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**RAIN**

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# RAIN

VOLUME I, NUMBER 7

APRIL 1975





*RAIN* is a publication of Eco-Net, an environmental education network funded by the Hill Family Foundation and an Environmental Education Grant from the U.S. Department of Health, Education and Welfare. The office is at the Environmental Education Center, Portland State University, Portland, Oregon 97207. Director: Don Stotler.

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Cover Photo: Ancil Nance  
Typesetting: Irish Setter

## RAIN: No such thing as a free lunch

*RAIN* will continue next year. We have been granted an extension of the Hill Family Foundation grant that carries with it, however, the assumption that *RAIN* will be growing towards self-sufficiency. This means that soon we will be distributing *RAIN* by subscription and sale in retail outlets. The exact price, marketing strategy and exchange subscription philosophy are still being worked out. You will soon be notified by mail of the decision, and, likely, a request for money.

The reason to move toward subscription now is two-fold: (1) to eventually become self-sufficient, and to pay for increase in coverage (features, columns, wider geographic emphasis, more pages); and (2) because we can no longer afford to send *RAIN* gratis to people we just think might be able to use it. The subscription request will be just one way of separating the readers/users from the non-readers/non-users.

Our original policy of distribution was based on certain assumptions of growth; we added to the mailing list throughout the year lists that we obtained or that were given us, on the theory that *RAIN* was free as long as we could afford it. When you reach 8,000 (this month's printing) this scatter gun approach doesn't seem feasible, especially because it means the people who really want it may not be able to receive it. The requests alone, of about 125 a week, are more than we can handle with present staff.

Feedback is always lopsided. We've gotten hundreds of letters of encouragement, and assume from that we are filling some kind of need. At the same time, the majority of people receiving *RAIN* we don't hear from. We have had to assume from the positive responses that chances were pretty good the majority of *RAIN*s were being appreciated.

We hope the move toward subscription will be gradual, and with adequate flexibility to allow for continuation of the network of readers we know are out there. Included in the subscription mailing will be a reader enquiry card which we hope you will fill out regardless of your decision on whether to subscribe, perhaps telling us what you have or have not enjoyed, or under what circumstances you would subscribe.

Steve Johnson



### PLEASE NOTE

There are two special pull-out sections in *RAIN* this month. An on-going Roughdraft section (this month on Funding) and the second part of the Energy Environmental Center Directory (A-H). Both sections are designed to be pulled out.

SELF-STAMPED return envelopes please. Remember that many of the groups we list are small. Responding to questions can take time, money and energy away from daily work. We have recently gotten several letters complaining of people's failing to include self-addressed, stamped envelopes, so please do. *RAIN* as a bulletin board and introduction service fails if we drain energy from people we wish to support. Also, it is important to be two-way about it. Sharing is better than requesting. Tell people why you want to know what you want to know and who you

are and, when possible, what you can give in return.

**ENERGY PRIMER.** You should find in this issue a flyer announcing the publication of *The Energy Primer*. While we are not trying to sell you things, we feel *The Energy Primer* is an important publication. In summary form and usual *Whole Earth Catalog* succinctness, it is one of the best introductions to energy self-sufficiency available. And since we are spending a lot of our time answering questions about energy, we feel the wider availability of *The Energy Primer* could lighten our load.

**OUR APOLOGIES.** We underestimated the number of *RAIN*s we would need last month and ran short. If you are not receiving *RAIN* and requested it, send us a note. We are also pretty much out of back issues, but hopefully most of the information will be in the *RAIN* package/catalog later this spring.

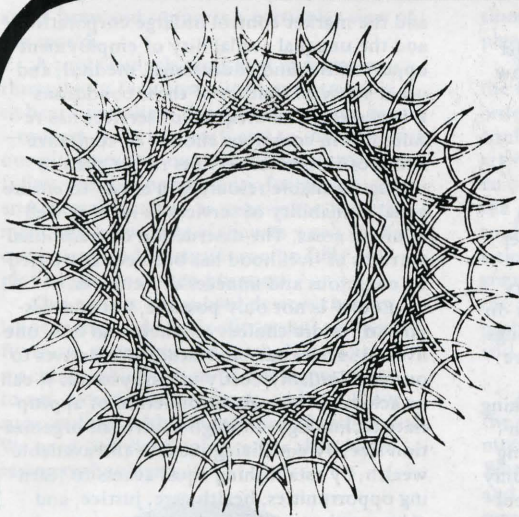
## AGRICULTURE·FOOD

**Pacific Northwest Forest & Range Experiment Station**  
P.O. Box 3141  
Portland, Or. 97208

A major research and report producer of the U.S. Forestry Service. Usually pretty technical (so see also *Forestry Update*). Information on economics in forest management, wood utilization, chemicals, insect control, plant ecology, recreation, timber management, mensuration, fire, physiology. One of the best vegetation guides for Oregon & Washington produced by them, "Natural Vegetation of Or. & Wash." Jerry Franklin & C.T. Dyrness. Now available from Government Printing Office, Washington, D.C. 20402. \$4.65. Stock No. 0101-00329. The experiment station publishes a yearly annotated bibliography of publications, available on request.

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# SHARING SMALLER PIES

The following is an excerpt from a 38-page monograph produced by Tom Bender and Lane Demoll, who until recently were energy conservation consultants for the Oregon State Office of Energy Research and Planning. We recommend the entirety of *Smaller Pies* as one of the most succinct statements on the evident choices before us, containing as well as Tom Bender's usual startlingly clear sentences, a section of reasonable and sound actions for us all, assimilated by Lane. Copies are available for \$1 from:

Tom Bender  
760 Vista Ave., S.E.  
Salem, Or. 97302

Our ability to develop a culture that can endure beyond our own lifetimes depends upon our coming to a new understanding of what is desirable for a harmonious and sustainable relationship with the systems that support our lives.

*STEWARDSHIP, not progress.* We have valued progress highly during our period of growth, as we have known that changes were unavoidable, and have needed an orientation that could help us adjust to and assist those changes. Progress assumes that the future will be better—which at the same time creates dissatisfaction with the present and tells us that NOW isn't as good. As a result, we are prompted to work harder to get what the future can offer, but lose our ability to enjoy what we now have. We also lose a sense that we ourselves, and what we have and do, are really good. We expect the rewards from what we do to come in the future rather than from the *doing* of it, and then become frustrated when most of those dreams cannot be attained. The "future" always continues to lie in the future. Progress is really a euphemism for always believing that what we value and seek today is better than what we valued before or what anyone else has ever sought or valued.

Stewardship, in contrast to progress, elicits attentive care and concern for the present—for understanding its nature and for best developing, nurturing, and protecting its possibilities. Such actions unavoidably insure the best possible future as a byproduct

of enjoyment and satisfaction from the present.

The government of a society has a fundamental responsibility, which we have neglected, for stewardship—particularly for the biophysical systems that support our society. It is the only organ of society which can protect those systems and protect future citizens of the society from loss of their needed resources through the profiteering of present citizens. The government's fundamental obligation in this area is to prevent deterioration in the support capacities of the biophysical systems, maintain in stable and sound fashion their ongoing capabilities, and whenever possible extend those capabilities in terms of quality as well as quantity. Present and past governments, and those who have profited from their actions, must be accountable for loss to present and future citizens and to the biophysical systems themselves from their actions.



*PEOPLE, not professions.* Our wealth has made it possible for us to institutionalize and professionalize many of our individual responsibilities—a process which is inherently ineffective and more costly, which has proven destructive of individual competence and confidence, and which is affordable only when significant surplus of wealth is available.

We have been able to afford going to extensively trained doctors for every small health problem, rather than learning rudiments of medical skills or taking care to prevent health problems. We have been able to afford expensive police protection rather than handling our problems by ourselves or with our neighbors. We have established professional social workers, lawyers, and educators—and required that everyone use their services even for things we could do our-

selves and that are wastes of the time and expertise of the professionals. As the wealth that has permitted this becomes less available to us, it will become necessary to deprofessionalize and deinstitutionalize many of these services and again take primary responsibility for them ourselves.

Our institutions have contributed to isolating, buffering, and protecting us from the events of our world. This has on one hand made our lives easier and more secure, and freed us from the continual testing that is part of the dynamic interaction in any natural system. It has also, by these very actions, made us feel isolated, alienated, and rightfully fearful of not being able to meet those continued tests without the aid of our cultural and technical implements.

Our lack of familiarity with all the natural processes of our world and uncertainty of our ability to successfully interact with them aided only by our own intuitive wisdom and skills has enslaved us to those implements and degraded us. We can act confidently and with intuitive rightness only when we aren't afraid. We can open ourselves to the living interaction that makes our lives rewarding only when we cease to fear what we can't affect. Fear is only unsureness of our own abilities.

We have to take responsibility **OURSELVES** for our own lives, actions, health, and learning. We must also take responsibility ourselves for our community and society. There is no other way to operate any aspect of our lives and society without creating dictatorial power that destroys and prevents the unfolding of human nature and that concentrates the ability to make errors without corrective input. No one else shares our perceptions and perspective on what is occurring and its rightness, wrongness, or alternatives. We are the only ones who can give that perspective to the process of determining and directing the pattern of events.

Our institutions can be tools that serve us only when they arise from and sustain the abilities of individuals and remain controlled by them.

*AUSTERITY, not affluence.* Austerity is a principle which does not exclude all enjoyments, only those which are distracting from or destructive of personal relatedness. It is part of a more embracing virtue—friendships

Continued on page 4



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or joyfulness, and arises from an awareness that things or tools can destroy rather than enhance grace and joyfulness in personal relations. Affluence, in contrast, does not discriminate between what is wise and useful and what is merely possible. Affluence demands impossible endless growth, both because those things necessary for good relations are foregone for unnecessary things, and because many of those unnecessary things act to damage or destroy the good relations that we desire.

**PERMANENCE, not profit.** Profit, as a criterion of performance, must be replaced by permanence in a world where irreplaceable resources are in scarce supply, for profit always indicates their immediate use, destroying any ability of a society to sustain itself. The only way to place lighter demands on material resources is to place heavier demands on moral resources. Permanence, as a judge of the desirability of actions, requires first that those actions contribute to rather than lessen the continuing quality of the society. Permanence in no way excludes fair reward for one's work—but distinguishes the profit a person gains based on loss to others from profit derived from a person's work or contribution to others.

**RESPONSIBILITIES, not rights.** A society—or any relationship—based on rights rather than responsibilities is possible only when the actions involved are insignificant enough to not affect others. Our present society is based upon rights rather than responsibilities, and upon competitive distrust and contractual relationships rather than upon the more complex and cooperative kinds of relationships common in other cultures. These relationships have given us the freedom to very quickly extract and use our material wealth, settle a continent, and develop the structure of cities and civilization.

Any enduring relationship, however, must balance rights with responsibilities to prevent destruction of weaker or less aggressive, yet essential, parts of relationships—whether other people, the biosphere that supports our lives, or the various parts of our own personalities.

Distrust or contractual relationships are the easiest to escape and the most expensive to maintain—requiring the development of elaborate and expensive legal and financial systems—and cannot be the dominant form of relationship in societies that do not have the surplus wealth to afford them. Moral or ethically-based relationships; relationships based on cooperation, trust, and love; and the relationships encompassing more than just work, family, educational, recreational, or spiritual parts of our lives are more rewarding and satisfying to the people involved. They are also more stable in their contribution to society, vastly easier to maintain, and harder to disrupt. They have always been the most common kinds of relationships between people except under the extreme duress of war or growth.

**BETTERMENT, not biggerment.** Quantitative things, because of the ease of their measurement by external means, have been sought and relied upon as measures of success by our institutionally-centered society. We are learning the hard lesson that quantity is no substitute for quality in our lives, that qualitative benefits cannot be externalized,

and that a society that wishes betterness rather than moreness, and betterment rather than biggerment, must be organized to allow individuals the scope for determining and obtaining what they themselves consider better.

**ENOUGHNESS, not moreness.** We are learning that too much of a good thing is not a good thing, and that we would often be wiser to determine what is enough rather than how much is possible. When we can learn to be satisfied with the least necessary for happiness, we can lighten our demands on ourselves, on others, and on our surroundings, and make new things possible with what we have released from our covetousness. Our consumption ethic has prevented our thinking about enoughness, in part out of fear of unemployment problems arising from reducing our demands. Employment problems are only a result of choices of energy vs. employment-intensive production processes and arbitrary choices we have made in the patterns of distributing the wealth of our society—both of which can be modified with little fundamental difficulty. Our major goal is to be happy with the least effort—with the least production of goods and services necessary and with the greatest opportunity to employ our time and skills for good rather than for survival. The fewer our wants, the greater our freedom from having to serve them.



**LOCALIZATION, not centralization.** Centralization, in all kinds of organization, is important during periods of growth when ability to quickly marshal resources and change and direct an organization is important. It is, however, an expensive and ineffective means for dealing with ongoing operations when an excess of energy to operate the system is unavailable. As effectiveness in resolving problems on the scale and location where they occur becomes more important, organization must move to more localized and less institutionalized ways of operation. Even with sufficient resources, the power concentration of centralized systems overpowers the rights of individuals, and has proved to lead to inevitable deterioration of our quality of life.

The size and centralization of many of our organizations has nothing to do with even alleged economics or benefits of scale, and actually often is associated with diseconomies of scale and deterioration of quality of services. Size breeds size, even where it is counterproductive. It is easiest for any organization to deal with others of the same scale and kind of organization, and to create pressures for other organizations to adapt their own mode of operation.

**EQUITIZATION, not urbanization.** Uncontrollable urbanization has accompanied industrialization in every country where it has occurred. The roots of that urbanization, which has occurred in spite of the desires of both the people and the governments involved, has been twofold: the destruction of traditional means of livelihood by energy slaves

and the market control of large corporations, and the unequal availability of employment opportunities and educational, medical, and other services. Neither of these conditions is necessary. The inequity of services has resulted from conscious choices to centralize and professionalize services rather than to manage available resources in a way to ensure equal availability of services in rural as well as urban areas. The destruction of traditional patterns of livelihood has been equally based on conscious and unnecessary choices.

Equity is not only possible, but is necessary to restore choices of where and how one lives. It is necessary to restore alternatives to our unaffordably costly urban systems. It can be achieved through introduction of appropriate technology; through control of organization size; by equalizing income and available wealth; by establishing equal access to learning opportunities, health care, justice, and other services; and by assuring everyone the opportunity for meaningful work. It can be achieved by returning to individuals the responsibility and control of their lives, surroundings, and social, economic, and political systems; by ensuring freedom to not consume or depend upon any systems other than one's own abilities; and by encouraging the ownership of the tools of production by the people who do the work, thus increasing the chances of developing a balanced, affluent, and stable society.

**WORK, not leisure.** We have considered work to be a negative thing—that the sole function of work was to produce goods and services. To workers it has meant a loss of leisure, something to be minimized while still maintaining income. To the employer it is simply a cost of production, also to be minimized. Yet work is one of our greatest opportunities to contribute to the well-being of ourselves and our community—opportunity to utilize and develop our skills and abilities, opportunity to overcome our self-centeredness through joining with other people in common tasks, as well as opportunity to produce the goods and services needed for a dignified existence. Properly appreciated, work stands in the same relation to the higher faculties as food to the physical body. It nourishes and enlivens us and urges us to produce the best of which we are capable. It furnishes a medium through which to display our scale of values and develop our personality. To strive for leisure rather than work denies that work and leisure are complementary parts of the same living process, and cannot be separated without destroying the joy of work and the bliss of leisure.

From this viewpoint work is something essential to our well being—something which can and ought to be meaningful, the organization of which in ways which are boring, stultifying or nerve-wracking is criminal. Opportunity for meaningful work rather than merely a share of the products of work, needs to be assured to every member of our society.

**TOOLS, not machines.** We need to regain the ability to distinguish between technologies which aid and those which destroy our ability to seek the ends we wish. We need to discriminate between what are tools and what are machines. The choice of tools and what they do is at root both philosophical and spiritual. Every technology has its own nature and its own effect upon the world around it. Each



arises from and supports a particular view of our world.

A tool channels work and experiences through our faculties, allowing us to bring to bear upon them the full play of our nature—to learn from the work and to infuse it with our purposes and our dreams—and to give the fullest possible opportunity for our physical and mental faculties to experience, experiment and grow. A tool focuses work so that our energy and attention can be fully employed to our chosen purposes.

Our culture has valued devices that are labor saving and require little skill to operate. By those very measures, such devices are machines which rob us of our opportunity to act, experience and grow, and to fill our surroundings with the measure of our growth. We need skill-developing rather than labor-saving technologies.



**INDEPENDENCE AND INTERDEPENDENCE.** Many of the basic values upon which we have tried to build our society have become weakened through the ways they have been interpreted and face the prospect of further weakening through the pressures inevitable in adapting our society to new conditions.

Independence cannot be maintained when we are dependent upon other people or other nations—as long as we are forced to work on others' terms, to consume certain kinds of education to qualify for work, to use automobiles because that kind of transportation system has made even walking dangerous or physically impossible; as long as we are dependent upon fossil fuels to operate our society; as long as we must depend upon resources other than ourselves and the renewable resources of our surroundings, we cannot be independent.

