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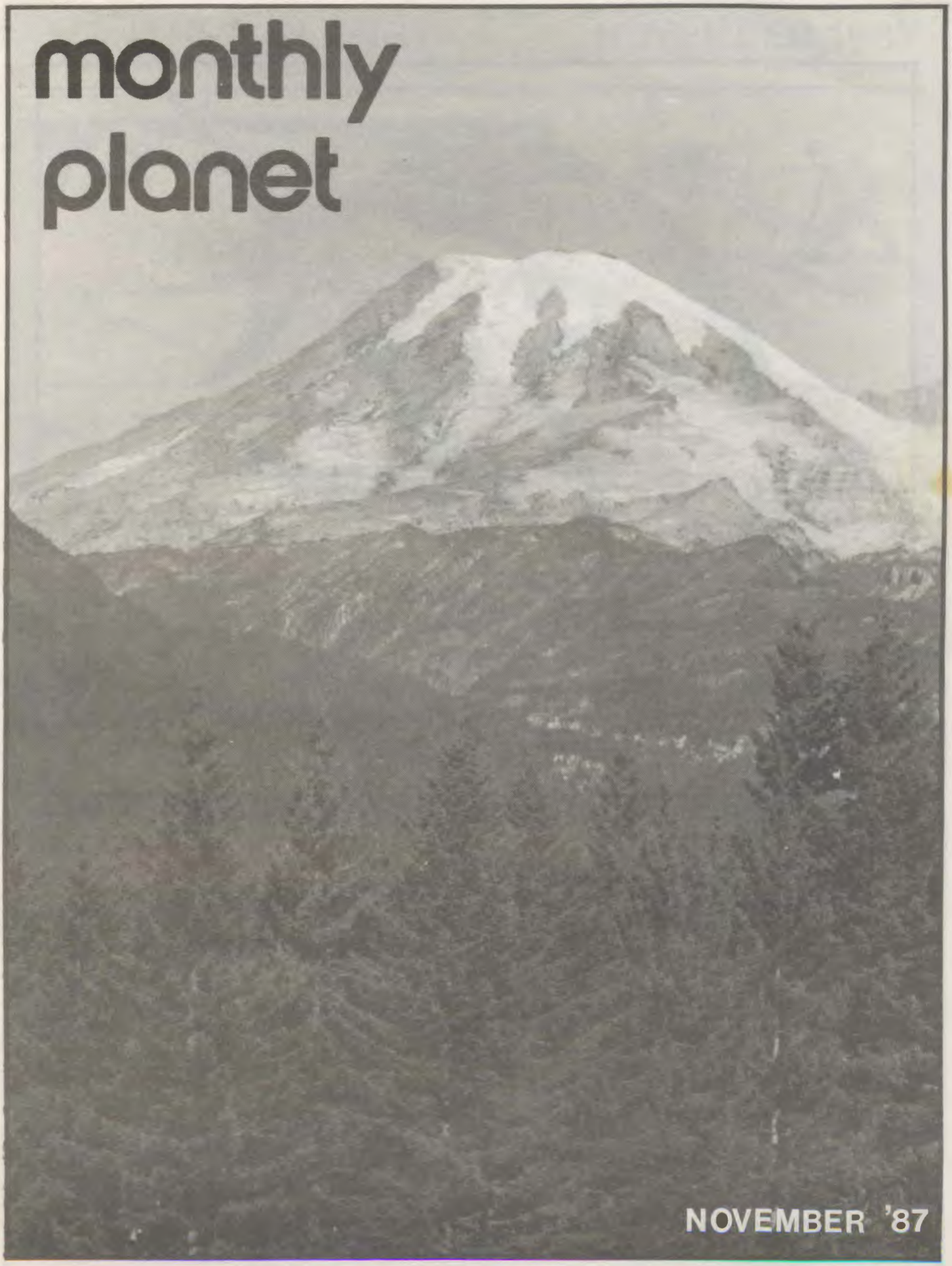
monthly planet



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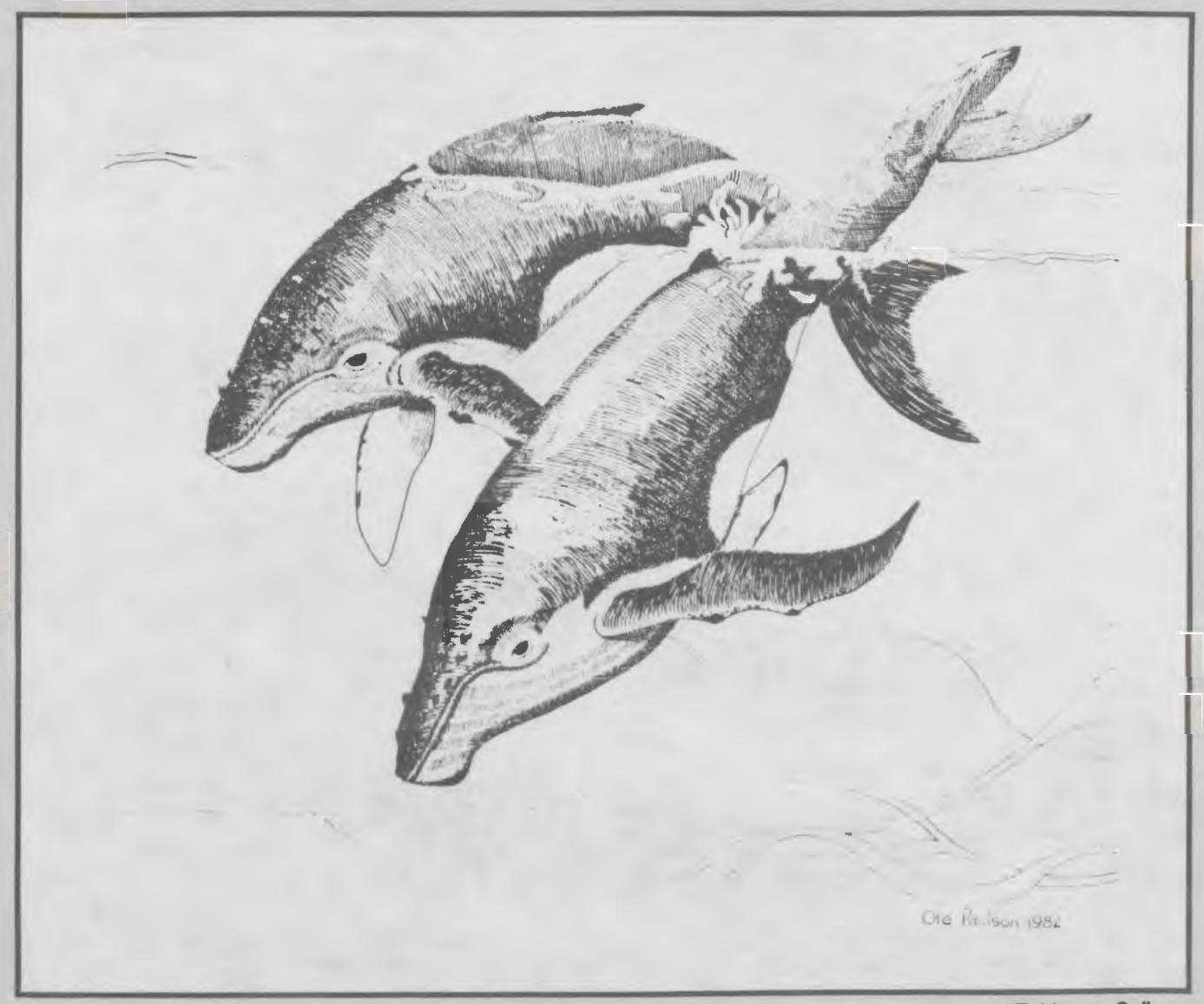

