who eventually have to make political decisions, that can be an empty exercise."

Now Pomerance spends down time reading climate studies in everything from the journal of the American Geophysical Union to the Weekly Weather and Crop Bulletin of the Commerce Department. And it is not unusual for him to get five telephone calls an hour from congressional committees.

It all brings back a moment from his 20s, when he was a very green lobbyist for the Clean Air Act. An experienced union lobbyist and ally picked up a phone, called then-Sen. Birch Bayh (D-Ind.), and was put through to him immediately. "I said, 'Wow, how do you do that?'" Pomerance recalled. "And he said, 'You just have to be around awhile. You have to get to know people.'"

— From the Washington Post
July 27, 1989

The Two Faces Of Ozone

By Richard Monastersky

Summer in the city: a time for baseball games, barbecues and smog so noxious it sears the lungs.

From Los Angeles to Sao Paulo, the problem is ozone, a key element of urban smog. When ozone levels increase in the bottommost atmospheric layer, or troposphere, breathing can become a dangerous pastime, especially for asthma sufferers, exercisers and the elderly.

Ozone shows its kinder, gentler side more than 10 kilometers above Earth's surface. In this region, called the stratosphere, ozone molecules shield the planet by absorbing ultraviolet radiation that can harm plants, animals and humans, in which it can cause skin cancers and cataracts. Yet pollutants threaten this lifesaving ozone layer, and many countries are now taking action to prevent further destruction (SN: 9/26/87, p.196).

Too much ozone where it's unwanted, not enough where it's needed. The predicament seems to prove that Murphy's law — "If something can go wrong, it will" — applies to planets as well as to supermarket lines.

Many people remain confused by the seeming paradox of ozone's hero/villain personality and by scientists' insistence that limiting pollutants is the only practical way to save the protective shield. Why, some wonder, can't the excess in the troposphere be shifted to the ozone-starved stratosphere? A few have gone so far as to suggest using the space shuttle to salvage the world's ozone worries.

Thousands of media reports have focused on the ozone problem while leaving underlying questions unanswered. The more fundamental of these include:

Question: Why is some ozone good and some bad?

Answer: Ozone is ozone. At the ground or miles up, it's all the same molecule, made of three oxygen atoms. What differs is the setting.

In the troposphere, ozone threatens the health of plants, animals and people. It develops when sunlight cooks an atmospheric stew of nitrogen oxides and hydrocarbons emitted from motor vehicles, power plants and a myriad of other sources. An extremely active molecule, ozone will react with most anything in sight, including lung and eye tissue (SN: 7/22/89, p.53).

Stratospheric ozone is just as harmful, but nobody is up there to breathe it. In this region, ozone molecules created by solar radiation wrap a protective veil around the globe. Humans are thinning this safety blanket by releasing ozone-destroying chlorine and bromine compounds into the atmosphere.

In 1974, F. Sherwood Rowland and Mario J. Molina from the University of California, Irvine, first proposed that chlorine from human-made chlorofluorocarbons (CFCs) threatens the ozone layer. They predicted that as chlorine levels increased, global ozone concentrations in the upper stratosphere would gradually drop.

This vision of slow change crumbled a decade later, when events over the Antarctic revealed the ozone layer faces more danger than scientists had imagined. Each September since the late 1970s, sunlight and chlorine have combined to eat away portions of ozone over the far southern latitudes, creating the so-called ozone hole. In 1987, more than half disappeared from Antarctic skies during the austral

spring (SN: 10/10/87, p.230). Scientists are now finding evidence that the Arctic suffers a similar but far less pronounced ozone loss during late winter (SN: 7/22/89, p.54).

While few people live in the Antarctic or Arctic, ozone destruction near the poles may affect more populated areas. Some scientists think loss near the poles can dilute the global ozone layer. Supporting this concept, researchers reported in the July 27 *Nature* that ozone levels dropped sharply over New Zealand and Australia in late 1987 after the Antarctic ozone hole broke up and ozone-poor air moved northward.

As they learn how ozone succumbs to chemical pollutants, atmospheric scientists are discovering other potential threats. Evidence indicates large volcanic eruptions may substantially lower stratospheric ozone levels over the heavily populated midlatitudes. Extrapolating from this, some researchers even suggest ancient eruptions could have destroyed enough ozone to kill off the dinosaurs.

Question: Might the excess ozone at ground level rise to replace ozone lost in the stratosphere? And if not, couldn't scientists construct huge pipes to send up smoggy air?

Answer: Pollutants such as CFC's can enter the stratosphere because they survive for such a long time in the troposphere. But most air from the troposphere, tends not to rise into the stratosphere, where temperatures are warmer. Think of it this way: A hot-air balloon filled with nothing but cold air would never get off

the ground. Warm air rises, but cold air sinks.

Some ozone does shuttle between the troposphere and stratosphere, but it goes down instead of up. In fact, scientists believe the stratosphere supplies an important fraction of the "natural" ozone in the troposphere, says Rowland.

The troposphere is actually ozone-poor compared with the stratosphere. During the worst days in Los Angeles, ozone can reach levels of 0.3 parts per million for a few hours. That's less than one-thirtieth of the normal concentration in the midstratosphere. So even if humans could pump city smog into the stratosphere, this would only dilute the protective ozone layer rather than repair it, says Gary Whitten, who studies smog ozone at Systems Applications Inc., in San Rafael, Calif.

Question: Why not produce pure ozone at the ground and carry it to the stratosphere in airplanes or the space shuttle?

Answer: Several factors, including ozone's explosive nature, keep this idea in the clouds. The paramount problem lies with the energy needed to add ozone to the stratosphere. Total up all the energy humans use today, and it still would not equal the amount needed to reverse the ozone thinning, Rowland says.

As ultraviolet radiation from the sun continually creates vast amounts of stratospheric ozone, other atmospheric processes continually destroy the molecule. The ozone concentrations in the stratosphere therefore represent a balance between these two processes — a situation resembling water flowing into a hole-riddled bucket, says Mark R. Schoebert, an atmospheric scientist at NASA's Goddard Space Flight Center in Greenbelt, Md.