We have also discovered through the power that our wealth has given us that slavery is as enslaving for the master as for the mastered—by becoming **DEPENDENT** upon the abilities of the slave, whether the slave is a human, animal, institutional or energy slave, we forego developing our own capabilities to be self-sufficient.

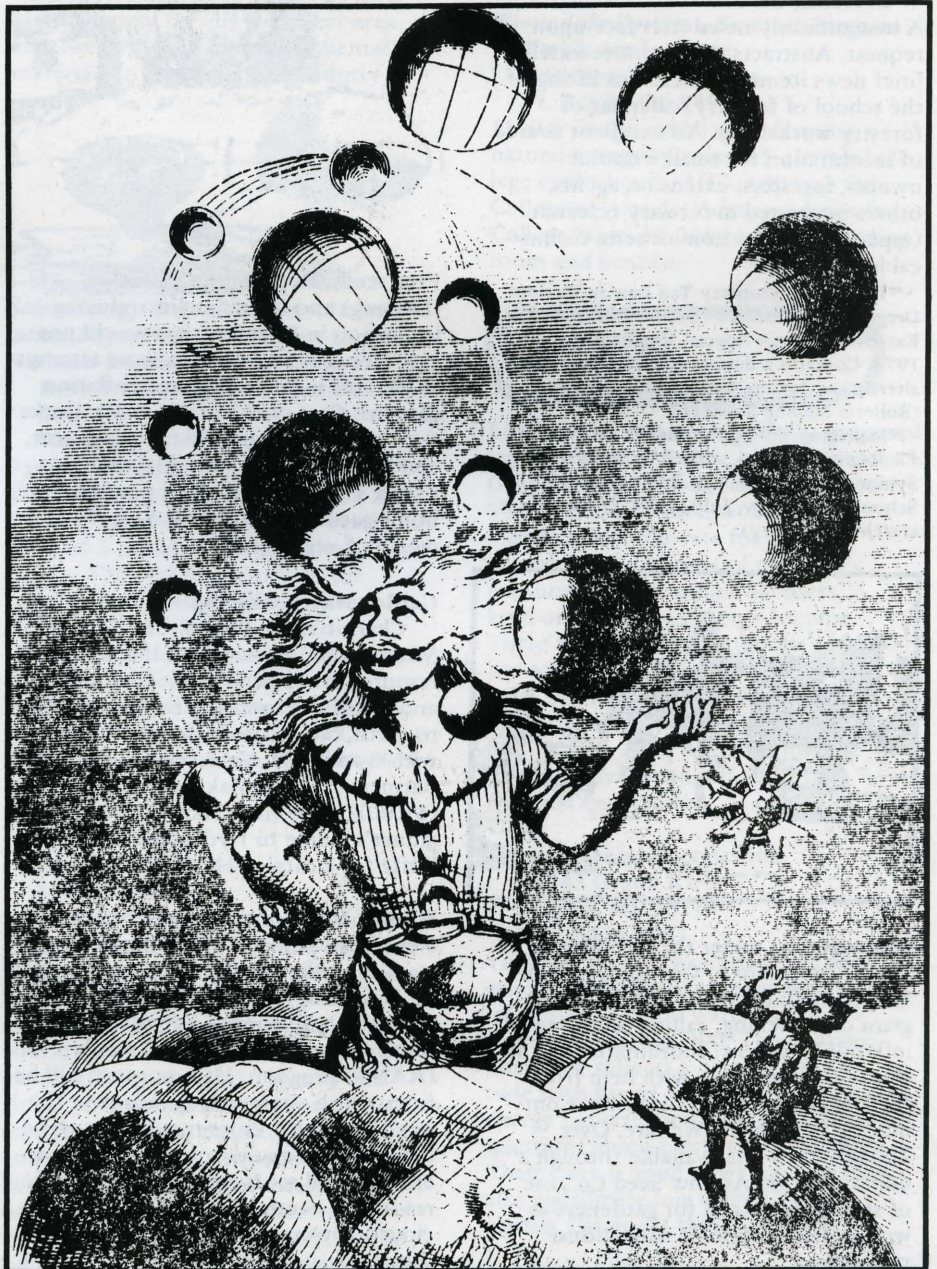
In another sense total independence is never possible, for that means total power, which inevitably collides with the wants and power of others. We are also, in reality, dependent upon the natural systems that convert the sun's energy into the food upon which we live. Totally independent individuals may have freedom from organization, but have no special value, no special mission, no special contribution and no necessary role in the energy flows and relationships of a society that permits greater things than are attainable as individuals. Such freedom results in little respect or value for the individual. Our success and survival on this planet also must recognize the total interdependence that exists between us and the health, disease, wealth, happiness, anger, and frustra-

tions of the others with whom we share this planet.

Two things are important. We must have the **CAPABILITY** for self-sufficiency—in order to have options, alternatives, self-confidence, and knowledge of how things are related and work and to be able to lighten our demands on others. We must also have the **ABILITY** to contribute our special skills to the development of interdependent relationships which can benefit all. Trade, as *giving of surplus*, of what is not necessary, is the only viable resolution of the interrelated problems of independence, interdependence, and slavery.

As we begin to actually make changes, the things we come to find of value are almost the opposite of what we value today. What contributes to stability and soundness and to valued relationships is exactly what prevents and hinders disruption, change, and growth—which have been both necessary

and desired under the conditions we have until recently experienced. Meaningful work, localized economies, diversity and richness of employment and community, and controllable, clever, human-centered technologies will become important. Common sense and intuition will be recognized again as more valuable than armies of computers. Community will become more important than individualism and our present actions seen as unsupportably selfish. Strong roots and relationships will become more important than mobility. Buildings and equipment with long life and lower total costs rather than low initial costs will be favored. Cooperation will be seen as more positive, wiser, and less costly than competition. Skill-using will replace labor-saving. We will soon discover that all our present sciences and principles are not unbiased, but are built upon values promoting growth rather than stability, and will need to be modified when quantitative growth is no longer possible.





**AGRICULTURE/FOOD**

Continued from page 3

**Forestry Extension Conferences and Short Courses**

**School of Forestry  
Oregon State University  
Corvallis, Or. 97331**

Many to choose from: small woodlot taxation, small woodlot stand improvement; resource development and technical assistance; management of young Douglas fir and western hemlock. Write for extension circular 848 for details, dates, places, etc. (and/or write to be put on mailing list to receive *Forestry Update*).

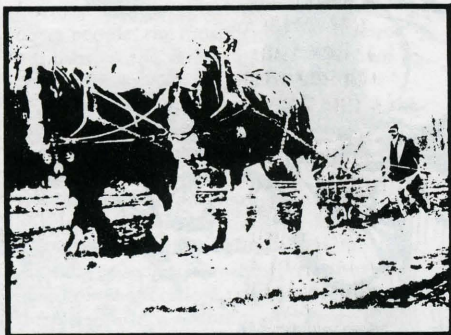
**Forestry Update**

**School of Forestry  
Oregon State University  
Corvallis, Or. 97331**

A new monthly newsletter free upon request. Abstracts of current research, brief news items, publications listing of the school of forestry; calendar of forestry workshops. An excellent source of information for small woodlot owners, foresters, extension agents, others interested in forestry research (especially on the non- or semi-technical level).

"The Forest Property Tax Law in Western Oregon," by Charles F. Sutherland, Jr., OSU Extension Service Special Report 425, Nov. 1974. Contains a description of timber tax alternatives for the small woodland owner. (Bulletin Mailing Service).

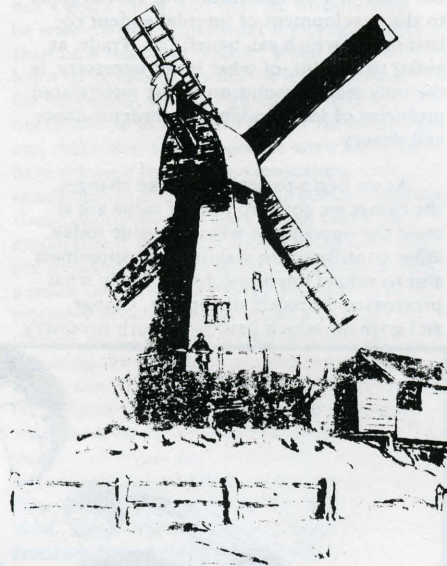
"Managing Young Forests in the Douglas-Fir Region," Vol. 4., edited by Alan B. Berg. Symposium Proceedings. 234 pp. \$6.00. School of Forestry, July, 1974. (Forest Research Laboratory).



Pennsylvania, under the increasingly astute leadership of Governor Milton Shapp, has launched a statewide program of gardening, calling them "anti-inflation" gardens; coordinated by the Dept. of Agriculture with help from the Departments of Education, Community Affairs and Welfare. Over 200,000 seed kits available through a donation from Asgrow Seed Co.; use of state-owned land for gardeners as well as distribution of educational materials.

**The Effects of Uncertain Energy Supplies on Rural Economic Development. \$1.55. Available from:**

**Public Documents Distribution Center  
Pueblo, Colo. 81009  
(order no. 71b. s/n 5270-02582  
Emphasis on non-farm areas.**



**Free seeds. Rep. James A. Burke (D-Mass.) and others are introducing legislation in Congress that would provide free seeds to millions in an attempt to provide incentive for anti-inflation gardens. Cost of the program Mr. Burke feels would be about \$6 million a year, and he predicts that the \$18 million over a 3-year period could provide home gardeners with over \$1 billion worth of vegetables.**

**Garden Way Publishing  
Charlotte, Vt. 05445**

Many people know about this excellent resource, but just in case: They publish and distribute some of the best down-to-earth, how-to-do-it books. Heating with wood (\$3); Veterinary Guide for Farmers (\$6.95); Making Apple Cider (\$1.00); Have More Plan (\$2.50); Beginner's Guide to Hydroponics (\$5.95). Write for a catalog—a delight in itself.

**World's Non-Conventional Protein Resources.** A major study has been started by the Massachusetts Institute of Technology under a \$185,000 grant from the Ntl. Science Foundation's research applied to national needs (RANN) program. Main purpose will be to establish a research agenda over the next 5 months. Protein resources to be considered include: soybeans, sunflowers, mustard seeds, barley, rye, aquatic resources, bacteria, yeasts, alfalfa, clover. Director: Dr. Nevin S. Scrimshaw.

**National Food Storage Assn.  
5806 114th Ave., N.E.  
Kirkland, Wa. 98033**

A good 8-page introduction to food storage available from this non-profit, no pitch group for 10¢ and a long stamped, self-addressed envelope.

**ARCHITECTURE**

**Access  
School of Architecture  
University of Wisconsin  
Milwaukie, Wis. 53201  
404-963-5339 or 964-4134**

Similar to Ouroboros (see Energy); an option in the school of architecture; experimenting in the area of low cost, low impact, environmentally responsive shelter and life support sub systems.

*Access Manual #2* is a summary of a variety of their experiments—hydroponics, solar-wash, wind generation. 58 pages, 14 experiments. \$2.50 plus 25¢ mailing.



**ART**

**Performing Arts Marathon, Portland** 72 hours of folksingers, poets, clowns, ballet, classical piano, jazz, video and films. For support of the performing arts committee. \$2.00. Contact Center, 1532 S.W. Morrison, Portland, 97205. Debbie Heasley, 222-6562.

**AUDIO VISUAL**

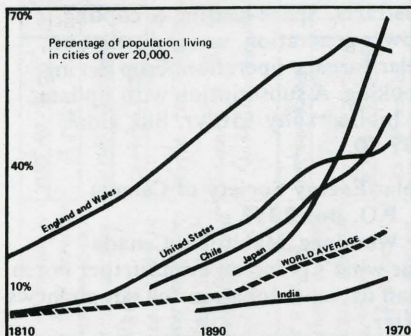
**Eco-Net Cooperative Video Catalog**  
Available from:  
**Bob Philips  
2009 N.E. Brazee  
Portland, Or. 97212**

A listing of over 200 video tapes produced mostly in the Northwest, including some B.C. and California.



## COMMUNITY

### Migration to Cities



**The Town Forum**  
704 Whiteaker St.  
Cottage Grove, Or. 97424  
503-942-7720

One of the most carefully planned large communities utilizing Ian McHarg planning concepts is underway 25 miles south of Eugene. They are wanting to share their plans and knowledge. For a report on the "Cerro Gordo" experiment, write to them.

**Open Space and the Inner City Exhibit**  
Put on by the Eco-Aesthetics Urban Environmental Center, Cleveland High School, Portland. Exhibit from April 4 to May 4. Scheduling for classroom visitation may be made by calling 234-9020 between 1 and 4 pm weekdays.

## EDUCATION

**Oregon Community Education Assoc.**  
1724 Moss Street  
Eugene, Or. 97403

Development of community education centers through existing facilities throughout the state. Coordinates in-service workshops, helps people wanting to set up community education facilities. Newsletter, *Hot Flashes* will tell you more. Over 160 members. An important network of people opening up schools to more community access.



**Tennessee Valley Authority**  
Environmental Education Section  
327 Miller's Building  
Knoxville, Tenn. 37902  
615-637-0101, ext. 2103

Jon Wet, Director. They have lots of good environmental education material, mostly free, including:

*Developing Environmental Education Curriculum Material*, one of the most complete bibliographies (annotated) of environmental educ. curriculum materials in over 150 school programs.

Also: *Developing Environmental Study Areas*, *Writing Environmental Education Grants*, *Some Selected Materials for Environmental Education Master Planning*.

Also, recently an energy Resource Materials Center has been initiated, including referral list of expertise (people) in energy use/development area; also energy resource/environmental materials from around the country.



**Solar Energy School Heating Augmentation Experiment.** A Report to the National Science Foundation by:

**Inter Technology Corporation**  
Box 340  
Warrington, Va. 22186

Fauquier High School in Warrenton, Virginia, is receiving from the sun all of the heat required to meet the heating loads of 5 mobile-type, detached classrooms. The cost to the school for heating these classrooms is approximately 25¢ per day.

Copies of the report available from the National Science Foundation, Washington, D.C. 20550, or U.S. Gov. Printing Office, Washington, D.C. 20402. \$1.45. Stock no. 038-000-00204.

**Sea Net**  
P.O. Box 4244  
Seattle, Wa. 98104  
206-324-5055

Sea Net is a Seattle-area environmental information network of groups and individuals working to facilitate environmental improvement and community awareness. Sea Net's functions are to educate, communicate, and to act in cooperation with other regional and global environmental resources and concerns. Planned projects include community information gatherings, living lightly conference, ecological monitoring, public awareness presentations (one now in the Seattle Public Library). Regular meetings every other Monday. Call for place and time.

**Portland Community College**  
Community Services Education  
12000 S.W. 49th  
Portland, Or. 97219  
503-244-6111

A wide range of community education courses including many basics: self how to do it classes. Also one-shot workshop, lectures on such subjects as: fix it yourself, meatless cookery, applehead dollmaking. Call for schedule and to be put on mailing list.

**We update our models (of the world) every tenth of a second for position, every two-tenths for velocity, and every three-tenths for acceleration, as long as we are awake." (Warren S. McCulloch)**

**Whole Life Systems, Summer Program**  
Farallones Institute  
P.O. Box 700  
Pt. Reyes, Ca. 94956

Shelter design, small scale farming, natural energy systems. 15 quarter college credit hours. Affiliated with Cal. College of Arts & Crafts and Antioch College/West. \$1,000 tuition (including room and board).

## ENERGY

**Lifeline**, the concept originally proposed by the Vermont Public Interest Research Group submitted but rejected by the Vermont Legislature, would provide a relatively low flat rate for the first several hundred hours of electricity consumption by residential users. A kind of guaranteed energy income. There are other such attempts across the nation. A summary can be gotten from Science in the Public Interest, 1779 Church St., N.W., Washington, D.C. 20036. (Ask for Vol. II, No. 2 of newsletter. Send self-addressed stamped envelope.)

**Environmental Energies Inc.**  
21243 Grand River  
Detroit, Mi. 48219  
1-313-533-1985

They sell various wind powered aero generating equipment ranging in size from 50 to 12,000 watts and prices from \$600 to \$18,000. Their catalog obviously reflects a helping hand attitude with useful information, such as energy conservation aids, and basic questions about electricity answered. Their store is wind powered; and they also coordinate low energy living classes. Catalog, I think, is \$1.00.

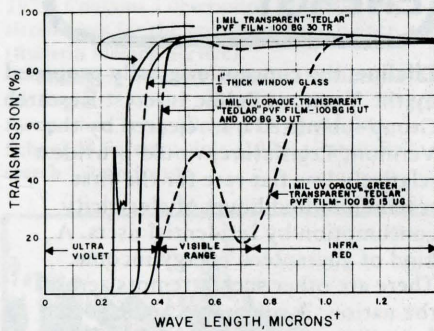


**ENERGY**

Continued from page 7

**Solar Energy Bills, Oregon**

Chances of passage of a package of solar energy bills appears good (HB 2200 to HB 2204). The referendum on nuclear power plants (SB 120 and 127) is in the Joint Committee on Trade and Economic Development, where it will need a big push to see favorable action. Four major energy bills have been introduced to create a state energy agency. SB 199, by Senator Hallock, is the most comprehensive, consolidating into one agency the authority of NTEC over power plant siting, the PUC over utility rates and energy curtailment plans, and the Department of Geology over geothermal. Governor Straub's bill, SB 483, is not quite so ambitious. It would keep NTEC's powers in an Energy Facility Siting Council, but with strong influence from the new Department of Energy, whose director would hold one of the three council seats. The PUC would retain jurisdiction over utility rate-setting. SB 291, by Sen. Betty Roberts, would create a new Energy Commission with all new authority. SB 466, by the Energy Advisory Committee, would create an energy agency with broadly defined powers.