Drawing courtesy of Fairhaven College

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The Battle for Bellingham's Waste- Will Olivine be given permission to burn

Olivine wants to burn waste at the incinerator on Thomas Road

By Amy M. Cross

"MY OPINION ABOUT THE ENVIRONMENT IS KEEP IT CLEAN AND SIMPLE, DON'T TAKE IT TO EXTREMES."

CORKY SMITH SR.

Each year Bellingham incinerates an estimate 20 million pounds of residential garbage. The controversy over who has the Best Available Control Technology (BACT), continues between Olivine and the Thermal Reduction Corporation. The two corporations are vying for the right to burn Bellingham's municipal waste. TRC is currently burning the city's garbage and seeks approval to burn waste for neighboring counties.

TRC's current cost is $38.50 for one ton of incineration. Olivine's estimated cost, if allowed to burn, would be $28.00 said Corky Smith Sr., Chairman of the Olivine Corporation. Olivine's incinerator has an acid gas scrubber in its system. The scrubber removes harmful toxins such as sulfur dioxides, carbon monoxide and dioxide; and hydrogen chloride.

"One thing I can say about TRC is that their acid gasses are bad, they have no gas scrubbers on their plant," said Dr. Briggs, a chemistry professor at Western Washington University.

"My wife works two blocks from the TRC incinerator and the free hydrogen chloride particles in the air around there, have pitted the roof of her car. Hydrochloric acids hydrolyze in your lungs, this can't be good on the people breathing that air, to say the least."

Briggs has worked with Olivine twice in the past year. Between July and October of 1986, Briggs studied Olivine's acid gas samples. The study compared injections of dry powered lime into the incinerator, with liquid lime spray.

"The less liquid you have in the system, the smaller the steam plume is." (a plume is the visible effluents that escape throught the top of the smokestack.)said Briggs, "In fact, we did quite well. The sulfur dioxide was completely removed and the HCL levels (hydrochloric acids), were reduced by nearly two-thirds."

"He is a guy who is trying to do right by his community, although there has been a lot of negative feelings in the past from the Bellingham community toward Olivine." said Briggs of Corky Smith Sr." One year ago their incinerator was belching black smoke. But I know Smith has updated his plant's technology and he deserves a chance to prove Olivine will pass the required stands set for best BACT regulations."

Prior to Olivine's shut down on Nov. 10 1986, the Smiths re-designed their incinerator. They added a bag house in the first part of October and they have added the acid gas scrubber since its shut down. These two added technolological improvements comply with the BACT requirements according to Mike Ruby, Olivines consulting engineer.

BACT as defined by the Puget Sound Air Pollution Control Agency is the "Best known available and reasonable method of emission control. An emission limitation ,based on the maximum degree of reduction, which the Agency, on a case-by-case basis and taking into account energy, environmental and economic impacts, as well as other costs, determined as achievable for such a source through application of production process and available methods, systems, and techniques, including fuel cleaning or treatment and innovative fuel combustion techniques for control of each pollutant."

In June 1985, Olivine received a temporary permit to burn This lasted 17 months. On Nov. 10th 1986, Olivine was shut down. It was not using equipment that prevented harmful emissions from their incinerator.

"I have learned so much about environmental issues and their related concerns in the last two years, and I've put them into action here at the plant." said Smith Sr.

Olivine has manufactured 170 incinerator units. It recently received the information that proves their technology will meet the standards required by the Air Pollution Control Authorities. The information which was received on Oct. 13, confirmed that its municipal waste incinerator in Sydney, Nova Scotia, Canada, had passed the required tests for particulate emissions, according to Corky Smith Jr., President of the Olivine Corporation.

"The burner tested at .03 grains per dry standard cubic feet. This is the same standard that will be required of our incinerator on Thomas Road, here in Bellingham."

Smith Jr., said the incinerator in Nova Scotia is comparable to the Thomas Road facility in size and concept.

"This should eliminate the argument that no other incinerator in the world utilizes our technology." said Smith Jr., "Here is a working incinerator currently passing the standards everyone was trying to say we couldn't meet."

"We have been trying to obtain a permit to burn for ten years now," Smith Sr., said.

On Oct. 13, the Olivine Corporation filed a request for reconsideration on a permanent permit to burn waste, from the Northwest Air Pollution Authority (NWAPA). The board meeting took place on Oct. 14, however, Olivine's request was not on the agenda. The Olivine Corporation decided to withdraw this permit request and planned to continue the permit process at a later date.

On Oct. 11 and 12, 1987, Olivine's consulting engineer, Mike Ruby, a Ph.D in Environmentation, and a nationally known authority on pollution control engineering, made a breakthrough that has allowed him to develop a thorough BACT analysis of the Olivine site without actually burning at the Bellingham plant. Mr. Ruby has been working with the Olivine Corporation for seven months.

Corky Smith Sr.

"It is Mr. Rubys' opinion that this break through represents an enormous technological understanding of the problems associated with municipal waste disposal," said Smith Jr.

"Ruby's findings amount to scientific verification of the ideas that my father has been trying to accomplish within this family run corporation for years. The Olivine Corporation has developed an economical and ecological sound method of disposing of municipal solid waste. Ruby's test indicated that the Olivine plant would meet the strictest environmental standards required to date." said Smith Jr.

After the installation of a bag house and an acid gas scrubber, Olivine began burning on Aug. 22, 1986. They burned for eight days. Smith Sr. is convinced that if there would have been enough time, they would of been able to get the plant running at optimum efficiency. Dr. Briggs was out at the site during Olivine's last burning. This time Briggs was looking for complete combustion.