From: *Earthwatch*

**Energy Conference**  
**Delphian Foundation**  
 Rt. 2, Box 195  
 Sheridan, Or. 97378  
 503-843-3521

The Delphian Foundation is sponsoring a series of symposia on such topics as forestry, education, recycling, land use planning, farming and energy. The first conference will consist of day-long roundtable discussion, "Renewable Energy Sources: solar, wind and bio-conversion," scheduled for May 3, 1975.

**Citizens Energy Platform**  
**National Consumers Congress**  
 1346 Connecticut Ave., N.W.  
 Washington, D.C. 20036

A coalition of leading environmental groups has prepared a statement of purpose (with background and bibliographic information) on strategies for energy legislation. (\$1.00 donation)

**Dynamic Conversion of Solar Generated Heat to Electricity**

Report developed by Honeywell/Black and Veatch for NASA/Lewis Research Center. Points to the optimum development of solar power plants to be in the range of 50 to 200 MW, which, importantly, would lead to development of medium size plants rather than large, centralized solar plants, for maximum energy efficiency. (NASA, 400 Maryland Ave., S.W., Washington, D.C. 20546).

**Ouroboros**

**University of Minnesota**  
**School of Architecture & Landscape Architecture**  
 110 Architecture Bldg.  
 Minneapolis, Mn. 55455

"Architecture, embracing the entire built environment, is directly responsible for over a third of all energy use in the U.S. If we are genuinely concerned with understanding and modifying this, we must examine and evaluate scrupulously assumptions about energy management, energy sources, and pollution control which underly our life styles and present methods of environmental design. Architects and environmental designers must begin systematically to propose the reorganization and modification of land-use patterns, and to reverse their tendencies to produce environmentally costly buildings—those which rely upon our finite world resource savings account.

"During the past year 150 students in the Environmental Design class of the School of Architecture and Landscape Architecture of the University of Minnesota have been studying architecture's role in energy conservation through the research, design and construction of a full-scale working experimental dwelling."

Here's one of the most well-conceived living-learning education projects in the country. Both working on retro fitting an old city dwelling and designing from scratch an energy conserving house.

*Ouroboros/East*, toward an energy conserving dwelling. 1974. 209 pp. \$5.50, postpaid.

The syllabus for architecture 1-1002, edited by Dennis Holloway, is a beautiful compilation: energy, architecture, agriculture, light living. It is not available to general public, but persons interested could write to Mr. Holloway (remember, provide postage and input). (See also Access)

**Solar Thermal Energy Utilization**

**Energy Information Center**  
**Technology Application Center**  
**University of New Mexico**  
 Albuquerque, N. Mexico 87131

Bibliography of 2,100 references with abstracts. Space heating & cooling, power generation, water distillation, solar furnace operation, crop drying, cooking. A subscription with update to bibliography \$50/yr. Bib. alone \$37.50.

**Solar Energy Society of Canada**  
 P.O. Box 1353  
 Winnipeg, Manitoba, Canada

For what's going on even further north than us; send donation for sample newsletter.

**Oregon Solar Institute**  
 3764 N. Colonial  
 Portland, Or. 97227  
 503-281-3396

Incorporated March 10, 1975, OSI is a public interest, non-profit citizens' organization for the encouragement of solar energy in Oregon. Researches the applicability of solar energy for buildings, bio-conversion, solar thermal electricity, and electricity, via photovoltaic, silicon cells. Weekly meetings at Centenary Wilbur Church in Portland.

**Science in the Neighborhood**  
**Community Technology**  
 1901 Que St., N.W.  
 Washington, D.C. 20009

(Note address change). Latest newsletter (No. 3) reports on hydroponics, waste and fish raising projects directed by the group. Also points to other low technology projects elsewhere: New York University School of Education's city science project (providing city people with usable scientific information); catfish farming by member of Dartmouth's Geography Dept.; Stanford University Mechanical Engineering Dept. (Bernard Roth) doing work in alternative technology; Byron Kennard, Ntl. Council for Public Assessment of Technology interested in a trade fair for alternative technology; Michael Diamond, Antioch Law School, interested in studying socio-legal problems of alternative technology; Jefferson Physical Laboratory, Harvard, is putting out a newsletter on public conceptions of science.

**Very Large Crude Carriers, Fiction & Facts.**

**Standard Oil Co.**  
 Rm. 1165, 225 Bush St.  
 San Francisco, Ca. 94104

A dialogue about the relative dangers of small and large oil tankers.

Continued on page 9



<p>Advanced Building Technology Group Architecture Dept. Univ. of Idaho Moscow, Idaho 83843</p> <p>Anton A. Eder</p>	<ul style="list-style-type: none"> <li>o a course on alternative energy systems using student teams to gather info about various systems</li> <li>Windpower: <ul style="list-style-type: none"> <li>- windmill types, mfrs</li> <li>- history</li> <li>- economics (large and small-scale)</li> <li>- energy storage</li> </ul> </li> </ul>	<table border="1"> <tr><td>networking</td><td>✓</td></tr> <tr><td>R + D</td><td></td></tr> <tr><td>classes-workshops</td><td>✓</td></tr> <tr><td>construction</td><td></td></tr> </table> <p style="text-align: center;">tuition</p> <p>Windpower Booklet available in near future Write for information and price.</p>	networking	✓	R + D		classes-workshops	✓	construction		<p>Institute for Local Self-Reliance 1717 18th St. N.W. Washington, D.C. 20009</p> <p>David J. Morris Marc Winokur (recycling) 202-232-4108</p>	<ul style="list-style-type: none"> <li>o community technology, community law, economics, information access, Communitas: University Without Walls</li> <li>o acts as a catalyst in starting new neighborhood projects... most recent... establishment of home pick-up recycling center</li> </ul>	<table border="1"> <tr><td>networking</td><td>✓</td></tr> <tr><td>R + D</td><td></td></tr> <tr><td>classes-workshops</td><td>✓</td></tr> <tr><td>construction</td><td></td></tr> </table> <p style="text-align: center;">tuition, grants</p> <p>Write for their publication list &amp; prices "Science in the Neighborhood" newsletter (with Community Tech., Inc.)... SASE.</p>	networking	✓	R + D		classes-workshops	✓	construction	
networking	✓																				
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networking	✓																				
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construction																					
<p>Institute for Alternative Futures 2376-E Walker Road Mt. Vernon, WASH. 98273</p> <p>Bob Ness</p> <p>206-422-5655</p>	<ul style="list-style-type: none"> <li>o Skagit Basin flora-fauna inventory as basis for comprehensive planning (with Planet Drum, Evergreen Land Trust)</li> <li>o Projects include: design center, community school, several new home-industries, voluntary action center, NW Washington energy R&amp;D center (with Outback at Fairhaven C.-Bellingham)</li> </ul>	<table border="1"> <tr><td>networking</td><td>✓</td></tr> <tr><td>R &amp; D</td><td>✓</td></tr> <tr><td>classes-workshops</td><td>✓</td></tr> <tr><td>construction</td><td>✓</td></tr> </table> <p style="text-align: center;">tuition, grants</p> <p>Compost privy info + plans.... SASE for price Rural mass transportation study.... ditto</p>	networking	✓	R & D	✓	classes-workshops	✓	construction	✓	<p>Integrated Living Systems Star Route 103 Tijeras, NM 87059</p> <p>Robert Reines</p>	<ul style="list-style-type: none"> <li>o Constructed and are now expanding their energy self-sufficient community... research and application of solar, wind energy, energy-saving dome dwellings</li> <li>o Goal is larger, 200+ person laboratory</li> </ul>	<table border="1"> <tr><td>networking</td><td></td></tr> <tr><td>R + D</td><td>✓</td></tr> <tr><td>classes-workshops</td><td>✓</td></tr> <tr><td>construction</td><td>✓</td></tr> </table> <p style="text-align: center;">conferences, consulting</p> <p>Write to be put on their mailing list for future publications.... SASE</p>	networking		R + D	✓	classes-workshops	✓	construction	✓
networking	✓																				
R & D	✓																				
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R + D	✓																				
classes-workshops	✓																				
construction	✓																				
<p>Institute of Energy Conversion Univ. of Delaware Newark, DEL 19711</p> <p>Karl W. Boer</p> <p>302-738-1263</p>	<ul style="list-style-type: none"> <li>o Construction of SOLAR ONE house... first to get both electricity &amp; heat from the sun</li> <li>o research and development in solar panels, solar energy storage.</li> </ul>	<table border="1"> <tr><td>networking</td><td></td></tr> <tr><td>R + D</td><td>✓</td></tr> <tr><td>classes-workshops</td><td>✓</td></tr> <tr><td>construction</td><td>✓</td></tr> </table> <p style="text-align: center;">tuition, grants</p> <p>"The Solar House and Its Portent" by K.W. Boer, reprint from July 1973 CHEMTECH SOLAR ENERGY, SOLAR ONE pamphlets.. SASE</p>	networking		R + D	✓	classes-workshops	✓	construction	✓	<p>Living-Learning Centre Southern Oregon College Ashland, OR 97520</p> <p>Fred Lorish Jeff Barnes</p> <p>503-482-6125/-6349</p>	<ul style="list-style-type: none"> <li>o a program acknowledging the immediate need for basic cultural transformation... emphasis on an end product other than mere absorption of knowledge.. self-sufficiency as an educational program... use of appropriate technology to meet human needs.... re-establish self-reliance</li> </ul>	<table border="1"> <tr><td>networking</td><td>✓</td></tr> <tr><td>R + D</td><td></td></tr> <tr><td>classes-workshops</td><td>✓</td></tr> <tr><td>construction</td><td></td></tr> </table> <p style="text-align: center;">tuition, grants</p> <p>May 3-4, 1975 MAY FESTIVAL.. gardening, recycling, renewable energy systems, community-neighborhood organizing, etc. Write for info. Program description..... SASE</p>	networking	✓	R + D		classes-workshops	✓	construction	
networking																					
R + D	✓																				
classes-workshops	✓																				
construction	✓																				
networking	✓																				
R + D																					
classes-workshops	✓																				
construction																					
<p>Institute for Ecological Studies Univ. of North Dakota Grand Forks, ND 58202</p> <p>Paul B. Kannowski</p>	<ul style="list-style-type: none"> <li>o research on infrared remote sensing applications, biological effects of synthetic pesticides, land reclamation, biological control of insect pests.</li> <li>o environmental impact of electric power generation facilities, of U.S. Army Corps of Engineers projects.</li> </ul>	<table border="1"> <tr><td>networking</td><td></td></tr> <tr><td>R + D</td><td>✓</td></tr> <tr><td>classes-workshops</td><td>✓</td></tr> <tr><td>construction</td><td></td></tr> </table> <p style="text-align: center;">tuition, grants.</p> <p>Amphibians &amp; Reptiles of No. Dakota Environmental Resource Center collection</p>	networking		R + D	✓	classes-workshops	✓	construction		<p>Living Systems Rt. 1, Box 170 Winters, CA 95694</p> <p>John Hammond</p> <p>916-753-3033</p>	<ul style="list-style-type: none"> <li>o multi-disciplinary team which prepared report for city of Davis, Calif., on building performance standards, changes in bldg. code, neighborhood planning + energy efficiency, and bldg. operation for maximum solar heating + cooling</li> </ul>	<table border="1"> <tr><td>networking</td><td></td></tr> <tr><td>R + D</td><td>✓</td></tr> <tr><td>classes-workshops</td><td>✓</td></tr> <tr><td>construction</td><td></td></tr> </table> <p style="text-align: center;">tuition, consulting, grant</p> <p>STRATEGIES FOR ENERGY CONSERVATION ..... \$5.00</p>	networking		R + D	✓	classes-workshops	✓	construction	
networking																					
R + D	✓																				
classes-workshops	✓																				
construction																					
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R + D	✓																				
classes-workshops	✓																				
construction																					
<p>Institute for Environmental Studies 112 Siea Hall, FR-40 Univ. of Washington Seattle, WASH 98195</p> <p>206-543-1812/-1801</p>		<table border="1"> <tr><td>networking</td><td></td></tr> <tr><td>R + D</td><td></td></tr> <tr><td>classes-workshops</td><td>✓</td></tr> <tr><td>construction</td><td></td></tr> </table> <p style="text-align: center;">tuition</p> <p>Roster of Environmental Resource Persons ..... \$1 "Windpower: Evolution, Technological Status and Potential for Washington" by Gail Brees Discussion Paper 74-1.... write for price</p>	networking		R + D		classes-workshops	✓	construction		<p>Living Systems Institute Maryhurst Education Center Maryhurst, OR 97036</p> <p>Chris Herron</p> <p>503-636-8141</p>	<ul style="list-style-type: none"> <li>o practice + teaching of energy-efficient life support: organic gardening, sensible carpentry, intermediate technology energy conversion, natural health &amp; healing</li> <li>o first in workshop series is HOME GARDENING: A WORLD OF SENSE</li> </ul>	<table border="1"> <tr><td>networking</td><td></td></tr> <tr><td>R + D</td><td>✓</td></tr> <tr><td>classes-workshops</td><td>✓</td></tr> <tr><td>construction</td><td>✓</td></tr> </table> <p style="text-align: center;">tuition</p> <p>LSI Quarterly Bulletin... write to be put on the mailing list.</p>	networking		R + D	✓	classes-workshops	✓	construction	✓
networking																					
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networking																					
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classes-workshops	✓																				
construction	✓																				

ENOUGHNESS, not moreness

(continued from RAIN #6) PAGE FIVE



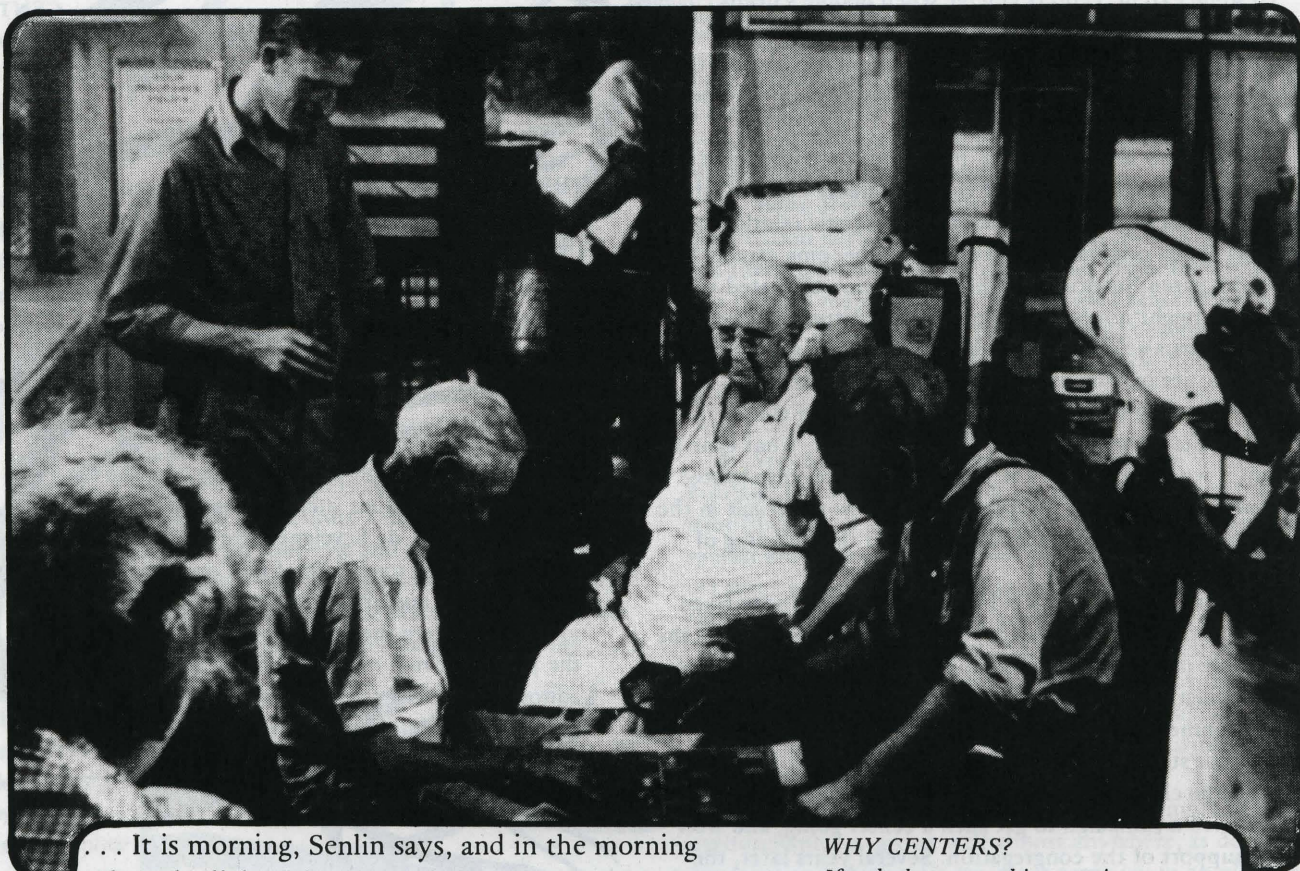
BETTERMENT, not biggerment

<p>Malheur Environmental Field Station P.O. Box 989 Burns, OR 97720</p> <p>Denzel E. Ferguson Larry Turner</p> <p>503-493-2629</p>	<ul style="list-style-type: none"> <li>field oriented science and environment courses... students from 17 Oregon member colleges</li> </ul>	<table border="1"> <tr><td>networking</td><td></td><td></td></tr> <tr><td>R+D</td><td>✓</td><td>\$170,000</td></tr> <tr><td>classes-workshops</td><td>✓</td><td>summer program, visiting groups, grants, college consortium</td></tr> <tr><td>construction</td><td></td><td></td></tr> </table> <p>Course brochure... write for copy</p>	networking			R+D	✓	\$170,000	classes-workshops	✓	summer program, visiting groups, grants, college consortium	construction			<p>New Alchemy Institute -West P.O. Box 376 Pescadero, CA 94060</p> <p>Richard Merrill</p> <p>415-323-0313</p>	<ul style="list-style-type: none"> <li>biological appropriate technology group working with and writing about renewable food and energy systems</li> <li>aquaculture, wind + solar energy, biological control of insect pests, composting, organic gardening</li> </ul>	<table border="1"> <tr><td>networking</td><td>✓</td><td>WE, EP</td></tr> <tr><td>R+D</td><td>✓</td><td></td></tr> <tr><td>classes-workshops</td><td>✓</td><td>tuition, publications</td></tr> <tr><td>construction</td><td>✓</td><td></td></tr> </table> <p>Methane Digesters for Fuel Gas and Fertilizer... \$3,000</p> <p>Designing Experiments for the Organic Garden...</p>	networking	✓	WE, EP	R+D	✓		classes-workshops	✓	tuition, publications	construction	✓	
networking																													
R+D	✓	\$170,000																											
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classes-workshops	✓	tuition, publications																											
construction	✓																												
<p>Maplevale Organic Farm Cross Creek New Brunswick EOH IEO CANADA</p> <p>Judy + Hal Hinds</p>	<ul style="list-style-type: none"> <li>resource center for experimental organic farming, energy conservation &amp; recycling education,</li> <li>Earthskills Workshops July 12-19 and August 9-16, 1975 weaving, gardening, cheese-making, beekeeping, pottery, herb lore...</li> </ul>	<table border="1"> <tr><td>networking</td><td>✓</td><td>\$11,000</td></tr> <tr><td>R+D</td><td></td><td></td></tr> <tr><td>classes-workshops</td><td>✓</td><td>self-supporting</td></tr> <tr><td>construction</td><td>✓</td><td></td></tr> </table> <p>Northwind quarterly newsletter... \$3 per yr.</p>	networking	✓	\$11,000	R+D			classes-workshops	✓	self-supporting	construction	✓		<p>New England Solar Energy Association P.O. Box 121 Townshend, VT 05353</p> <p>John T. Schnebly</p> <p>802-365-4084</p>	<ul style="list-style-type: none"> <li>to further solar and related arts, sciences and technologies with concern for the ecological, social &amp; economic fabric of the region</li> <li>... a accomplished thru meetings, publications, information centers"</li> <li>inform public + gov't</li> </ul>	<table border="1"> <tr><td>networking</td><td>✓</td><td></td></tr> <tr><td>R+D</td><td></td><td></td></tr> <tr><td>classes-workshops</td><td>✓</td><td>dues</td></tr> <tr><td>construction</td><td></td><td></td></tr> </table> <p>NESEA newsletter... \$5.00/yr.</p>	networking	✓		R+D			classes-workshops	✓	dues	construction		
networking	✓	\$11,000																											
R+D																													
classes-workshops	✓	self-supporting																											
construction	✓																												
networking	✓																												
R+D																													
classes-workshops	✓	dues																											
construction																													
<p>Max-Pot: Center for Maximum Potential Building Systems 6438 Bee Cave Road Austin, TX</p> <p>Pliny &amp; Daria Fisk Burgess Jackson</p> <p>512-327-2574</p>	<ul style="list-style-type: none"> <li>monitoring and integration of lab work and design of community systems</li> <li>appropriate technology related to bldg. systs., food production, waste handling, water conservation &amp; energy production</li> <li>development of cooperative local labor force to set up life support systs.</li> </ul>	<table border="1"> <tr><td>networking</td><td></td><td></td></tr> <tr><td>R+D</td><td>✓</td><td>\$500/semester</td></tr> <tr><td>classes-workshops</td><td>✓</td><td>tuition</td></tr> <tr><td>construction</td><td>✓</td><td></td></tr> </table> <p>Sweet 'N Sour... an alternative arch. catalog, Windmill, solar collector &amp; bio-gas plans... SASE</p>	networking			R+D	✓	\$500/semester	classes-workshops	✓	tuition	construction	✓		<p>EP Northern California Committee for Environmental Information P.O. Box 761 Berkeley, CA 94701</p> <p>Selina Bendix</p> <p>415-642-6707</p>	<ul style="list-style-type: none"> <li>development of an environmental edu. program</li> </ul>	<table border="1"> <tr><td>networking</td><td></td><td>\$24,000</td></tr> <tr><td>R+D</td><td>✓</td><td></td></tr> <tr><td>classes-workshops</td><td>✓</td><td>grants (USOE-HEW)</td></tr> <tr><td>construction</td><td></td><td></td></tr> </table> <p>Written materials on the environmental significance of alternative sources of energy... in process</p>	networking		\$24,000	R+D	✓		classes-workshops	✓	grants (USOE-HEW)	construction		
networking																													
R+D	✓	\$500/semester																											
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construction																													
<p>Minimum Cost Housing Group School of Architecture McGill University Montreal, Canada H3C 3G1</p> <p>Witold Rybczynski</p> <p>514-392-8021</p>	<ul style="list-style-type: none"> <li>action oriented research group working on ultra-low-cost self-built housing for developed + developing countries</li> <li>bldg. with sulphur, roofing, fibre-reinforcing + garbage housing</li> <li>Clivus composting toilet redesign for low-cost</li> </ul>	<table border="1"> <tr><td>networking</td><td></td><td>\$83,121</td></tr> <tr><td>R+D</td><td>✓</td><td></td></tr> <tr><td>classes-workshops</td><td>✓</td><td>grants</td></tr> <tr><td>construction</td><td>✓</td><td></td></tr> </table> <p>The Ecol Operation... \$5.00 Stop the 5-Gallon Flush... \$2.00 Roads from Sulphur... \$.50 Sulphur Concrete a Very Low Cost Housing... \$1.00</p>	networking		\$83,121	R+D	✓		classes-workshops	✓	grants	construction	✓		<p>OPEN: Northwest Information Network P.O. Box 5599 Seattle, WASH. 98105</p> <p>Ed Goehring</p>	<ul style="list-style-type: none"> <li>a cooperative switch-board for the Pacific NW; a clearinghouse for information, resources, ideas + projects</li> <li>a coalition of groups Index, Jaybird, Rural Resources + Info, Eco-Net, Sea-Net, Ecotopes, etc.</li> </ul>	<table border="1"> <tr><td>networking</td><td>✓</td><td></td></tr> <tr><td>R+D</td><td></td><td></td></tr> <tr><td>classes-workshops</td><td></td><td></td></tr> <tr><td>construction</td><td></td><td></td></tr> </table> <p>OPEN brochure... SASE</p> <p>OPEN people-to-people indices on energy, agric... each \$1 + SASE</p>	networking	✓		R+D			classes-workshops			construction		
networking		\$83,121																											
R+D	✓																												
classes-workshops	✓	grants																											
construction	✓																												
networking	✓																												
R+D																													
classes-workshops																													
construction																													
<p>Nethers Community School Box 41 Woodville, VA 22749</p> <p>Carla Eugster</p> <p>703-987-8917/-9041</p>	<ul style="list-style-type: none"> <li>educational community with 13 year-round members and up to 10 teen-age boarding students</li> <li>Summer Solar Project: to build solar collector for house designed to use solar energy, to build greenhouse</li> </ul>	<table border="1"> <tr><td>networking</td><td>✓</td><td></td></tr> <tr><td>R+D</td><td></td><td></td></tr> <tr><td>classes-workshops</td><td>✓</td><td>tuition, donations</td></tr> <tr><td>construction</td><td>✓</td><td></td></tr> </table> <p>Write for Solar Project brochure</p>	networking	✓		R+D			classes-workshops	✓	tuition, donations	construction	✓		<p>Open Living School Rt. 3, Box A10 Evergreen, COLO 80439</p> <p>Malcolm Lillywhite</p>	<ul style="list-style-type: none"> <li>school on natural living - greenhouses high-tech solar energy applied in down-to-earth fashion; methane from organic waste expertise</li> </ul>	<table border="1"> <tr><td>networking</td><td></td><td></td></tr> <tr><td>R+D</td><td>✓</td><td></td></tr> <tr><td>classes-workshops</td><td>✓</td><td>tuition, grants</td></tr> <tr><td>construction</td><td>✓</td><td></td></tr> </table>	networking			R+D	✓		classes-workshops	✓	tuition, grants	construction	✓	
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construction	✓																												



# ROUGH DRAFT III

## Centers



... It is morning, Senlin says, and in the morning  
When the light drips through the shutters like the dew,

I arise, and face the sunrise,  
And do the things my father used to do.  
Stars in the purple dusk above the rooftops  
Pale in a saffron mist and seem to die  
And I myself on a swiftly tilting planet  
Stand before a glass and tie my tie.

Vine leaves tap my window  
Dew-drops sing to the garden stones  
The robin chirps in a chinaberry tree  
Repeating three clear tones . . .

Conrad Aiken, *Senlin: A Biography*  
from *Collected Poems of Conrad Aiken*,  
Oxford University Press, 3rd Edition, 1958.

### WHY CENTERS?

*If only because, this morning, on a  
"swiftly tilting planet" the air was  
with messages: egg, 7 minutes and a  
half . . . bus leaves 5th & James 8:44  
. . . the green shirt, the green shirt  
could use an iron . . . frost-on-the-  
porch UNEMPLOYMENT RISES TO  
TEN AND A HALF PERCENT; six  
minutes for espresso from Ceylon—  
and, yes, Barbara Walters rises to  
greet the television set.*

It is by now commonplace to hear  
that one of the most significant de-  
velopments in the twentieth century  
may be the creation of a global  
village, unified by electronic impulses.

As relationships between energy  
phenomena and information are dis-  
covered, our planet and the universe  
may be seen more and more as an organic

communication system in which each energy exchange is a message exchange at a given level. This view creates a complex crisis when set alongside existing paradigms of unlimited growth, centralized power, big institutions and specialization.

That hundreds of centers are springing up all across the nation is some indication that centers are effective crisis-processors for converging environmental, cultural and economic crises. Trapped on the outer limbs of huge bureaucracies and confronted by an information explosion, individuals seek access to information which will better enable them to make decisions, and which will provide continuity to their lives. Though purposes and focuses vary, most centers emphasize at least one or any combination of the following functions: (1) information gathering for research (2) practicum skills such as building windmills and water wheels (3) information networking (4) legislative and lobbying activities and (5) public education.



# Centers: The Past,

## I. GETTING STARTED

To some extent, centers emerge when people's needs change faster than institutions. One day the principal finds students pounding on his door asking for a student lounge; another day the south corner of the school's boiler plant is suddenly taken over by the sophomores.

From another standpoint, institutions are ideal seed-beds for center development, and there are many cases in which centers and institutions develop a synergistic relationship. Ideas which originate in a center often become established by the parent-institution, while innovation tolerated within centers might not be tolerated on an institutional level.

Centers also get started when people have a shared vision of their needs. One way to stimulate that vision is to use brainstorming techniques (see Roughdraft I, February, 1975). State the problem in terms of a need: What type of center would stimulate the building of more solar heated homes in our city? What type of center would result in the opportunity for student involvement in the planning of parks and greenways?

Often it takes some kind of stimulus to dislodge fixed notions from people's heads to make them think about the possible instead of the probable. Members of the Parkrose Methodist Church were paying an innocent visit to the Environmental Education Center when the idea struck: why not start a church center? Two brainstorming sessions later, the church had material enough for a 10-year plan, launched a campaign to get such a center going, and won the support of the congregation. Several years later, the Parkrose Methodist Church has a successful church center which incorporates the idea of videotaping services with the idea of a multi-purpose center.

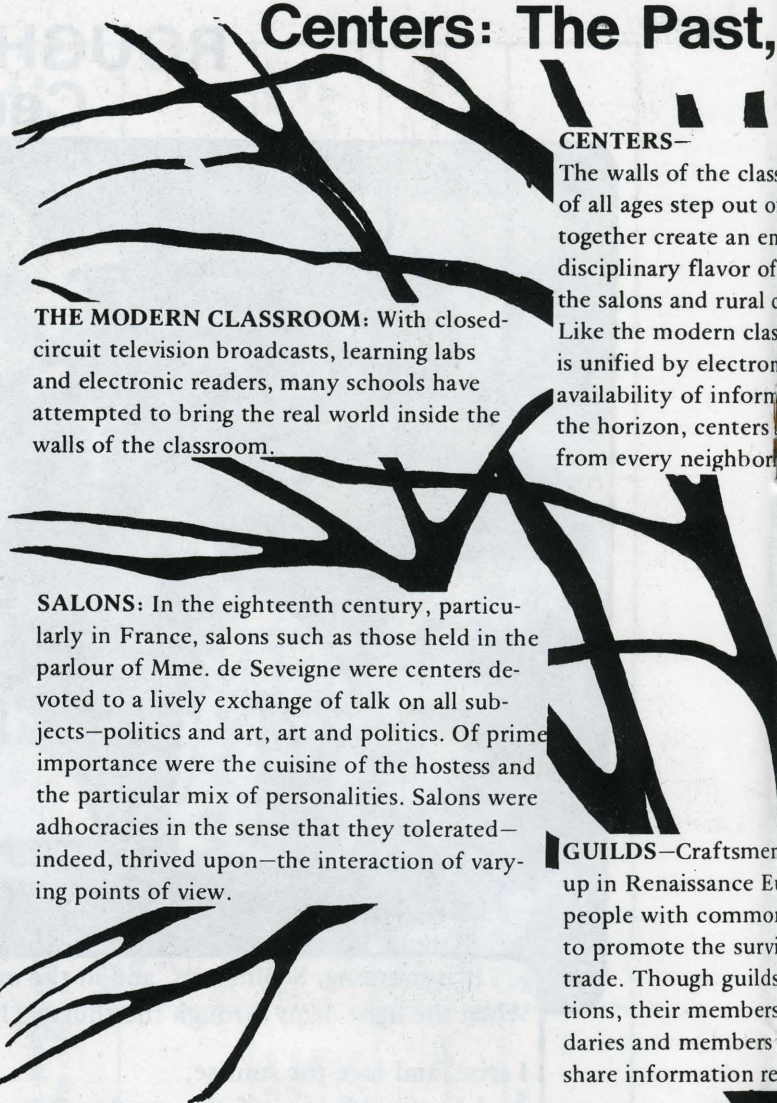
## II. BARN RAISING

As old as the frontier, barn raising represents collective action by which people get together voluntarily, and assume that it is in their best interests to help each other. Applied to building centers instead of barns, this technique creates a center clientele by allowing people to participate in the decision-making and execution of a problem. At some point in human history, barn-raising may be developed as a basic survival technique. People who lend their various resources to a common project (1) receive confirmation and positive support for individual talents, (2) acquire a needed sense of community and (3) gain confidence and acquire a sense of power derived from solidarity.

## III. VOLUNTEERS

If members of the community have been involved in brainstorming sessions and in barn raising events, a significant number of volunteers is probably available. Volunteers like to feel that they've had a say in the way things go, and bringing in volunteers from the beginning is an ideal way to accomplish this.

Sometimes group leaders make the mistake of feeling beholden to the volunteers. Though it's not a good idea to



## CENTERS—

The walls of the class of all ages step out together create an interdisciplinary flavor of the salons and rural. Like the modern class is unified by electronic availability of information the horizon, centers from every neighbor

**THE MODERN CLASSROOM:** With closed-circuit television broadcasts, learning labs and electronic readers, many schools have attempted to bring the real world inside the walls of the classroom.

**SALONS:** In the eighteenth century, particularly in France, salons such as those held in the parlour of Mme. de Seveigne were centers devoted to a lively exchange of talk on all subjects—politics and art, art and politics. Of prime importance were the cuisine of the hostess and the particular mix of personalities. Salons were ad hoc agencies in the sense that they tolerated—indeed, thrived upon—the interaction of varying points of view.