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"I don't think the sample I tested was represenative of the incinerators capable performance. The burn was to cool, thus resulting in some unburned waste in the ash. My only concern with incinerators using bag houses is proper containment of the fly ash. It needs to be properly encased to prevent leaching," Briggs said.

Olivine currently has a monitoring system around their clay lined ash disposal landfill site.

"We don't want any lechate from the fly ash entering into the environment," said Smith Jr., who has a masters in Mining Engineering from the Nevada School of Mines.

According to Olivine, " it was probable that the NWAPA would have granted a permit at the Board meeting on Oct, 14, 1987., and it's almost certain that the permit would have been appealled by our competiton TRC. The state's Pollution Control Hearing Board would probably uphold the appeal based on the fact that no proper BACT analysis has ever been clearly defined to the Northwest Pollution Authorities in Mt. Vernon. What this all means is that all municipal waste permits currently granted by the authorities are probably invalid."

"The Olivine Corporation can have, and will have, a proposal for authority to operate on a permant basis before the board of the Northwest Air Pollution Authority at the November Meeting. The documentation is such that the board, the state DOE, and the federal regulating authorities will be bound to support the Olivine System not only as being capable of meeting current standards but representing a real break through in technology," according to Olivine Corporation.

Eventually, Olivine will be given the chance to prove that they do have BACT, and that their incinerator will pass air quality standards. Olivine's opponents have unknowingly helped Olivine over the past year , by forcing Olivine to work through a process no other company they know of has had to follow. The types of documentation the state is now requiring of every company have already been developed by the Olivine Corporation for its incineration system.

By Tom McBride

For the past five years, Enviromental groups and labor groups have tried to get our state Legislaters to enact a state toxic waste clean up program. The need for such a program is very evident. Washington State has 158 contaminated waste sites , 57 of them have been placed on the state priority list and 28 on the superfund list . Another 400 potential problem sites are still being assessed. These hazardous waste sites seriously threaten our environment and human health.

The estimated cost of proper clean up is about 1 billion dollars. In January of this year several labor groups, environmental groups and State Representitives drafted Initiative 97- The Toxic Control Act and started in September seeking the 200,000 signitures needed to put this on the November 1988 ballot.

The main purpose of the initiative is to raise sufficient funds to clean up existing hazardous waste sites and to prevent future occurences of sites due to improper disposal of toxic wastes into our land , air , and water. The funds will be raised by imposing a one time tax of 7/10ths of one percent on the first time posession of hazardous substances in this state.

On October 10, the State Legislater passed a superfund bill to address the state's toxic waste problem. This bill is very similar to the initiative, but there are some differences.

The campaign for the initiative is still going very strong . Here in Bellingham there is a effort to organize the citizens of the area to work together in obtaining the 10,000 signatures expected from Whatcom County.

So far there 9 people involed which have been meeting every Wednesday since Oct 7. At the time of this article no leader has been named, nor has there been mention of a meeting place.

At W.W.U., the students are forming there own group " Students In Support Of Initiative 97", headed by Lesli Anne Larson. Their goal is to educate voters on the issue and to teach people how to petition.

Here is a comparison of the key differences in these two bills.

Initiative 97

Funding--$70 million per biennium

Type of tax--Wholesale "poisons tax" at a rate of .7%

Exemptions--Natural gas,

All petroleum products, except those products contained in all underground storage tanks will be taxed.

Clean up standards--Must be at least as stringent as all applicable federal and state laws. No deviations are allowed.

Liability--In the event that a cleanup fails or previously unknown substances are discovered, the potentially liable party remains liable for the cost of the secondary cleanup.

Enforcement-- $25,000 penalty per day plus 3 times state's costs incurred as the result of non compliance.

Regional citizens advisory committee-- Required

Use of funds: DOE grants for hazardous and solid waste programs : Expressly prohibits any funding for incinerator feasibility studies,construction, maintenance, or operation and by omission does not allow funding of other solid waste capital projects, such as minimal functional standard

Task Force Bill

Funding--$50 million per biennium

Type of tax--Wholesale "poisons tax" at a rate of .8%

Exemptions/Credits--Natural gas, asphalt, petroleum coke, liquid and fuel gas used in petroleum process.

Cleanup standards--Must conform to all applicable state and federal laws, unless Ecology determines that alternative standards would ensure protection of human health and environment.

Petroleum products covered--Exemption from most provisions of the bill for petroleum products except those designated as extremely hazardous waste under state law or hazardous substances designated under federal law, or solid waste decomposition products that present a threat to human health or the environment. This partial exemption includes gasoline.

Liability--Broad releases from liability. Draft does not contain true "reopeners" as are found in the intiative. Covenants must issued for off-site land disposal of wastes. Covenants may be issued when cleanups fail to meet existing state or federal cleanup standards.

Énforcement--$10,000 penalty per day, plus 3 times state's costs incurred as the result of willful noncompliance.

Regional citizens advisory committee--Not required.

Use of funds--Provides grant funding for clean ups, hazardous and solid waste planning and programs. Same as initiative but solid waste projects, such as incinerators and landfills can be financed. Loans are also allowed.

For more information contact:

Citizens Toxics Cleanup Campaign

Dave Brickland and Jolene Unsoeld, Co-chairs

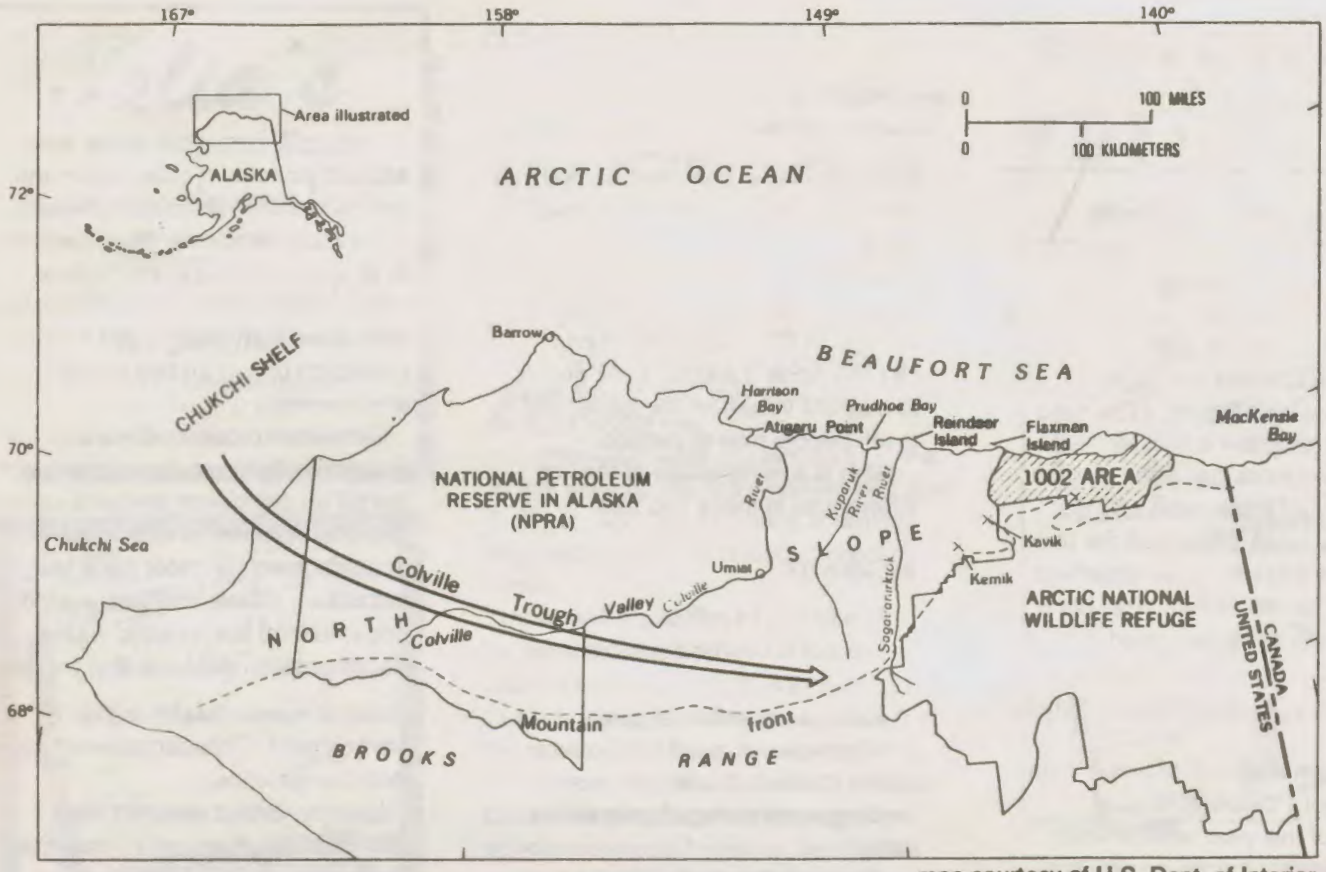
5512 University Way N.E.

Seattle, Wa. 98105

Phone # 206-526-1650

Students in Support of Initiative 97

Phone # 592-5527 Ask for Roger



map courtesy of U.S. Dept. of Interior

A calving area for caribou, the ANWR 1002 area may lose its wilderness refuge status.

Artic Wildlife Federation questions Interior Department report

By Ken Bennett

" International Treaty Obligations affecting migratory birds must be addressed, "

The Wildlife Federation

A special report released by the Wildlife Federation in March criticizes the Department of Interior for their recommendation to open the Arctic National Wildlife Refuge (ANWR) to oil exploration.

The report, Arctic National Wildlife Refuge Coastal Plain: A Perspective for the Future, stated that the Interior Department failed to follow the instructions of Section 1002(h) of the Alaska National Interest Land Claims Act (ANILCA).

The Wildlife Federation's report states that the Department of the Interior's study inadequetely addressed the following problems: environmental pollution from oil development; insufficient quantities of gravel for oil platforms, roads, land waste disposal pits; the availability of water for all phases of oil development; international treaties; and a failure to evaluate the economic benefits and costs within the context of a national energy policy.

According to the Federation, air pollution from oil development and construction facilities is not mentioned in the Department of the Interior's report. The Federation also feels that the analysis on the impact of drilling muds and other wastes is inadequete.

The Federation mentions that "the availability of adequete gravel supplies on the 1002 area (coastal plain) is uncertain". They also point out that the Department of the Interior fails to quantify the amount of gravel needed for oil development, or identify gravel sources.

Although the coastal plain has been classified as a wetland, fresh water resources are limited. According to the Department, 15 to 20 million gallons of water are needed for each exploratory oil well. Due to the lack of sizeable lakes in the region, obtaining water without greatly disrupting the tributaries of rivers could prove to be a major obstacle in drilling for oil.

"International treaty obligations affecting migratory birds must be addressed," the Wildlife Federation said in their report. In regard to migratory birds, the Federation states that the Department did not address the following treaties: the Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere, the Convention between the United States and Great Britain (representing Canada) for the Protection of Migratory Birds, and the Convention between the United States and the United Mexican States for the Protection of Migratory Birds and Game Mammals.

The Federation feels that the Department should have assessed the need for oil from ANWR in the context of a national energy policy. However, no mention of conservation as a energy source is in the Department's report.

The Wildlife Federation wants Congress to create a nine member commission to remedy the deficiencies in the Department of the Interior's study. The commission, three members appointed by each branch of the national government, would have two years to study the coastal plain within the guidelines established by Section 1002 (h).Congress enacted the ANILCA in 1980 to establish 16 wildlife refuges in Alaska. The legislation enlarged ANWR from 8.9 million acres to 19 million acres. Sufficient debate in the Senate forced Congress to adopt Section 1002(h) of the ANILCA that directed the Secretary of the Interior to conduct a five year study of the oil and gas potential of the coastal plain of the refuge. Section 1002(h) provided instructions for the Secretary to evaluate the impact that oil development would have on the arctic environment and its wildlife, and how the oil would relate to America's need for additional domestic energy sources.

In accordance with Section 1002(h) Secretary of Interior, Donald Hodel, reported the Department of the Interior's findings to Congress in November of 1986. Hodel concluded there was a 19 percent chance of finding economically recoverable oil. In addition he estimated that there was a 95 percent chance of finding 600 million barrels of oil, and a 5 percent chance of finding 9.2 billion barrels of oil. The Department of the Interior predicted the impact on the environment from oil development would be negligible to moderate. The Department also stated that the oil found would reduce the nation's dependence on imported oil and enhance national security.

Susan Alexander, director of the Wilderness Society-Alaska, said the Federation's report raises significant questions about the Department of the Interior's recommendation, but she questions the need for a commission. "The report is commendable, but why do we need a nine member commission to further study the coastal plain?" Alexander said. "The real question at hand is should we develop the refuge? The answer is no. We need to protect the unique arctic coastal plain."