**GUILDS—**Craftsmen up in Renaissance Europe people with common to promote the survival trade. Though guilds tions, their members daries and members share information re

give volunteers the jobs that no one else wants to do, volunteers are usually volunteering because they see some worth in it. They should be encouraged to do a good job and be given a sense of responsibility for a job, just like paid workers. At the Multnomah County Human Services Bureau, volunteers are asked to sign a statement committing some time each week as a way of reinforcing an individual's sense of commitment.

A positive atmosphere of trust is the best way to encourage volunteers. Monitoring devices and desks placed near entrances make people feel watched and controlled.

Existing community networks should be tapped for volunteers by advertising in community or school papers, and by visiting PTA presidents and church ministers, asking them to include appeals in their bulletins.

Build the users into the system. At the Environmental Education Center, users help maintain information files, updating and correcting the system on a volunteer basis, thereby eliminating the need for bureaucratic growth and encouraging volunteer participation.

## IV. AESTHETICS

People seem to like an aesthetically-pleasing environment. Why? No one exactly knows. What is an aesthetic environment? Another toughie. Comments gathered from visitors



# Present and Future

room are down. People of  
f their culture-trances and  
environment. The inter-  
information exchange in  
communities also prevails.  
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ics which facilitate the  
ation. At some point on  
are just ten minutes away  
ood.

's societies which sprang  
urope were associations of  
n interests, banded together  
ival and improvement of a  
s were specialized organiza-  
ship crossed national bound-  
relied upon each other to  
regarding common purposes.

to the Environmental Education Center range from the  
usual "Far out!" "Can I climb it?" "What's that made  
from?" "How did those get here?" to the most cryptic—  
from a local reporter—"Well, isn't this quasi-bizarre." If  
a center *feels* good to people, more learning will take place.

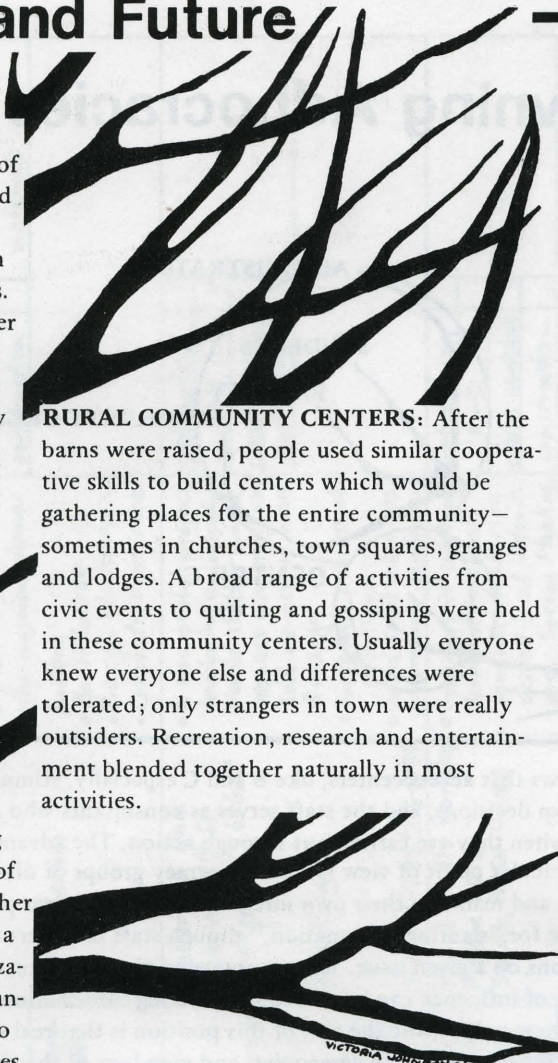
Just about everything in a center should be malleable  
though not breakable, intriguing but not fragile, and attrac-  
tive but not untouchable. If barn-raising techniques are  
used, costs can be low.

Some initial suggestions, gleaned from other centers:

1. *Brainstorm design.* Don't exclude the most impos-  
sible-sounding ideas. In the case of the Parkrose Methodist  
Church, brainstorming sessions produced ideas like "Let's  
build a swimming pool with roll-top turf that could be  
used as a lawn-carpeting for other occasions." It was  
partly due to the wild range of ideas which came out  
during brainstorming sessions that good, feasible, but  
innovative and creative ideas developed.

2. *Seating.* Should be durable and flexible. Buy Good-  
will hardbacks. Try a sew-in: many brightly colored cush-  
ions can be produced in the barn raising fashion. Gunny  
sacks cover squares of foam rubber (from packing plants)  
and sturdy two-way adhesive tape can be used sparingly  
to provide backs for floor chairs.

3. *Straw rugs.* They're an inexpensive,  
nature-colored, fairly soil-resistant floor covering. Another



**RURAL COMMUNITY CENTERS:** After the  
barns were raised, people used similar coopera-  
tive skills to build centers which would be  
gathering places for the entire community—  
sometimes in churches, town squares, granges  
and lodges. A broad range of activities from  
civic events to quilting and gossiping were held  
in these community centers. Usually everyone  
knew everyone else and differences were  
tolerated; only strangers in town were really  
outsiders. Recreation, research and entertain-  
ment blended together naturally in most  
activities.

way to work with floors is to make them part of an over-  
all scheme. Ugly brown-colored floors at EEC couldn't be  
painted, but stimulated the idea for a tree room, in which  
floors could be viewed as loving earth brown.

4. *Walls.* Overhead projectors can blow up pictures to  
paint. The idea of epics and journeys can be adapted to the  
history of a group through collective mural paintings like  
those done by Ikie Kressel and volunteers in Portland's  
Neighborhood Beautification Project.

5. *Maps.* Regional maps which identify people in an  
information net can provide inspiration for linking people  
and ideas. Several kinds of maps—road maps, topographical  
and cultural maps—provide an integrated sense of place.  
Keeping plenty of butcher paper around is essential to  
encouraging maps of ideas-in-process. All in all, maps—  
perhaps because they give us some perspective on ourselves  
—are a very satisfying thing.

6. *Special areas.* Parkrose United Methodist Church in  
Portland has a room called by the American Indian name  
*Kiva* (meaning a place of worship). The room is a private,  
special kind of sanctuary where people can take their shoes  
off and sit on multi-levels of carpeted space, making physi-  
cal space adapt to their psychological needs.

At the Living Learning Center at the University of Ore-  
gon in Eugene, a special grants-writing room for funding  
activities features wall-shelves with resources labeled shelf-  
by-shelf, and allows proposal writers to work without the  
disturbances of other areas of the center.

7. *Plants.* Plants are being used more and more in every  
environment. Ivy grows well almost anywhere, as do philo-  
dendrons and elephant's ear; plant some ivy in an old sink  
or in an unused coke machine.

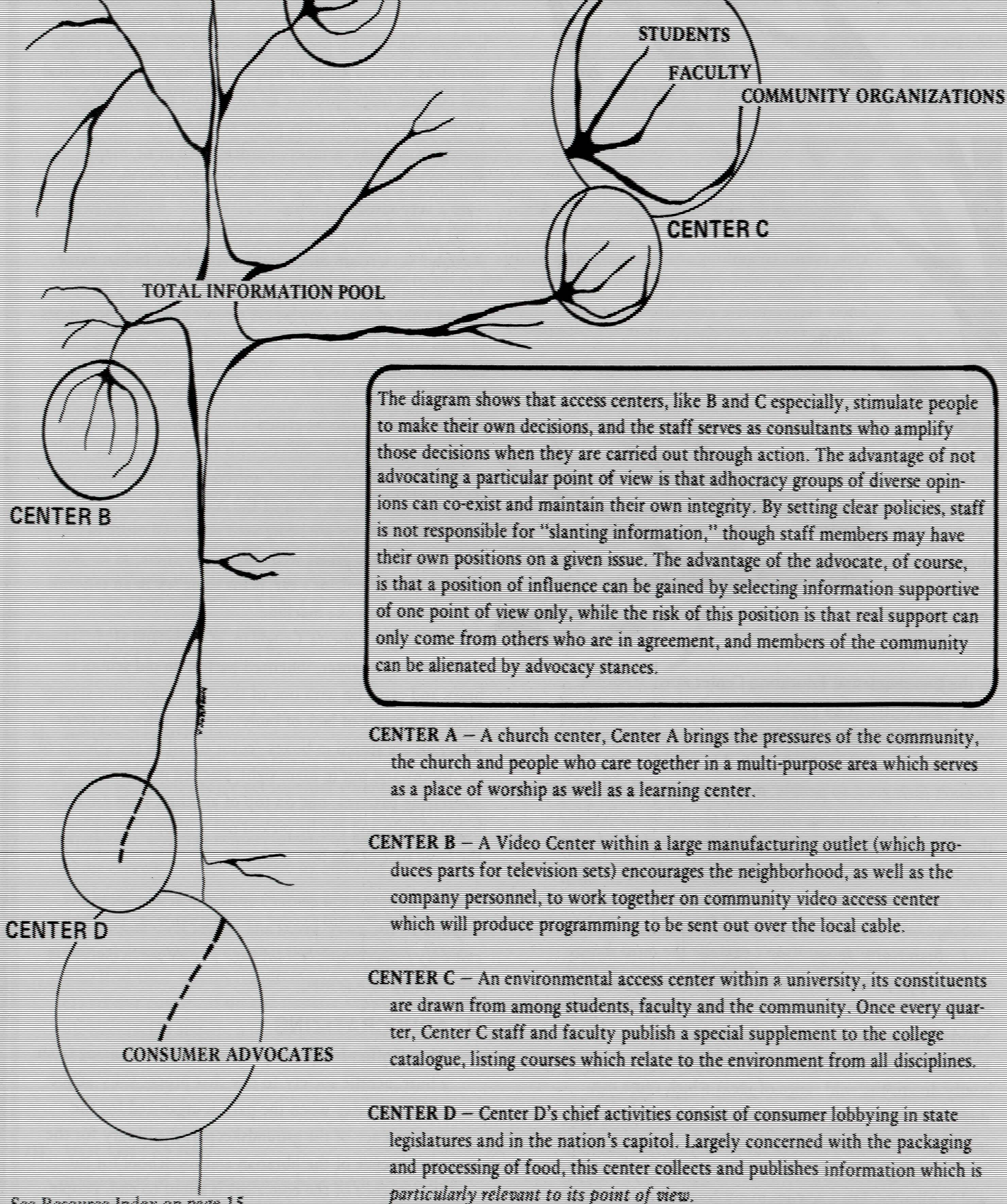
8. *Storage.* Roberta Caughlan, at Cleveland High School's  
Eco-Aesthetics center, inherited part of an old school li-  
brary and came up with one of the most innovative storage  
ideas, as a result of lack of built-in-space. Files and other  
materials are stored in boxes—color toned to the scheme of  
the room—and put in plain sight, stacked in geometrically  
interesting patterns, one on top of another. Files are num-  
bered plainly and can be picked out without disturbing  
the large part of the box sculpture.

*Most important, a center's aesthetic design should  
respond to the users' needs and reflect their vision. This  
can only be accomplished through people-participation in  
the building of a center.*

## V. ADHOCRATIZING

Alvin Toffler has pointed out that we are moving from  
a bureaucratic society to one that proceeds by adhoc-  
racies. The day when the park is organized for the  
convenience of the groundskeeper, the library for the  
convenience of the librarian and the school for the  
convenience of the educators is about to end. People  
should be enticed to make choices on their own, with  
staff available for consultation in amplifying the  
meaning of their choices. Typewriter, phone and  
office supplies can be made available to facilitate this  
process. Adhocracies are particularly successful when  
they allow the coexistence of varying points of view.





The diagram shows that access centers, like B and C especially, stimulate people to make their own decisions, and the staff serves as consultants who amplify those decisions when they are carried out through action. The advantage of not advocating a particular point of view is that adhoc groups of diverse opinions can co-exist and maintain their own integrity. By setting clear policies, staff is not responsible for "slanting information," though staff members may have their own positions on a given issue. The advantage of the advocate, of course, is that a position of influence can be gained by selecting information supportive of one point of view only, while the risk of this position is that real support can only come from others who are in agreement, and members of the community can be alienated by advocacy stances.

**CENTER A** – A church center, Center A brings the pressures of the community, the church and people who care together in a multi-purpose area which serves as a place of worship as well as a learning center.

**CENTER B** – A Video Center within a large manufacturing outlet (which produces parts for television sets) encourages the neighborhood, as well as the company personnel, to work together on community video access center which will produce programming to be sent out over the local cable.

**CENTER C** – An environmental access center within a university, its constituents are drawn from among students, faculty and the community. Once every quarter, Center C staff and faculty publish a special supplement to the college catalogue, listing courses which relate to the environment from all disciplines.

**CENTER D** – Center D's chief activities consist of consumer lobbying in state legislatures and in the nation's capitol. Largely concerned with the packaging and processing of food, this center collects and publishes information which is particularly relevant to its point of view.

See Resource Index on page 15

ROUGH DRAFTS are written and published by the Environmental Education Center, a U.S. Office of Education funded project located at 317 Lincoln Hall, Portland State University, Portland, Oregon. Special thanks to Lois Gibbons, Oregon Museum of Science and Industry; the Multnomah County Human Services Bureau; the Parkrose United Methodist Church; Roberta Caughlan, Eco Aesthetics/Urban Environmental Center at Cleveland High School; Sam McKinney, Environmental Living Studies Center; Peter Thurston, Environmental Living-Learning Center in Eugene; Jim Johnsrud, Lincoln High School Environmental Center; Bill Warner, Whittaker Living Learning Lab. Special thanks to Oscar Soule, Evergreen State College in Olympia, for his excellent advice on Roughdraft II, Funding. Anita Helle, editor; Victoria Johnson, graphic artist; Mary Wells, layout.



<p>Ouroboros School of Architecture Univ. of Minnesota 110 Architecture Bldg. Minneapolis, MINN 55455</p> <p>Dennis Holloway</p>	<p>o applying solar thermal collection technology to residential architecture o redesign + retrofitting of an existing, older house into a solar home</p>	<table border="1"> <tr><td>networking</td><td></td><td></td></tr> <tr><td>R+D</td><td>✓</td><td></td></tr> <tr><td>classes-workshops</td><td>✓</td><td>tuition, donations</td></tr> <tr><td>construction</td><td>✓</td><td></td></tr> </table> <p>OUROBOROS/EAST: Towards an Energy-Conserving Urban Dwelling... \$5.50</p>	networking			R+D	✓		classes-workshops	✓	tuition, donations	construction	✓		<p>Shelter Institute 72 Front St. Bath, MAINE 04530</p> <p>Patsy Hennin</p> <p>o provides education, information and guidance on all aspects of environmentally-conscious home building: o Basic Course o Design Workshop o Carpentry Experience</p>	<table border="1"> <tr><td>networking</td><td></td><td></td></tr> <tr><td>R+D</td><td></td><td></td></tr> <tr><td>classes-workshops</td><td>✓</td><td>tuition, scrounged materials</td></tr> <tr><td>construction</td><td></td><td></td></tr> </table>	networking			R+D			classes-workshops	✓	tuition, scrounged materials	construction		
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<p>Outback Fairhaven College Bellingham, WASH 98225</p> <p>Jennifer EH</p> <p>206-676-3680/4860</p>	<p>o living-learning program of organic gardening, windmill, solar panel and methane digester construction</p>	<table border="1"> <tr><td>networking</td><td>✓</td><td></td></tr> <tr><td>R+D</td><td>✓</td><td></td></tr> <tr><td>classes-workshops</td><td>✓</td><td>tuition, scrounged materials</td></tr> <tr><td>construction</td><td>✓</td><td></td></tr> </table>	networking	✓		R+D	✓		classes-workshops	✓	tuition, scrounged materials	construction	✓		<p>ShelterLab One 824 W. 19th St. Chicago, Ill 60608</p> <p>Rick Engel</p> <p>312-226-7136/236-5739</p> <p>o a non-profit project developing ecologically viable shelter which requires minimum use and re-use of mass &amp; energy o metabolic process of dwellings o wind, solar &amp; bio-gas, hydroponic gardening</p>	<table border="1"> <tr><td>networking</td><td></td><td></td></tr> <tr><td>R+D</td><td>✓</td><td></td></tr> <tr><td>classes-workshops</td><td></td><td></td></tr> <tr><td>construction</td><td></td><td></td></tr> </table>	networking			R+D	✓		classes-workshops			construction		
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<p>Phoenix of Colorado Springs, Inc. P.O. Box 7246 Colorado Springs, COLO 80933</p> <p>Rod Kuharich</p> <p>303-633-2633</p>	<p>o a non-profit corporation to act as an agency to design and construct buildings using new energy systems, incl. solar energy, heat pumps, waste heat</p>	<table border="1"> <tr><td>networking</td><td></td><td></td></tr> <tr><td>R+D</td><td>✓</td><td>\$125,000 for 25 mo.</td></tr> <tr><td>classes-workshops</td><td></td><td>NSF-RANN grant, business materials</td></tr> <tr><td>construction</td><td>✓</td><td></td></tr> </table> <p>SOLAR ENERGY AND THE LAW, avail. from NTIS, Grant no. GI-44210</p>	networking			R+D	✓	\$125,000 for 25 mo.	classes-workshops		NSF-RANN grant, business materials	construction	✓		<p>Rural Skills Workshops P.O. Box 6093 Seattle, WASH 98188</p> <p>Bill O'Neill</p> <p>206-246-5788</p> <p>o two days of information and practical seminars featuring skilled local instructors... Spring Planting, Shelters, Energy Systems... at Maple Valley &amp; Ravensdale Grange, and Shadow Lake Park</p>	<table border="1"> <tr><td>networking</td><td></td><td></td></tr> <tr><td>R+D</td><td></td><td></td></tr> <tr><td>classes-workshops</td><td>✓</td><td>tuition</td></tr> <tr><td>construction</td><td></td><td>\$10 for 2-day workshop</td></tr> </table>	networking			R+D			classes-workshops	✓	tuition	construction		\$10 for 2-day workshop
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<p>REDE: Research and Design Institute Box 307 Providence, RI 02901</p> <p>Ronald Beckman</p>	<p>o a non-profit design science agency now researching wind, solar and integrated energy systems</p>	<table border="1"> <tr><td>networking</td><td></td><td></td></tr> <tr><td>R+D</td><td>✓</td><td></td></tr> <tr><td>classes-workshops</td><td></td><td></td></tr> <tr><td>construction</td><td>✓</td><td></td></tr> </table>	networking			R+D	✓		classes-workshops			construction	✓		<p>Red Barn Program Eastern Washington State College Cheney, WASH 99004</p> <p>Horace R. Simms</p> <p>o a need to rediscover + to experiment with ways of life not based on consumption of fossil fuels o composting, gardening, windpower, traditional Amer. crafts, weaving, spinning, blacksmithing, beekeeping</p>	<table border="1"> <tr><td>networking</td><td></td><td></td></tr> <tr><td>R+D</td><td></td><td></td></tr> <tr><td>classes-workshops</td><td>✓</td><td>tuition</td></tr> <tr><td>construction</td><td></td><td></td></tr> </table>	networking			R+D			classes-workshops	✓	tuition	construction		
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<p>SEA-NET P.O. Box 4244 Seattle, WASH 98104</p> <p>206-324-5055</p>	<p>o Seattle area environmental information network involved in public library displays on energy, conference planning</p>	<table border="1"> <tr><td>networking</td><td>✓</td><td></td></tr> <tr><td>R+D</td><td></td><td></td></tr> <tr><td>classes-workshops</td><td></td><td></td></tr> <tr><td>construction</td><td></td><td></td></tr> </table>	networking	✓		R+D			classes-workshops			construction			<p>Social Ecology Program Goddard College Plainfield, VT 05667</p> <p>Murray Bookchin</p> <p>802-454-8311</p> <p>o the philosophy of decentralization as it relates to renewable energy sources, agriculture and land use patterns o Wilson Clark (Energy for Survival)</p>	<table border="1"> <tr><td>networking</td><td></td><td></td></tr> <tr><td>R+D</td><td></td><td></td></tr> <tr><td>classes-workshops</td><td>✓</td><td>tuition</td></tr> <tr><td>construction</td><td></td><td></td></tr> </table>	networking			R+D			classes-workshops	✓	tuition	construction		
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LOCALIZATION, not centralization

PAGE SEVEN



TOOLS, not machines

<p>SOLAR ENERGY CENTER Univ. of Oregon Eugene, OR 97405  Aaron Novick  503-686-5128</p>	<p>o academic center for solar energy seminars; research on solar heating in the Pacific Northwest, on the Coos Bay Solar Home o John Reynolds-arch. Robert Gray-arch. Peter Swann-law</p>	<table border="1"> <tr><td>networking</td><td></td></tr> <tr><td>R+D</td><td>✓</td></tr> <tr><td>classes:workshops</td><td>✓</td></tr> <tr><td>construction</td><td></td></tr> </table> <p>tuition, grants, donations by PPEL</p> <p>SOLAR ENERGY FOR PACIFIC NORTHWEST BUILDINGS... \$3.00 THE IMPACT OF SOLAR ENERGY ON ARCHITECTURE... \$12.00</p>	networking		R+D	✓	classes:workshops	✓	construction		<p>Tith P.O. Box 2382 Olympia, WASH 98507  Woody + Becky Deryckx</p>	<p>o communications on agricultural practices which reflect a sensitive and ecologically responsible husbandry of the soil</p>	<table border="1"> <tr><td>networking</td><td>✓</td></tr> <tr><td>R+D</td><td></td></tr> <tr><td>classes:workshops</td><td>✓</td></tr> <tr><td>construction</td><td></td></tr> </table> <p>Tith newsletter... \$3/yr. Directory of the NW Conf. on Alt. Agriculture... \$5.00</p>	networking	✓	R+D		classes:workshops	✓	construction	
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<p>Solar Energy Applications Lab Engineering Research Center Colorado State Univ. Fort Collins, CO 80523 George Löf  303-491-8632/322-0446</p>	<p>o academic center for solar energy R+D in southwestern U.S. o one solar home built</p>	<table border="1"> <tr><td>networking</td><td></td></tr> <tr><td>R+D</td><td>✓</td></tr> <tr><td>classes:workshops</td><td>✓</td></tr> <tr><td>construction</td><td>✓</td></tr> </table> <p>tuition, grants</p> <p>write for their brochure</p>	networking		R+D	✓	classes:workshops	✓	construction	✓	<p>TEA: Total Environmental Action 12 Church Hill Harrisville, NH 03450  Bruce Anderson  603-827-3374</p>	<p>o environmentally sensitive design &amp; consulting in architecture and bldg. systems engineering</p>	<table border="1"> <tr><td>networking</td><td>✓</td></tr> <tr><td>R+D</td><td>✓</td></tr> <tr><td>classes:workshops</td><td>✓</td></tr> <tr><td>construction</td><td>✓</td></tr> </table> <p>tuition, consulting, publications</p> <p>Solar Energy &amp; Shelter Design... \$7.00 Design with Wind... \$7.00 Solar Energy Housing Design... \$15.00 (write for resource material list)</p>	networking	✓	R+D	✓	classes:workshops	✓	construction	✓
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<p>Solar Energy and Energy Conversion Lab University of Florida Gainesville, FLA 32611 Erich A. Farber  904-392-6627</p>	<p>o academic center for solar energy R+D in southeastern US o one solar home built  o Howard T. Odum Thomas A. Robertson</p>	<table border="1"> <tr><td>networking</td><td></td></tr> <tr><td>R+D</td><td>✓</td></tr> <tr><td>classes:workshops</td><td>✓</td></tr> <tr><td>construction</td><td>✓</td></tr> </table> <p>tuition, grants</p> <p>write for their brochure</p>	networking		R+D	✓	classes:workshops	✓	construction	✓	<p>The Walden Foundation P.O. Box 5 El Rito, NM 87530  James B. DeKorne</p>	<p>o dedicated to proving that humanity can live an ecologically-sound, technologically sophisticated life on the land without becoming a slave to either land or technology o hydroponic greenhouse o aquaculture o wind + solar energy</p>	<table border="1"> <tr><td>networking</td><td>✓</td></tr> <tr><td>R+D</td><td>✓</td></tr> <tr><td>classes:workshops</td><td></td></tr> <tr><td>construction</td><td>✓</td></tr> </table> <p>publications</p> <p>Write only by including a stamped, self-addressed envelope To visit, write in advance of Sunday visiting day</p>	networking	✓	R+D	✓	classes:workshops		construction	✓
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classes:workshops																					
construction	✓																				
<p>Solar Utilization Now College of Architecture Arizona State Univ. Tempe, AZ 85281  Jeffrey Cook  602-965-7298</p>	<p>o academic center for solar energy R+D in southwestern U.S. o Solar Energy short-courses o one solar home built</p>	<table border="1"> <tr><td>networking</td><td></td></tr> <tr><td>R+D</td><td>✓</td></tr> <tr><td>classes:workshops</td><td>✓</td></tr> <tr><td>construction</td><td></td></tr> </table> <p>tuition, grants</p> <p>write for their brochure</p>	networking		R+D	✓	classes:workshops	✓	construction		<p>Wright-Ingraham Inst. 1228 Terrace Road Colorado Springs, CO 80904  Liz Wright-Ingraham John Yellott Peter Van Dresser  303-633-7011</p>	<p>o Running Creek Field Station, environmental impact study of basin; field station to use renewable energy for minimum impact on environment</p>	<table border="1"> <tr><td>networking</td><td></td></tr> <tr><td>R+D</td><td>✓</td></tr> <tr><td>classes:workshops</td><td>✓</td></tr> <tr><td>construction</td><td></td></tr> </table> <p>tuition, grants</p> <p>write for their brochure</p>	networking		R+D	✓	classes:workshops	✓	construction	
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R+D	✓																				
classes:workshops	✓																				
construction																					
networking																					
R+D	✓																				
classes:workshops	✓																				
construction																					
<p>Solarwind P.O. Box 7 East Holden, MAINE 04429  MaJo Keleshian  207-843-5168</p>	<p>o designing &amp; building several prototypes for testing, selling plans + kits o Elektro, Dunlite, Sencenbaugh-</p>	<table border="1"> <tr><td>networking</td><td></td></tr> <tr><td>R+D</td><td>✓</td></tr> <tr><td>classes:workshops</td><td></td></tr> <tr><td>construction</td><td>✓</td></tr> </table> <p>self-supporting</p> <p>"Electric Power from the Wind"... \$2.00</p>	networking		R+D	✓	classes:workshops		construction	✓	<p>Zomeworks P.O. Box 712 Albuquerque, N.M. 87108  Steve + Holly Baer  505-242-5354</p>	<p>o design, drafting, consulting, fabrication, research + development work in solar energy &amp; structural systems</p>	<table border="1"> <tr><td>networking</td><td></td></tr> <tr><td>R+D</td><td>✓</td></tr> <tr><td>classes:workshop</td><td></td></tr> <tr><td>construction</td><td>✓</td></tr> </table> <p>consulting, publications</p> <p>Solar booklet... \$3.00 Solar water heater plans... \$5.00 Drum Wall plans... \$5.00 Beadwall plans &amp; license... \$15.00</p>	networking		R+D	✓	classes:workshop		construction	✓
networking																					
R+D	✓																				
classes:workshops																					
construction	✓																				
networking																					
R+D	✓																				
classes:workshop																					
construction	✓																				



**ENERGY**

Continued from page 8

**WIND ENERGY,  
SOME NEW STUFF**

*Windworks, a Bibliography.* Ben Wolf.  
Council of Planning Librarians  
P.O. Box 229  
Monticello, Ill. 61856

Contains some new, more foreign references than Ben Wolf's original Windworks Bibliography.

*Applied Aerodynamics of Wind Power Machines,* Lissamen and Wilson.  
Technical

*Energy, Earth and Everyone,* Medard Gable.

*Basic Information of the Economic Generation of Energy in Commercial Quantities from Wind.* Prepared by Energy Engineering Labs, Oklahoma State U. Available from:

House Committee on Science & Astronautics  
House of Representatives  
Washington, D.C. 20515

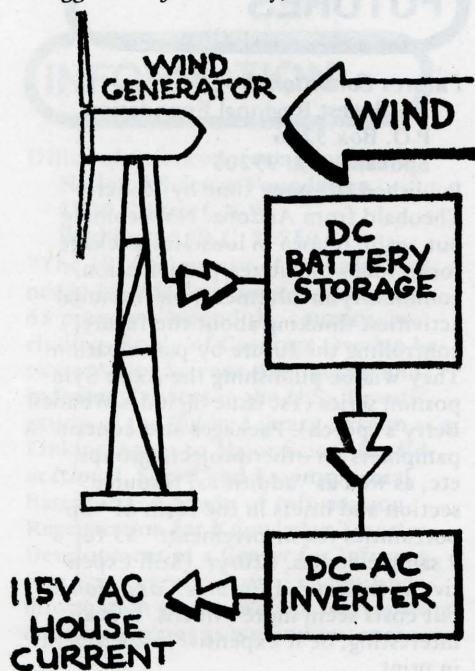
*Potential for Wind Generated Power in Texas.*

Vaughn & Gilmore  
West Texas State University  
Canyon, Texas 79016

*Information and Planning Manual for Wind Driven Electric Power Systems*

Syverson & Symons  
P.O. Box 233  
Mankato, Minn. 56001 Price?

(Suggested by Ben Wolf, Windworks)



**ENERGY CONSERVATION & SOLAR HEATING SYSTEMS,** especially as related to building design.

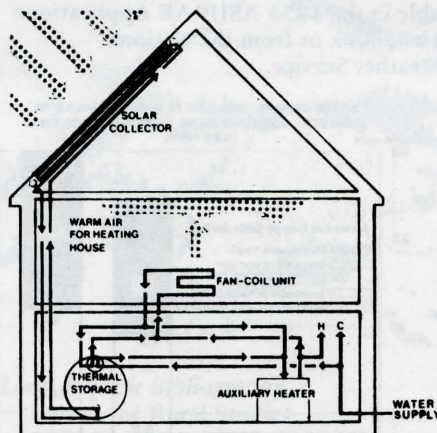


DIAGRAM OF SOLAR-HEATED HOUSE

"Energy Conservation in Architecture, Pt. 1, Adapting Design to Climate," by Donald Watson, A.I.A., in *Connecticut Architect*, March-April 1974. 50¢ from:

SUNWORKS, Inc.  
Guilford, Ct. 06437.

Housing patterns, climate, underground building, natural lighting and ventilation.

*Access Work Manual*, by John Schade, 1975. Available for \$2.00 from:

School of Architecture,  
University of Wisconsin,  
Milwaukee, Wisc. 53201

Insulating shutters, greenhouse, solar hot water on rehabilitated older 2-story urban homes . . . the way they did it.

Emergency Energy Assistance  
State of Wisconsin  
P.O. Box 5368  
Madison, Wi. 53705  
800-362-8043

A listing of energy conservation of state governments is being compiled by this office.

Smithsonian Science Information Exchange  
1730 M St., N.W.  
Washington, D.C. 20036

Has information about current research projects.

"Energy Conservation Legislation in the 93rd Congress, a summary," July 22, 1974.

Science and Technology Division  
Library of Congress  
Washington, D.C. 20540

"Energy Conservation Legislation Dealing with Buildings."  
Federal Energy Office  
Washington, D.C. 20461

**"Energy Conservation Design Guidelines for Office Buildings,"**

American Institute of Architects  
1735 New York Ave., N.W.  
Washington, D.C. 20006

Also available from General Services Administration, Washington, D.C. 20405 (or local branches).

National Bureau of Standards  
Office of Building Standards and Codes  
Center for Building Technology  
Room B226  
Washington, D.C. 20234

"Options for Energy Conservation"  
Center for Advanced Computation  
University of Illinois, Urbana-Champaign  
Urbana, Ill. 61801

"Draft Design and Evaluation Criteria for Energy Conservation in New Buildings."

American Society of Heating, Refrigerating & Air Conditioning Engineers, Inc.  
345 E. 47th St.  
New York, N.Y. 10017  
Proposed federal standards.

Office of Policy Development and Urban Development  
451 Seventh St., S.W.  
Washington, D.C. 20410

Small Homes Council—Building Research Council  
University of Illinois at Urbana-Champaign  
1 East St. Mary's Rd.  
Champaign, Ill. 61820

Pamphlets related to energy conservation, insulation, etc.

National Home Builders Assoc.  
Research Foundation Inc.  
P.O. Box 1627  
Rockville, Maryland 20850  
"Insulation Manual" \$4.

"Development of an Instructional Resource Package on Energy Allocation, Depletion and Conservation."  
National Science Teachers Assoc.  
1201 16th St., N.W.  
Washington, D.C. 20036  
Contact: John Fowler

Biomass Energy Institute  
204-870 Cambridge St.  
Winnipeg, Manitoba R3M 3h5,  
Canada

Recently awarded a contract by the Canadian government to design a periodically updated bibliography on energy conservation.



**ENERGY**

Continued from page 9

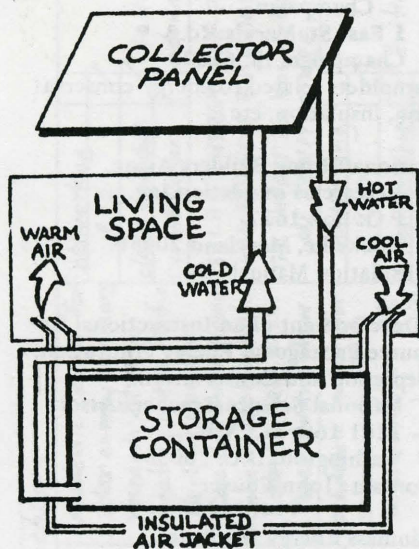
**"The Value of Thermal Insulation in Residential Construction: Economic and Conservation of Energy"**

Environmental Information System Office  
Oakridge National Lab  
P.O. Box X  
Oakridge, Tenn. 37830  
Report No. ORNL-NSF-EP-19

National Bureau of Standards  
Office of Building Standards and Code Services  
Center for Building Technology  
Bldg. 226, R. 3226  
Washington, D.C. 20234  
Building codes, pamphlets on housing energy use, state surveys of codes.

Conservation Foundation  
1717 Massachusetts Ave., N.W.  
Washington, D.C. 20036  
Lots of good books, studies, reports. Including "Hidden Waste, Potential for Energy Conservation." \$3.00.