Michael Frome, environmental journalist in residence at Western, said he favors protecting the refuge and is not opposed to the idea of a commission. "We need the refuge more for ourselves and the wildlife9 than we need the oil," Frome said. "We have been subjected to the illusion by geologists, bureaucrats, and the petroleum industry that we need the oil. The commission would at least delay the fate of the refuge for another two years--the Reagan administration would be out of office by then."

Section 1002(h) empowered Congress to decide on the fate of the coastal plain. It is expected that the 100th Congress will decide sometime during its reign.

" We need the refuge more for ourselves and the wildlife more than we need the oil. "

Michael Frome

1985 © Pete McDonnell From "RESOURCES"

THANKSGIVING

By N.S. Nokkentved

Late in the year, when there are more stars in the night sky than a mortal man can count, the frost sets in and the friendly smell of wood smoke hangs in the air. Flocks of geese pass high overhead, honking at the cracking frost. In the first grey light of dawn a mist rises from the marshes to shroud the hillsides in a ragged cloak of white.

The woodshed is crammed with seasoned firewood. The freezer is full of the fruits of summer. The potatoes have been dug and stored away. The pantry is lined with jars of beans and tomatoes and glasses of applesauce.

Soon, kitchens will be crammed with the smells of roasting turkey, pumpkin pie, cranberries and candied yams. Parlors and living rooms will be crammed with aunts and uncles and cousins; childish laughter will mingle in the air with cigar smoke, the smell of beer and the flickering glow of the T.V. sports spectacular.

Yes, a regular family Thanksgiving.

Thanksgiving Day -- a day for rejoicing in the bounty of nature, for feasting and sporting. It is a time to put away the garden tools, to clean out the stove and the chimney, to sit by the fire with feet on a stool, to rest from the summer's work.

It is time to reflect on the year gone by, to be thankful that we made it as well as we did--in spite of what the government or the neighbors might have done. For no matter how bad it might sometimes seem, there always are others who are worse off.

It is time to be with family and friends, a time to thank God and each other for the gifts we all have received--this amazing phenomenon of good stuff just growing right up out of the ground (well the farmer deserves a little credit).

Man through the ages, has celebrated a day of thanks and feasting in honor of the harvest. These celebrations often included sacrifices to the appropriate gods, and games of athletic competition.

In this country we trace the traditions of our celebration to the first thanksgiving of the Pilgrims at Plymouth in 1621. Theirs was a tenuous existance, with starvation during the imminent New England winter on one hand and hostile Indians on the other.

Their harvest, however, came through better than expected, and with the help of a new friend, Chief Massasoit, they averted disaster. For this, these austere people, not normally given to celebration, declared a holiday.

They invited their Indian neighbors to share in the festivities. They were a deeply religious people and there was much prayer. But, there also was feasting for the Indians had brought food of their own to share. And, young men, Indian as well as Pilgrim engaged in exhibitions of physical prowess and friendly competitive games.

Since the time of the Pilgrims we have celebrated a thanksgiving at different times and for different reasons. Through the efforts of Sarah Joseph Hale and a Joint Resolution of Congress, Thanksgiving became a national holiday celebrated on the fourth Thursday of November.

Times have changed a bit since 1621. The family unit is no longer so strong, as families are broken and scattered before the winds of change. What once was a family tradition and religious celebration of thanks for the bounty of the fruits of the earth shared by the brotherhood of man, has seemingly, for many, become an empty and meaningless hedonistic feast of gluttony.

Oh, we're reminded that this is the time to count our blessings. But, isn't there a little more to it than that? How many of us stop to think about the implications of the example of the Pilgrims?

I am not suggesting that we all run out and become Puritans. Perhaps the symbolism in their Thanksgiving was unintentional, but it is none the less an imposing example of what Thanksgiving ought to be. A time to count our blessings, to be sure, but also a time of brotherhood and sharing.

Today we find ourselves once again on the brink of catastrophe--deterioration of the environment on one hand and thermo-nuclear holocaust on the other. It is important that we take this time to reflect, put aside our greivances, and sit down with our neighbors to break bread, in the tradition of the Pilgrims, so that we might step back from the brink of destruction, so that we might have good reason to be thankful. Can we not afford to share with others that they might be thankful also? Indeed, can we afford not to?

Is it too much to ask to forget our economic endeavors and our petty schemes for one day, that we might put the thanks and the giving back in Thanksgiving?

For so many people today, Thanksgiving has become a habit, a chore, a family obligation, without any thought about what the day means. For far too many people this day means a turkey dinner, family visits and little else except perhaps a stomach ache the next day. Far too many take this day with all its trimmings for granted, as though it were their due.

I have yet to meet the man, woman or child who had nothing to be thankful for. It is a strange quirk of human nature that when life is easy we tend to take it for granted. It seems the more we have to be thankful for, the more thankless we become.

I am sad that my own family is scattered over half the world, but I am thankful that I have a family that is warm and loving, albeit by long distance. I am thankful that I have friends with whom to share this day. I am thankful for the sunshine and for the rain, and I am thankful that I have eyes to perceive the splendor of Nature. I am thankful that I can make people happy with song, and that I can make them laugh. I am thankful that I have something to give, but most of all, I am thankful that I have something to share.

It seems to me that it is time we began to live like human beings, began to live as though we gave a damn about each other. It is time we realized why this day has been set aside, time we realized what a wonderful paradise we live in and began to show some respect and appreciation. Let us be thankful for what we have, however much or little it might be. Let us rejoice in one another. It is not enough to count our blessings, we must share them with others, for what is life worth if we don't share it.

The Northwest Association for
Environmental Studies presents its sixth
annual conference

Montane to Marine:
New Approaches to Caring for the Environment

To facilitate work and discussion aimed at achieving a healthy Northwest environment, this year's conference will focus on dispute resolution and examine possibilities for cooperative resource management. Panels will bring together citizen advocates, agency representatives, and scholars to begin cooperating in new ways. Half the time of each panel discussion will be devoted to audience participation.

Nov. 6 - Nov. 8, 1987
Western Washington University
Viking Union Lounge

For more information contact Huxley College at (206) 676-3520.

Montane to Marine Conference

By Mike Monson

On Nov. 6th,7th and 8th the Sixth Annual Conference of the Northwest Association for Enviromental Studies will meet at Western Washington University. This years topic: Montane to Marine. The main goal of this years conference is to educate people about the Northwest enviroments and ecosystems, and how they are being protected. Problems will be examined, with possible solutions, along with dispute resolutions.