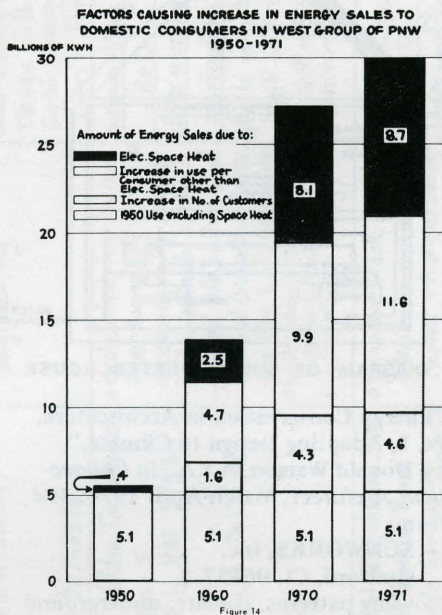
Also contact locally:  
Energy Information Office  
4220 E. Martin Way  
Olympia, Wa. 98504  
and  
Energy Conservation & Allocation Office  
528 Cottage N.E., Room 301  
Salem, Or. 97310



**SOLAR**

"Practically Engineering a Solar Heating System for Your Home," by International Solarthermics Corp.  
P.O. Box 397  
Nederland, Colo. 80466.  
Send a stamped, self-addressed business

envelope for this 6-page practicum on sizing a solar system for an existing building (i.e., "retrofitting"). Shows the methods used for calculating the needed information from tables available in the 1974 ASHRAE Applications Handbook or from the National Weather Service.



From: Electric Energy in Pacific N.W. B.P.A.

**Criteria for the Preliminary Design of Solar-Heated Buildings**, by Everett M. Barber, Jr., and Don Watson, 1974.

\$10.00 from:  
Sunworks, Inc.  
Guilford, Ct. 06437.

Has a most useful appendix which explains how to figure the percentage of a building's annual space heating requirements that can be provided by a given solar heating system. Data tables needed for calculation are provided.

**The Solar Energy Handbook**, by Henry C. Landa, 1974. Available for \$7.50 from:

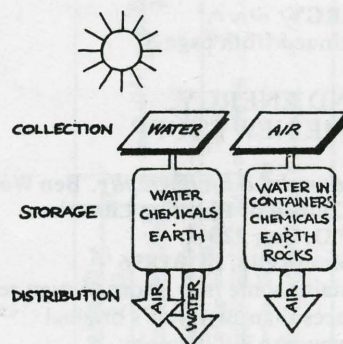
FICOA  
2901 S. Wentworth Ave.,  
Milwaukee, Wisc. 53207.

Very comprehensive, presenting needed information and theory very clearly, as well as indexing the contents for quick thumb retrieval.

**Alternative Natural Energy Sources in Building Design**, by Davis & Schubert, 1974. \$7.00 from

Passive Energy Systems  
P.O. Box 499  
Blacksburg, Va. 24060.

An extra added attraction is Malcolm B. Wells' "Ecologic Standards for Construction," an item to be read after reading George Ramsey's "Energy & Architecture" Plowboy Interview in *Mother Earth News* No. 30.



**Use of Domestic Hot Water for Space Heating.** \$10 (\$5 to members) from:

Circulation Sales Department  
ASHRAE  
United Engineering Center  
345 E. 47th St.,  
New York, N.Y. 10017

How to put all that conserved, solar-heated water to use. Ask for their "Symposium Bulletin" publication list.

Nationwide Conference on the Magnitude and Implementation Schedule of Energy Resources. A proposal for a conference (sometime in May or June?) designed to deal with problems of information resources in energy resources area: Contact C.H. Wang or Bernard Spinrad

Office of Energy Research & Development  
Oregon State University  
Corvallis, Or. 97331  
503-754-2344

**FUTURES**

**Futures Conditional**

Northwest Regional Foundation  
P.O. Box 5296  
Spokane, Wa. 99205

Published for some time by Robert Theobald from Arizona. Now coming out again; reborn in looseleaf package form; focus on citizen participation, community involvement, bicentennial activities, thinking about the future, controlling the future by participation. They will be publishing the Expo Symposium series (1st issue includes Wendell Berry's speech). Packages also contain pamphlets on other projects/groups etc, as well as "additional resource" section and briefs in the form of "opportunities for involvement." \$5 for 2 sample copies. \$20/yr. (Still expensive as the retired *Futures Conditional*, but costs seem more evident. It is an interesting, be it expensive, experiment in print.



## GOVERNMENT

### *Oregon Environmental Council Legislative Bulletin*

Oregon Environmental Council  
2637 S.W. Water Ave.  
Portland, Or. 97201

Designed to keep people informed of environmental legislation. \$5 for rest of legislative session.

### FEDERAL LAND WITHIN THE UNITED STATES

By Predominant Usage  
AS OF JUNE 30, 1973



	MILLION ACRES	PERCENT
Forest and Wildlife	503.8	66.2
Grazing	163.6	21.5
Parks and Historic Sites	24.9	3.3
Alaska Oil and Gas Reserves	23.0	3.0
Military (Except Airfields)	15.7	2.1
Flood Control and Navigation	7.8	1.0
Reclamation and Irrigation	7.0	0.9
Industrial	2.9	0.4
Alaska Native Reserves	2.8	0.4
Military Functions in Alaska and Hawaii	2.6	0.3
Airfields	2.2	0.3
Power Development and Distribution	1.5	0.2
Research and Development	1.6	0.2
Other Usages	1.6	0.2
TOTAL	761.0	100.0

From: *Inventory Report on Real Property Owned by the United States throughout the World.*

Superintendent of Documents  
Government Printing Office  
Washington, D.C. 20402  
Stock No. 2200-00087. \$1.10.

## INFORMATION

Office of Science Information Service  
National Science Foundation  
1800 G Street, N.W.  
Washington, D.C. 20550

"The 1974 Summary of Awards," for newly-founded and ongoing programs. 63 programs around the country, including: Study of Coverage Overlap between Major Science Abstracting and Indexing Services in the U.S.; Investigation of the Public Library System as a Linking Agent to Major Scientific, Educational, Social and Environmental Bases (!!!); A Study of Information Regeneration for Knowledge Transfer; Development of a Center for Information Services; also several energy and information grants. We will be reporting on the programs as we find out more.

## LAND USE



### *Land Reform Bibliography Center for Rural Studies*

1095 Market St.

San Francisco, Ca. 94103

Over 1,500 citations. \$1.00 (from the people who publish "People and Land")

## MEDIA

### *Institute on the Public Interest in Telecommunications*

The Network Project  
101 Earl Hall  
Columbia University  
New York, N.Y. 10027

4-week summer institute, June 2-27, in: Television, a psychopedagogic tool; the business of broadcasting—commerce or communication; Control of communications policy; Case studies in research and action; Cable, satellites, public television. \$300 tuition (some special arrangements can be made). April 25 deadline for registration.

*The Publish It Yourself Handbook:  
Literary Tradition and How To.* \$4.00,  
Edited by Bill Henderson.

Pushcart Book Press  
Yonkers, N.Y. 10701

In December, 1972, a group of authors demonstrated on New York's Fifth Ave. protesting the inefficient distribution methods of commercial publishers. The authors sold their own books from pushcarts.

A unique collection of the history of print-it-yourself, famous and not-so-famous persons and groups. Includes the experiences of Anais Nin, Leonard & Virginia Woolf, Stewart Brand. . . . It is more a history and experiential text than how to, though scattered throughout and the last 20 pages is how to do it.

## OUTDOOR ED

*Field Study Directory, Clackamas County and Surrounding Area.* Compiled by Outdoor Environmental Ed. Dept.

Clackamas County Intermediate  
Ed. District  
Marylhurst Campus  
Marylhurst, Or. 97036  
503-835-4341

Over 160 places to take students, where varying amounts of guidance is provided for tours. The range is unusual, —city dumps, nurseries, industries, tree farms, print shops. Adequate information given per place. Subject index. (Wish there was a geographical index as well.) \$1.00.

## POPULATION

### *World Population News Service*

A program of the U.S. Commission on UNESCO and 39 other national commissions, providing monthly 17" by 22" specially designed information sheets on world population problems for use in display and/or for easy reproduction. The service is free from:

IDEAS  
1785 Massachusetts Ave., N.W.  
Washington, D.C. 20036

## TRANSPORTATION

Folding bikes are at least as old as the bike craze of the gay nineties. They faded out with the decline of bike interest. Now there are a number of hindrances to their general adoption: folks just cannot as yet be persuaded to saw their bikes in two; folding bikes on the market usually have itty bitty wheels and there has been no competitive testing of the various systems of folding. My system of folding is very simple. No hinges or trick latches—just the most common sense arrangement—pedalling between buses and hitched rides, etc. Eleven years ago I had my shop full of bikes in process of being converted to fold. The highway dept. took my home and shop and choice commercial location. . . . I have not been able so far to get back into business.

John L. Coffin  
Star Route  
Ava, Mo. 65608  
(beside the bridge 4 mi. s.)

Continued on page 12



**TRANSPORTATION**

Continued from page 11

**Bicycle Transportation**

Government Printing Office  
Superintendent of Documents  
Washington, D.C. 20402

The Environmental Protection Agency recently conducted a study, for the first time taking seriously the bicycle as a transportation option. 95d.

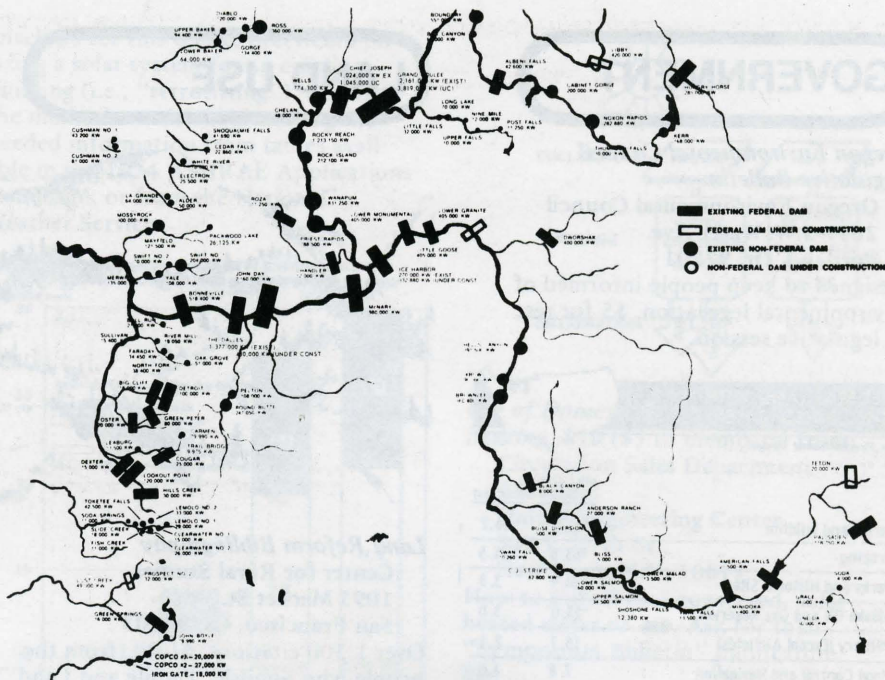
**The Stripper's Guide to Canoe Building**

David Hazen \$6.95

524 S.E. 15th

Portland, Or. 97214

Revised 1975. 86 pp. 6 sheets of full size template drawings for 7 canoes and 2 kayaks. Laminated wood strip and fiberglass construction. Lots of general instructions. (Techniques, the author says, could be transferred to making airplanes, cars, showers and drums, etc.) Material kits available from: Wilderness Boats Inc., Rt. 1, Box 101A, Carlton, Or. 97111.



Major hydroelectric dams in the Pacific Northwest

**WATER**

Minuse Systems Inc.  
206 N. Main, Suite 300  
Jackson, Ca. 95642  
209-223-1330

A shower developed (patent pending) that uses 10% of the water of the typical American deluge system, through use of air blower that mixes air with shower water. Water usage is 1/2 gallon per minute compared with 5 gallons per minute of typical shower. Contact: Larry Baker. (Suggested by Brian Smythe, U. of Arizona)

Citizens Drinking Water Coalition  
Commission for Advancement of  
Public Interest Organizations  
1875 Connecticut Ave., N.W.,  
Suite 1013  
Washington, D.C. 20009  
202-462-0505

To articulate issues raised because toxic pollutants are in the drinking water supply of this country, and to push for water monitoring programs at the state level. To assure that the safe drinking water act of 1974 will be implemented.

Water Resources Policy Issues—1975  
Water Resources Research Institute  
115 Covell Hall  
Oregon State U.  
Corvallis, Or. 97331

A series of seminars from April 3rd to May 29th including water requirements for energy (April 10); water and food production demands (May 15). Contact William H. Buckley for details, 754-1022.

BLM offshore leasing for development and recovery of oil and gas resources has been announced, with newly initiated baseline studies to be carried out for N. California, Oregon and Washington for May, 1976, and sale of leases scheduled for Oct. 1978 (which is one of the last to go).



**WHOLE SYSTEMS**

**The Elements**

Institute for Policy Studies  
1901 Que St., N.W.  
Washington, D.C. 20009

\$5/yr. A hole is filled. Here is a non-profit, at-cost (not the \$60/yr. usual) survey of resources, energy, food, developments and problems world-wide.

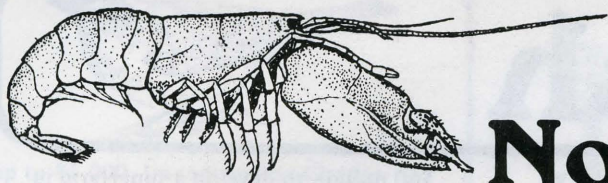
The fighting back section reports on the Institute's projects, "New Energy," for reorganizing energy around local units, and the work of Community Technology, and others around the country.

**MAJOR SUGAR PRODUCING COUNTRIES**

	Tons Produced in 1972 (1,000s)		1973 Acres in Production	1973 Exports (Millions of tons)	Tons Sold Under US Quota, 1974
	Cane	Beet			
USSR	—	8,793	8,650,000	.03	0
Brazil	6,909	—	2,875,000	2.80	872,424
Cuba	6,063	—	—	4.80	0*
US (Continental (Hawaii))	1,362	3,534	1,902,000	—	5,065,333
India	1,125	—	117,000	.05	1,110,000
France	4,915	—	6,930,000	.15	85,533
Mexico	—	3,285	1,161,000	1.0	0
Australia	3,145	—	1,166,000	1.0	717,724
China	3,015	—	599,000	2.1	213,670
West Germany	2,600	—	—	.60	0
Philippines	—	2,440	867,000	0	0
South Africa	2,435	—	1,100,000	2.0	1,599,081
Poland	2,111	—	440,000	.90	60,440
Italy	—	2,043	1,100,000	0	0
	—	1,409	588,000	0	0

\*Though its US quota was dropped after Cuba's revolution, a "reserve quota" is kept on the USDA books for Cuba in case Castro falls or diplomatic relations are resumed.  
Sources: Sugar Reports (USDA) and UN Food & Agricultural Organization.





## UPDATE

We received a sizeable response to our February "in process" directory. Here are the additional listings. Thanks to Kenneth Brooks, George Diel, Terry Lash, Darvel Lloyd, Kurt Kutay, Ron Long, Russell Pergetty, Roy Thompson, Peter Thurston, and especially Steve Zemke.



**Native Plant Society**  
3514 N. Russet St.  
Portland, Or. 97217

**Survival Center**  
Suite 1, EMU, University of Oregon  
Eugene, Or. 97403

Have on-site directory of Eugene area groups.

**Natural Resources Defense Council**  
664 Hamilton Ave.  
Palo Alto, Ca. 94301 415-327-1080

As they say, they have represented NW environmental groups in court cases.

**Environmental Guild of Spokane**  
121 South Wall St.  
Spokane, Wa. 99204 509-747-0677

A new professional service group composed of city, county planners, architects, environmental designers, theologians, economists, working on town design, project guidance, energy conservation, street furniture design.

**Pacific County Environmental Council**  
Rt. 2, Box 405-B  
Raymond, Wa. 98577

Shoreline management, land use, recycling, energy policies.