The conference starts on Friday, November 6, with registration followed with a Huxley Colllege Alumni "Careers Day", where former Huxley students will discuss what they are doing now. Gail Bingam, of the Conservation Founndation, and also a former Huxley student, will present a dispute resolution seminar. Also, on Monday, there will be local tours and a buffet dinner in the Viking Union followed by a keynote address: "Changing the vocabulary of Society" given by Tony Angelll, supervisor , Washington Office of Enviromental Educatiion. For those who would enjoy it, Fairhaven College will be presenting the play "The boy who loved Earth" at Fairhaven College.

Saturday Nov. 7, starts out with a buffet breakfast in the Viking Union, followed by panel discussions. Topics to be discussed are as follows:

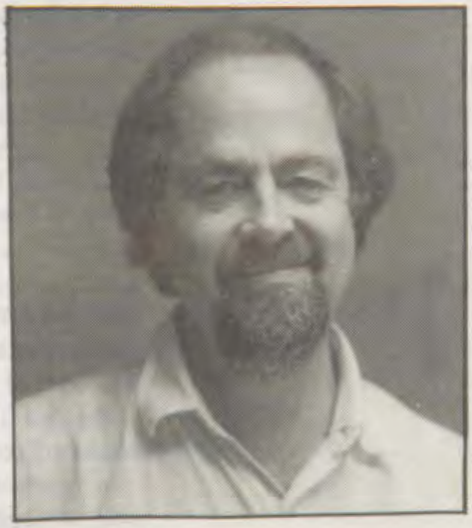
Katherine Fletcher will chair a panel for "Transboundary management; Our shared resources", and Ernst Gayden will chair a panel on " Land use and land use ethics". Panel members will be Ollie Wilgress, Tyson Braunigan, and Tom Jay. Dr. Ruth Weiner will chair a panel on " Nuclear Waste and the Nuclear Future" which will discuss Nuclear power and proposed depositories for Nevada and/or Washington.

At lunch, which will again be a buffet in the Viking Union, John Miles, Dean of Huxley College, will speak on the role of Enviromental studies in higher education.

Following lunch, more panel discussions. Dr. Richard Mayor will panel a chair on "Multi- Institutional Water Management Case Studies" which will examine the subsurface contaminents in farming communities. Panel members include Stephanie Birchfield (Columbia Basin), Julie Rector and Kathy Creaham (both for Lake Whatcom water quality). Michael Frome will chair a panel on " Forestry practice and research." His panel members will include Roger Nichols (Nootsack Watershed) , Claire Cdebaca, and possibly David Mumper, from Weyerhauser. Ending the panel discussions will be Student Panel Presentations, chaired by Laura Lancaster. Students from the University of Oregon, Evergreen College, and Huxley College will be represented.

Following the Student Panel Presentations, local tours and activities will be held, as well as a wine and cheese reception, dinner, and a keynote address on environmental dispute resolution given by Gail Bingham.

Sunday, the last day of the conference will feature an address on environmental innovations in the Pacific Northwest, given by John baldwin, president NWAES. Sunday will also be a wrap-up of the conference, with a summary, lunch, more topurs, and a reshowing of the play "The boy who loved the earth".



Lynn Robbins, *Senior Organizer*

Ecology and Human Ecology

by

S. P. R. CHARTER

Ecology defines the interrelationships, both obvious and subtle, of an organism with its total environment. Human Ecology defines the interrelationships of Man (by his own definition the most important organism in all of Nature) with his total environment.

Ecology and Human Ecology are vital terms which have become extraordinarily popular. Even with the best of intentions they are frequently misused—but such is the cost of popularity. They are often used as substitutes for the expression of ideas and emotions which need other words for their description and understanding. They have become pennants, flags emblematic of a championship of the 'good' challenging the 'bad,' but mainly in terms of the physical tangibilities of Earth: breathable air, potable water, non-chemicalization of the land, non-contamination of the sea, forest and species preservation. . . in terms of the physical tangibilities of people: population numbers, open space, housing, garbage generation and disposal, food de-contamination. . . and in terms of the tangible expressions of the emotional aspects of peace, love, goodness, interpersonal and group relationships. . . Much of the current use of these words is descriptive of action aimed at doing the 'good' by undoing the 'bad.'

Such action, especially by many very young people who are arriving at the self-realization that there is *something* they can do about their world, is laudatory as the beginnings of a vital awakening. Action of itself is frequently seductive to many—more so than thought. As action, Ecology and Human Ecology are being used as technological terms. Technological terms, by their nature, are quantifiable: they lend themselves to the confines of measurability and to the demands of precision.

Because there is much in Ecology and especially Human Ecology which is neither measurable nor precise, much which is concerned with the non-measurable intangibilities, the dominance of technological interpretations to these enormously important words will be self-defeating. Have we not yet learned that while technology can help achieve human purpose, it cannot—and must not be permitted to—direct and proscribe human purpose? (After all, depollution industries now proliferating can themselves readily become polluters, even as nuclear anti-missiles are themselves nuclear missiles.)

No one can, with sanity, truly question that we confront huge ecological problems of our own making. Are their solutions beyond our capabilities? It has been demonstrated many times that when an animal is forced to deal with problems insoluble to it, the ani-

mal loses its sanity and biological control trying to solve them; the nervous-system attrition it suffers is soon followed by massive contortions and death. Man is now forced to deal with near-insoluble problems. If he accepts them as insoluble, he too will lose his sanity and biological control because he is now *forced* to deal with these problems; they will not disappear of themselves. If he does not accept them as insoluble, but attempts to solve them if only for the sake of sanity, Ecology and Human Ecology are indispensable in dealing with these problems.

But Ecology is not a Pill-word. Neither is it Conservation. Nor is it *OM!*

Every organism, from amoeba to man, is in a constant process of both living and dying, simultaneously. This being-in-process is on a finite Earth; it is part of a living planet whereon all things and beings are interrelated; but a planet physically non-expansible. Ecology is concerned with uncovering these interrelationships and their meanings. Aware that the destructive consumption of resources (consumption without replenishment) leads only to attrition, massive contortion and death, Ecology is simultaneously concerned with the elimination of destructive consumption and with the possibilities and processes of replenishment.

All organisms live within an ecological world; but only Man is capable of ecological awareness, which is only one of many awarenesses. Ecological awareness consciously demands profound understanding, which itself requires knowledge, plus reason and emotion—and dedication. It also requires projections of forethought through evaluations of past and present events. Conscious awareness, furthermore, requires the strengthening of that quality of wildness, of untamability, of antidomestication, now receding from us mainly because we are becoming fearful and through increasing fear increasingly impotent.