**Mt. Adams Wilderness Institute**  
Flying L Ranch  
Glenwood, Wa. 98619

Also at same address: Friends of Pah-To (dedicated to the preservation of Mt. Adams)

**Concerned About Trident**  
305 Dretz Bldg.  
Bremerton, Wa. 98310 206-373-4700

**League of Women Voters—Seattle**  
1402 18th  
Seattle, Wa.

**Northwest National Seashore Alliance**  
Box 102  
LaConner, Wa. 98257

**Sea Net**  
P.O. Box 4244  
Seattle, Wa. 98257

**Lower Ill. River Commission**  
304 S. Coos River  
Coos Bay, Or. 97420

# Northwest Environmental Groups

**Skagitarians Concerned About Nuclear Plants**  
P.O. Box 337  
Anacortes, Wa. 98221

**Washington Kayak Club**  
Box 24264  
Seattle, Wa. 98124

**Zero Population Growth—Seattle**  
4426 Burke Ave. N.  
Seattle, Wa. 98103

**Committee for Environmental Crisis**  
University of Washington  
Seattle, Wa. 98103

**Environmental Affairs**  
Associated Students of Univ. of Wash.  
University of Washington  
Seattle, Wa. 98195

**Alpine Lakes Protection Society**  
4539 E. Laurel Dr. N.E.  
Seattle, Wa.

**Puget Sound Beach Preservation Society**  
850 N.W. Elford Dr.  
Seattle, Wa. 98177

**Friends of the Earth—Seattle**  
Phone correction: 325-8761

**Margy Rush**  
Student Lounge & Activities Center  
Environmental Science Program  
305 Troy  
Pullman, Wa. 99163

**BRING, Recycling Inc.**  
P.O. Box 885  
Eugene, Or. 97401  
Change of address

**OSSR Environmental Education Study**  
Environmental Studies Center  
11 PLC, University of Oregon  
Eugene, Or. 97403  
Change of address

**Hunger Action Center**  
716 Rainier Ave. S.  
Seattle, Wa. 98144

**High Country School**  
c/o Erik Bergman  
10640 S.W. 55th  
Portland, Or. 97219 246-1285

History, ecology, outdoor skills, anthropology, disciplines during summer excursion through Idaho, Oregon, Montana, Wyoming.

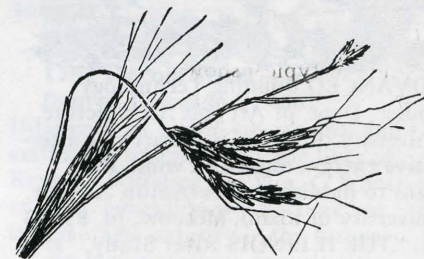
**Idaho Conservation League**  
P.O. Box 844  
Boise, Id. 83701

**Idaho Environmental Council**  
P.O. Box 1708  
Idaho Falls, Id. 83401

**Environmental Committee on Survival**  
2416 Pacific Way  
Longview, Wa. 98632

**Beverage Container Control Coalition**  
4534-1/2 University Way N.E.  
Seattle, Wa. 98105

**Consumer-Business Assn. Inc.**  
428 Park Ave., Rm. 200  
Idaho Falls, Id. 83401



## MEDIA:

*The Argus*  
6654 White Bldg.  
Seattle, Wa. 98101

*The Falls*  
West 621 Mallon Ave.  
Spokane, Wa. 99201

*Quest*  
College of Engineering  
Washington State College  
Pullman, Wa. 99163

Oft times good environmental stuff, such as spring/summer 1974 issue, which contained, among other things, "Man's Entropic March."

**Living With the Earth**  
KZEL-FM  
P.O. Box 1122  
Eugene, Or. 97401

Program about on-going projects in the Willamette Valley; alternative energy, agriculture, recycling, living lightly.



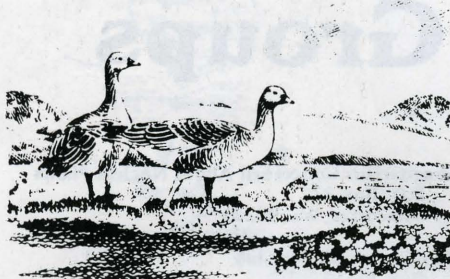
# Rush

THE CITY of Richland, Wa., is negotiating with the energy research and development administration public power supply system and Hanford area contractors for construction of a \$1 million energy information center. . . . BOSTON, MA., Edison Electric is studying a proposal for wind power systems. . . . GROW, Gardening and Recycling the Organic Way, in Portland, is underway again, looking for garden spaces in N.W. Call 233-3654 or 224-4221. . . . SENATOR James Abourezk of South Dakota has introduced a bill which would prohibit large oil companies from owning/dominating other sources of energy. . . . NEW YORK garbage collection is down by about 1,000 tons a day from last year at this time—from 30,000 to 29,000. . . .



ADVANCED Building Technology Course, Dept. of Art and Architecture, University of Idaho, is researching alternative energy, especially wind, with plans to publish results. Anton A. Eder, University of Idaho, Moscow, Id. 83843. . . . "THE ILLINOIS River Study," alternatives for inclusion into the Wild and Scenic River System, is now available free from: Siskiyou Ntl. Forest, P.O. Box 440, Grants Pass, Or. 97526. . . . THE STATE of Connecticut has been given a \$130,700 federal grant to design solar energy installation in 20 of a 40-unit, million dollar housing project for the elderly. . . . NORTH Portland: A 35¢ introduction compiled by a League of Women Voters committee: history, housing, industrial development. 308 Senator Bldg, Portland, Or. 97204. . . . LIVING Lightly, week-long series of classes to be held this summer (July 6 to 13) at OMSI in Portland; urban homesteading, wood heating/cooking, diet for a small planet, waste not-want not. Call Linda Craig for information, 248-5940. . . . "POP PR, Nos. 6 & 7 has a survey of responses to the Dr. Kenneth Edelin abortion manslaughter case.

ZPG, 1346 Connecticut Ave., N.W., Washington, D.C. 20036. . . . EARTH Move, P.O. Box 252, Winchester, Ma. 01890, manufacturers of the \$35 auto methane conversion kit, are planning to publish a low technology journal called *Earth Times*. . . .



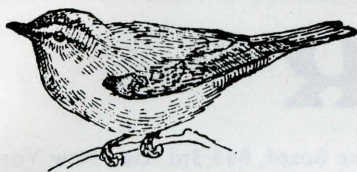
NEW graduation requirements in Oregon stipulate that students learn survival skills, metric system and birth control. . . . CABLE TV. *Willamette Valley Observer*, Vol. 1 No. 4. Good special feature. 454 Willamette St., Eugene, Or. 97401. . . . THE FEDERAL Council for Science and Technology has estimated that total federal effort in solar and geothermal energy will increase about 21% from \$102 million this year to \$123 million in fiscal 1976, about 6% of the total federal energy research and development budget. (*Energy Digest*). . . . NATURE and Americans is a course for this winter at Portland State. An interesting survey of ways Americans have encountered their natural environment. Gordon Dodds, instructor. . . . OREGON State University has been awarded a \$60,000 a year contract from (formally) the Atomic Energy Commission to evaluate the capabilities of emergency cooling systems in nuclear reactors (Director: Bernard Spinrad). . . . THE SOUTHWEST Research and Information Center has published its "Workbook" No. 2, with continuing good resources, especially for public interest groups. P.O. Box 4524, Albuquerque, N. Mexico 87106. . . . A motorist recently stopped in Philadelphia for a moving violation was found in possession of an authentic gas rationing coupon (they are currently stored in the Phil. mint building). . . . A STUDY has been completed for the Washington Power Supply System on Geothermal Potential in Washington. . . . ALUMINUM industry in Oregon & Washington, Jan. 1975 issue of *Audubon*. (Recommended by Tilth). . . . MALCOLM McLean, N. Carolina trucking magnate, is investing

\$60 million to develop a superfarm in that state's boggy coastal plain; 375,000 acres, half the size of Rhode Island. . . . DR. J. RICHARD Williams and Joseph D. Clement of Georgia Institute of Technology recently suggested at an MIT conference the installation of satellite nuclear power stations (*Future Report*). . . . UNITED Stand is a group of owner-built homesteaders who grouped after a task force of the county board of supervisors issued "red tags" for violators of building, zoning, sanitary regulations. For information on their findings, send \$1 to United Stand, P.O. Box 191, Potter Valley, Ca. 95469. . . . EX-GOV. Tom McCall has announced he will become president of a non-profit corporation, The Institute of Applied Energetics. . . . TASK force on ozone problem has been formed, directed by the Council on Environmental Quality and Federal Council for Science and Technology. . . . TOTAL Environmental Action, Church Hill, Harrisville, N.H. 03430, has a new list of resource materials available from them: wind, solar, slide shows, low energy living, bibliographies. . . . BULL RUN Watershed, Portland. Responses to the land suitability analysis and management options are due soon. For an imaginative compilation from a Bull Run follower, amateur expert citizen, send a donation to Joseph Miller, 3424 S.E. Tolman St., Portland, Or. 97202. Called "Bull Run Logic," it's a collection of public statements that adds up to illogical conclusions. . . . IDAHO Conservation League, Box 844, Boise, Id. 83701.



Feb. 10 newsletter, an extensive guide to the Idaho legislature. . . . SOLTEC, P.O. Box 6844, Denver, Colo. 80206. One of several emerging solar energy system designers: heating, cooling, water. They also have a "life support" system design. . . . FEDERAL house bill (H.R. 1505) would grant \$1,000 credit for solar climate control equipment or 25% reduction for purchase of

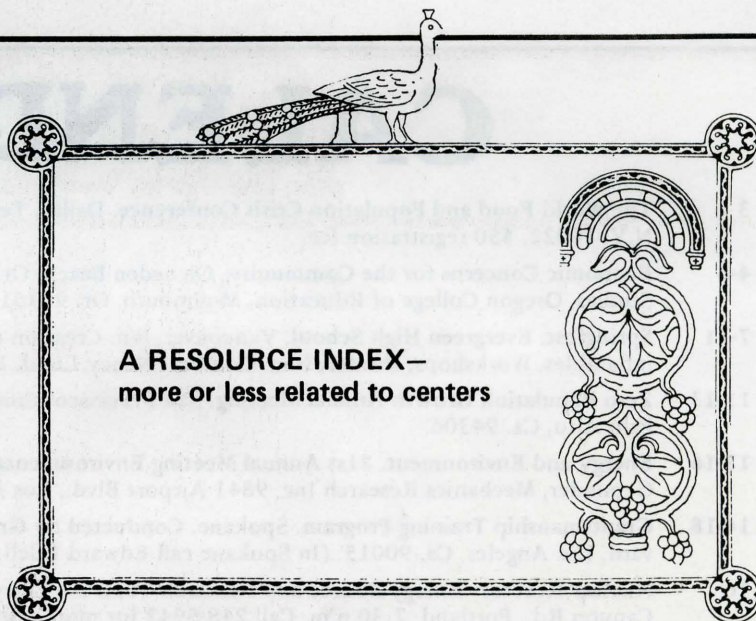




up to \$4,000. Introduced by Charles Vanik, D-Ohio. . . . EUGENE area directory of recycling facilities free from: Solid Waste Division, Dept. Environmental Management, 135 E. 6th Ave., Eugene, Or. 97401. . . . EARTH Skills Workshops, July 12-19, and Aug. 9-16. Living learning experience. Maplevale Organic Farm, Cross Creek, New Brunswick, EOH 1EO, Canada. . . . METHANE to be produced from cattle manure in Oklahoma will be transported via pipe line to Illinois to be distributed by the People's Gas, Light and Coke Co., by 1975. . . . TILTH (new address) P.O. Box 2382, Olympia, Wa. 98507. . . .



ECO-TOPE (change of address) P.O. Box 618, Snohomish, Wa. 98290. . . . ENVIRONMENTAL Action Workshop, Eugene, April 23. Eugene Citizens for a Livable Environment, P.O. Box 3643, Eugene, Or. 97403. \$1 registration fee—checks to Marcy Willow. . . . TWO important solar energy periodicals which we will review in detail next issue: *Solar Energy Intelligence Report*, 1101 Spring St. (P.O. Box 1067), Silver Spring, Md. 20910. (\$60/yr; careful watch of especially solar energy legislation). . . . AND: *Advanced Solar Energy Technology Newsletter*, 1609 West Windrose, Phoenix, Az. 85029. \$60/yr. Especially good on technical developments research reports. Focus on large scale, versus backyard, home workshop type solar energy application. . . . LEARN to climb by climbing. North Paranoid Climbing School. \$15 per day. Portland, call 223-6688. . . .



## A RESOURCE INDEX— more or less related to centers

While researching the Roughdraft on Centers, the Eco-Net staff discovered certain information gaps. Though many folks who helped us have developed their ideas about centers from eclectic sources, we found little written material which directly addressed some of these questions: (1) What are the socio-cultural-economic indicators which stimulate the development of centers? (2) What are the best ways to measure these factors? (3) How can we best demonstrate the importance of a center to its community? (4) What do centers as diverse as the OMSI Energy Center and the Women's Resource Center have in common? (5) Can data about centers form a predictive basis for future research?

Perhaps it is true, as Don Stotler has suggested, that "You can't read about new ideas, you have to see models of them." We'd like to hear from RAIN readers who can tell us more about these questions from their own experience, and offer suggestions for future research. Write RAIN.

### "Culture, Politics and Pedagogy"

Jerome Bruner

*Saturday Review*, May 18, 1968

Something of an anthropological perspective from the granddaddy of educational philosophy.

### "Man's Movement and His City"

C.A. Doxiadis

*Science*, October 18, 1968

Community centers should be within ten miles of residence or work of the user. In the ancient city-state, as Doxiadis points out, there was an average of 10 min. walking time from the radius of the build-up area and of 8 hours in the radius of the city.

### *The New Einsteinian Culture and Communication*

Earle O. Miller

Miller Publishing Company  
Portland, Oregon

Discusses cultural implications of discoveries in the physical realm. Many of these—the idea of adhocracies and the idea of community centers—are in many ways cultural translations of Einstein's theories of relativity.

### *Prospective Changes in Society by 1980*

Morphet, Edgar L. (chief editor)  
Report of an Eight-State Project  
1362 Lincoln Street  
Denver, Colorado (1966)

Discussion of urban, educational and cultural development by the likes of Kenneth Boulding and Wm. C. Wheaton: ". . . education will become our largest single industry in the future . . . we face marvelous opportunities to develop lifelong education and campuses which are real community centers . . ." (Wm. C. Wheaton).

### "Revolution in the Dream World"

Christopher R. Evans

*NEA Journal*, March, 1968

### The Self Learning Society

Don Stotler

The Environmental Education Center  
317 Lincoln Hall  
Portland State University  
Portland, Oregon 97207

A design for implementing centers in schools, governments and the community through a time-window to the future.



# CALENDAR

- April 3**     **The World Food and Population Crisis Conference.** Dallas, Texas. Conference Board, 845 3rd Ave., New York, N.Y. 10022. \$50 registration fee.
- April 4-6**     **Economic Concerns for the Community.** Gleneden Beach, Or. Contact: Dr. Ron Finster, Center for Economic Studies, Oregon College of Education, Monmouth, Or. 97361.
- April 7-11**     **Springfest. Evergreen High School,** Vancouver, Wn. Creation of an Alternative Environment: domes, windmills, inflatables. Workshops, theater, film. Contact: Nancy Lund, 14300 N.E. 18th 98664, 256-6034.
- April 11-13**     **Zero Population Growth Annual Meeting.** San Francisco. Contact: ZPG, c/o Verna Graham, 984 Lima Way, Palo Alto, Ca. 94306.
- April 13-16**     **Energy and Environment. 21st Annual Meeting Environmental Institute.** Anaheim, Ca. Contact: Robert Geminder, Mechanics Research Inc. 9841 Airport Blvd., Los Angeles, Ca. 90056.
- April 14-18**     **Grantsmanship Training Program.** Spokane. Conducted by Grantsmanship Center, 1015 W. Olympic Boulevard, Los Angeles, Ca. 90015. (In Spokane call Edward Udell, 456-5024.)
- April 16**     **Nuclear Reactor: Energy Source and Research Tool.** Dr. Larry Church, Reed College. At OMSI, 4015 S.W. Canyon Rd., Portland. 7:30 p.m. Call 248-5942 for more information.
- April 16-18**     **Alaska Environmental Education Convention.** Anchorage. Contact Dr. Paul Gulyas, Dept. of Education, Puch F. Juneau, Alaska 99811.
- April 16-18**     **Workshop on Solar Energy Storage Subsystems for Heating, Cooling of Buildings.** Charlottesville, Va. Dr. L.U. Lilleehet, ERDA/NSF workshop. Thornton Hall, U. of Virginia, Charlottesville, Va. 22901.
- April 17**     **Food Day.** Project of the Center for Science in the Public Interest, 1785 Massachusetts Ave., N.W., Washington, D.C. 20036.
- April 21-27**     **Futures Fair.** Fairhaven College, Western Washington State College, Bellingham, Wa. 98225. Energy, food, new agriculture, endangered species.
- April 25**     **Arbor Day Festival.** Hoyt Arboretum, 4000 S.W. Fairview Dr., Portland, Or. 97221. To participate, contact by April 15, 228-8732.
- April 27-29**     **National Association for Environmental Education Annual Conference.** "Improving Quality of Life through Better Use of Energy and Resources." Contact: James Gallagher, National Assoc. Environ. Ed., 5940 S.W. 73rd, South Miami, Fl. 33143.
- May 3-4**     **May Festival.** Living Learning Center, Southern Oregon College. Alternative Sources of Energy (including members of Energy Research Planning Office); recycling, gardening. Contact: Fred Lorish, LLC, Southern Oregon College, Ashland, Or. 97520.

**Special Note:** Urban Pioneer Days is a series of educational events being coordinated through the Environmental Education Center during the month of May to correspond with previous years' Earth Day Events. Persons wanting to participate, or planning like events, contact Anita Helle at the EEC, 229-4692, 229-4682.



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Portland State University  
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