Ecology, as a study of interrelationships, can document, and has, many ecological offenses and capital crimes against Man and Earth and the human continuum. (However, knowing the crime is not automatic assurance of knowing the 'good.' The non-crime is not automatically the 'good': if the murder of one's brother is one of the worst of crimes, the non-murder of one's brother is certainly not one of the best of the 'good.' The anti-bad is not necessarily the 'good.' One can be 'anti-bad' and pro-*nothing*.)

Documentation is essential in many ways, but it is not synonymous with solution. Directions toward solution are more within the area of Human Ecology.

In 1962 Aldous Huxley, in his Foreword to MAN ON EARTH—*A Preliminary Evaluation of the Ecology of Man*, wrote: '. . . Human Ecology is by far the most important of the sciences. It is also, ironically, the least developed of the sciences, the most nearly non-existent. . .' It was so then; it still remains so. One of the reasons for this is because

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ECOLOGY from P.15

Human Ecology requires more than sophisticated technology because it is an Art-Craft-Science. As used here, Art defines the individual's search for the unity of Man and Universe. Craft defines the multiple methods and tools used (and usable) in aspects of this search. (It should be noted that tools, all too frequently, are used to hamper this search and to befoul the human reservoir: nuclear weapons, radiation and chemical-bacteriological warfare devices, massive and insidious devices of persuasion, and so many others.) Science is used here in its broader ancient meaning of Natural Philosophy. To Aristotle Natural Philosophy included the physical universe as well as politics, ethics and aesthetics; today it also includes Nature and Man always as part of, and never apart from, Nature.

Within Human Ecology Man is regarded as Man-the-Species and Man-the-Individual, simultaneously. This factor of simultaneity applies to no other organism in all of Nature—only to Man. For Man-the-Species certain inevitabilities are apparent: he had a beginning, he will therefore have an ending; he evolved from more primitive organisms, and he is continuing his evolutionary (and perhaps devolutionary) processes; he must adapt to his changing and aging environment, and adapt his environment to his changing needs—or perish. But for Man-the-Individual other factors obtain.

In the logical consideration of Man-the-Species medical-genetic expertise dictates that the haemophiliac, for instance, should be allowed to bleed to death in early age in order not to weaken the genetic reservoir of the species since haemophilia is a genetic factor—as should the diabetic, and anyone else whose reproduction may strain the physical survival of the species. Nevertheless, in terms of Man-the-Individual, conscience, however illogical, dictates that the haemophiliac should not be allowed to bleed to death. The logic for Man-the-Species would state that the un-normal Van Gogh and the malformed Toulouse-Lautrec were physical liabilities, as were, in terms of genetic tendencies, blind Milton, tubercular Keats, deaf Beethoven. What then of *Paradise Lost*, much less *Paradise Regained*? These creative individuals were genetically poor in terms of Man-the-Species; and yet, consider how they have enriched—and even more especially, how they continue to enrich—Man-the-Individual. In terms of Man-the-Species, logic exerts an imperative which frequently does not apply on many levels to Man-the-Individual.

Where are we now, in terms of our physical, physiological, demographic, mental, cultural, natural and man-made totality?

Where are we heading, now?

Where do we want to go with our present and foreseeable capabilities?

What do we want to seek to become?

What can we do, now, in order to seek to become that unique organism which we want to become? Not where and how are we going to spend Eternity, but where and how we are going to spend tomorrow and the day after in terms of the human continuum itself.

These are some of the questions for which Human Ecology attempts to seek answers.

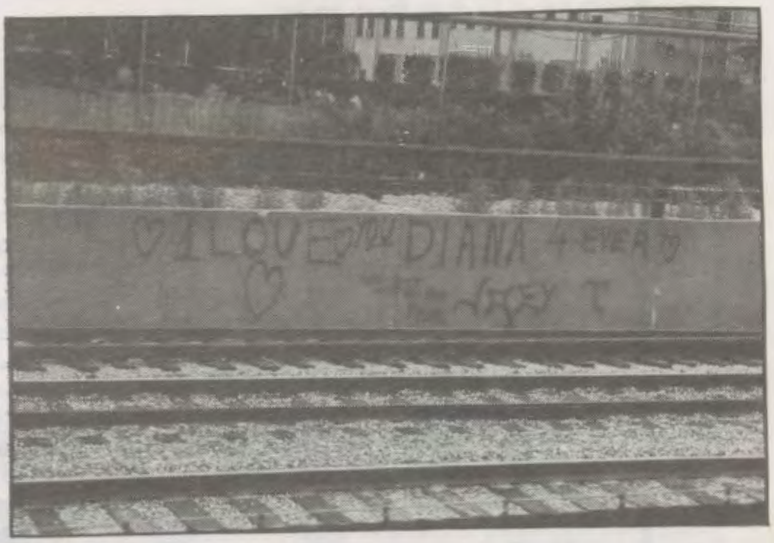
So many people now talk of the 'ecological first order-of-priority' as though there were a preferred correct sequence for our actions. But the 'first' order-of-priority cannot be found within the tangibilities of clean air or potable water or population-reduction because so many tangibilities need to be done simultaneously and one is no less of 'first order' than the others. The first order is that self-awareness in terms of our own search for profound understanding which can come only from the intangibilities. For instance: Why are we where we are? What are our personal needs and meanings of privacy, of intimacy? Why should we preserve Nature? Not how, but why. Only from such intangibilities will we achieve the know-why to direct our know-how.

Finite Man, possessed of a finite brain, is living on a finite Earth which is part of a possibly infinite Universe. The uniqueness of Man is that this finite being seeks to think infinite thoughts; that limited Man seeks limitlessness. Limited, even in the number of his days on Earth, he seeks the only limitlessness possible for him: the inner limitlessness of his attempt to seek the unity of Man and Universe. The awareness of the need for limitlessness exists, however dimly, within each of us. When we deny it deliberately or by default we condemn ourselves to species-imperatives and limitations.

In many ways Human Ecology is concerned with Philosophy. Philosophy is concerned with thought and mind. The mind exists only within the body. We are each mind-body complexities; we are not disembodied spiritualities. Whatever spirituality Man possesses is contained within his biology. The mind-body needs to be within that environment on Earth which permits the greatest enrichment to the mind-body complexity, and to the human continuum. Human Ecology is concerned with the totality of the mind-body-environment, with the self and beyond-self totality.

Human Ecology is the antidote to the insanity which is descending upon us through our own defaults precisely because we are now finally forced to deal with many near-insoluble problems. When Human Ecology begins to become effective to Man-the-Individual, it points the way toward sanity for Man on Earth. This is one of the basic reasons why Human Ecology can be sought and expressed, as both thought and actuality, only as a way of life.

SPRC



Concern grows over Agricultural Sludge Applications

By Claire Cdebaca

The application of solid waste sludge onto the productive agricultural and/or pastoral land within Whatcom County is currently one of the hot issues in local circles. Sludge has been used in this manner since the 70's, yet it has only become an issue of concern in the last few months. Permits to apply sludge have been issued by the Bellingham-Whatcom County District Department of Public Health.

The reason that many citizens are concerned with the effects of sludge application is the high levels of toxins and pathogens; namely cadmium leaching into the water table as well as bacterial and viral contamination of the surface of the soil onto which the sludge has been applied.

Permits are issued yearly for application of up to 12.5 gross tons per acre for ten years with no pH adjustment of the soil or 12.5 gross tons per acre for 39 years with pH adjustment to the soil. This should yield an average of 45 parts per million (ppm) cadmium to the soil ratio which has been determined by the Department of Ecology to be the loading rate of sludge.

Public officials feel there is no cause for alarm as no one has suffered any ill effects despite over a decade of application. Sludge is not defines as "hazardous" material so the standards are low. But officials have recognized four hazards in sludge application: nitrate accumulation, which can leach into the soil or runoff into streams and rivers much like the agricultural fertilizers; toxic organic compounds like PCBs which can be held in the soil for prolonged periods of time; pathogens like bacteria, viruses, and worms; and heavy metals, specifically cadmium.

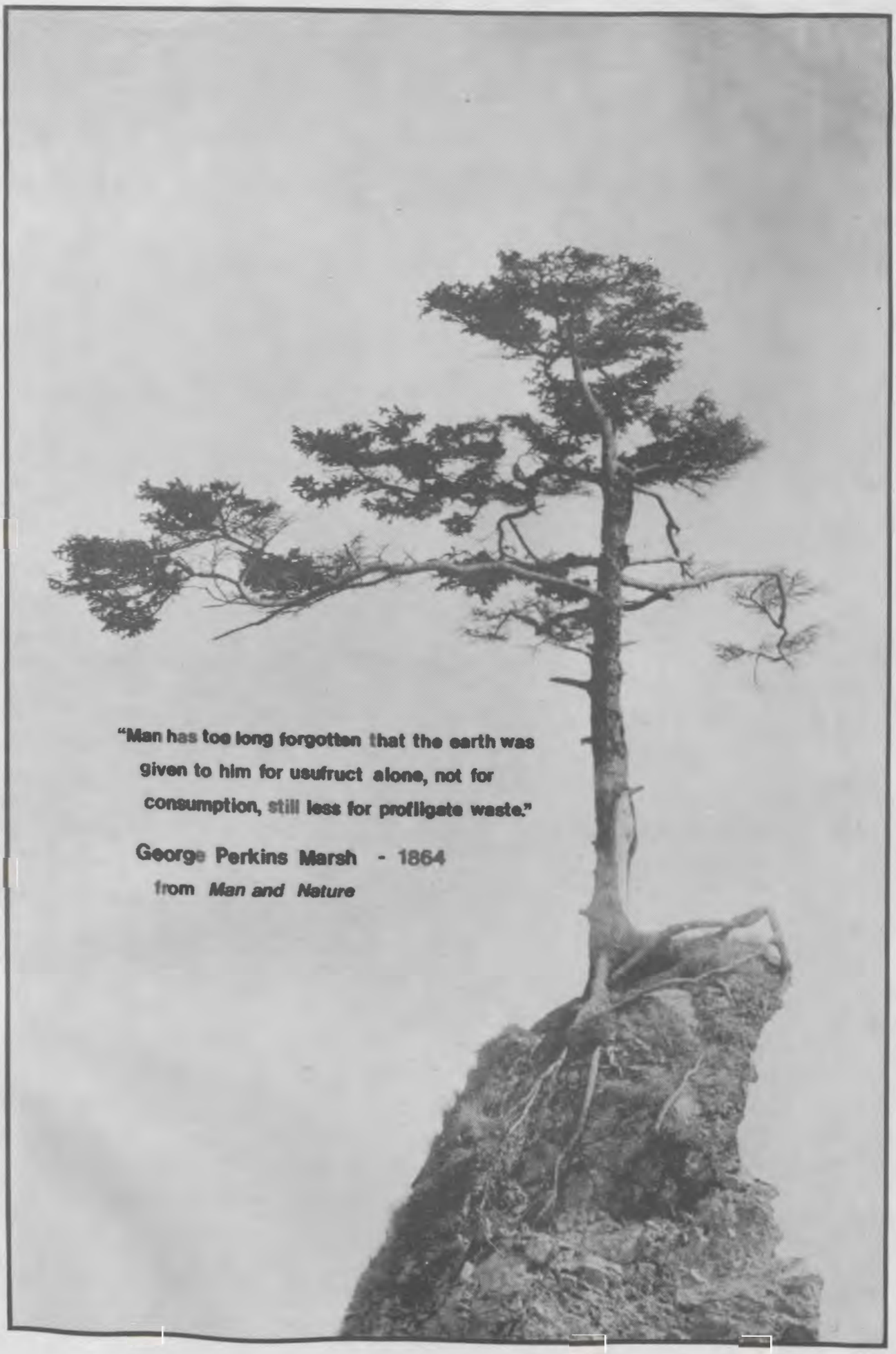
Concerned citizens and experts feel that regulations are not sufficiently stringent to insure the health of humans and pasture animals. The Farmland Protection Association has helped draft new regulations and is involved in raising public awareness of past and present violations.

Many of the farmers who agreed to sludge applications have stated that they were not informed of the contents of the sludge spread on their fields. Food crops cannot be grown for up to one and a half years for root crops or until the sludge has been tilled into the soil for crops such as corn or peas. Animals cannot be pastured until the sludge has been tilled into the soil due to the danger of heavy metal accumulation in their organ tissues.

Sumas Transport, the company which owns the sludge, has been stockpiling sludge for future application. There is currently a 15,000 ton uncovered pile in Everson. Sumas Transport expects to apply for permits next year as it has already applied all the sludge allowed this year.

Such stockpiling is in violation of current regulations as 15,000 tons is above the amount allowable to stockpile and three weeks is the longest time limit allowed. Despite such violations the Public Health Board has been slow to react. A 4-4 vote has effectively deadlocked the Board. Until a decision is reached, application and permit issuance will continue.

Regular meetings of the Public Health Board are held on the third Wednesday of the month at 3:30p.m. at the Health Department in Bellingham. Technical meetings are being held on Tuesdays at 6:30p.m. through December, at the same location.


"Man has too long forgotten that the earth was given to him for usufruct alone, not for consumption, still less for profligate waste."
George Perkins Marsh - 1864
from *Man and Nature*