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**RAIN**

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# RAIN

VOLUME I, NUMBER 8

MAY 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.

*Energy Center / Oregon Museum of Science and Industry*  
 4015 S.W. Canyon Rd.,  
 Portland, Or. 97221  
 503-248-5900 or 248-5920

Linda Craig, Lee Johnson, Mary Lawrence, Shabtay Levy, Rusty Whitney, Rick Siewert

*RAIN / Environmental Education Center*  
 Portland State University  
 Portland, Or. 97221  
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 229-4692

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 Portland State University  
 Portland, Or. 97207  
 (Room 373, Lincoln Hall)  
 229-4682

Randi Krogstad, Don Stotler

Cover Photo: Ancil Nance  
 Typesetting: Irish Setter

# RAIN UPDATE

First things first. We are in the process of hiring a person to help us set up the subscription base for *RAIN* (will be hired by the time you read this). We are taking time, so please bear with us, especially those of you who may not want to be receiving *RAIN* or those of you receiving several copies. It's a large task to sift through the mailing list, and, as presently staffed, we barely have time to make corrections and additions as they come in. But it will for sure happen before the next issue.

A curious stage of development. It seems that the information flowing our way comes in waves. For example, this month we got notices of several women's consciousness groups, review copies of books about women, etc. And I don't really have an explanation, but we're not in a position right now to judge such materials. We expect to do a top to bottom, side to side analysis of *RAIN*'s scope, come up with editorial guidelines, etc., but it will probably have to wait till this summer when we can look at it from a discrete distance.

The same is true for other subject areas: some areas of information we've dropped temporarily (such as games) because we were deluged with press releases about new teaching aid/games with inadequate background to judge, review, select. We are interested in some of the subject areas we've temporarily banned, but we feel we should sit back for awhile, study the area and/or find someone with the necessary background to act as sub-editor.

In general: it is very difficult for us to respond to skeletal press release-type information, especially in regard to books, magazines, etc, and when we've had no previous contact with the sender. Sometimes we will enter the information when it seems the resource is sufficiently unique—one of a kind. But, please, if you can afford it, send as complete information as possible.

The *RAIN Catalog* is in process. We are researching the areas of information we've covered so far in *RAIN* and updating, correcting. Most importantly, we are filling out the information base to form the sections into introductory guides. If you would like to help in this process, write to us about resources we've failed to mention, or write telling us what areas you might be able to help with.

Steve Johnson



## PLEASE NOTE

Laura Williamson, former manager of the Environmental Education Center, is now working at OSPIRG coordinating the work of student interns. She can be reached there: 408 S.W. 2nd, Portland, Or. 97204. (503) 222-9641.

*Rain* #7 cover. Steve, Anita, and Lee sharing a small pie. Sorry, bad print job.

## AGRICULTURE·FOOD

*Alternative Market Newsletter*  
 P.O. Box 554  
 Republic, Wn. 99166

An outgrowth of the Nov. '74 agriculture conference. The newsletter serves as a vehicle of communication among food coops, food producers and small trucking groups. The first issue has a listing of over 100 food coops in the northwest.

### *Trees of Washington*

Cooperative Extension Service  
 College of Agriculture  
 Washington State University  
 Pullman, Wn. 99163



Revised. Free. 41 pp. Bulletin No. 440.

### *American Farmers and the Rise of Agribusiness: Seeds of Struggle.*

Arno Press  
 New York Times Co.  
 330 Madison Ave.  
 New York, N.Y. 10017

Arno is an established reprint publishing house, and this collection, which in total (46 books) costs \$1,200, is obviously a library purchase. (Editions may be bought separately but not inexpensively.) For anyone doing research on the politics of agriculture in the U.S., this is an important collection. (Write for description of the books in collection.) They have also made available the Annual Agriculture Economics bibliographies which were published by the U.S. Dept. of Agriculture from 1929 to 1942.

### *The Hows and Whys of Food Coops* Environmental Action Bulletin 33 E. Minor St. Emmaus, Pa. 19049

March 22, 1975 issue. Devoted to survey of food cooperative ventures around the country; regional buying networks, and description of Pumpkin Sour and other canning cooperatives, started by the Ball Corporation. (Joel M. Jackson, Food Preservation Program, Ball Corporation, 1509 Macedonia Ave., Muncie, Indiana 47302.)

### *Organic Farming Yearbook of Agriculture*, edited by Ray Wolf.

\$2.95 ppbk from:

Rodale Press  
 Organic Park  
 Emmaus, Pa. 18049

How large-scale commercial organic farmers are flourishing amidst high fertilizer and pesticide costs, increased insect and weed resistance, drought and soil erosion. From "What it is" to animal manure, sewage sludge, weed and bug solutions, and marketing. You'll learn a lot just reading the index in the back.

**Tilth Newsletter**

P.O. Box 2382

Olympia, Wn. 98507

Serving as a communication vehicle for participants in the Nov. 74 Ellensberg conference on agriculture, relating developments in the groups spawned by that gathering as well as news of legislation (mostly in Washington) affecting small towns, rural areas and farmers; abstracts of books and articles; trends in agriculture and energy. Though some of the areas of information they deal with overlap with our own, the support of a rural based communication vehicle in the Northwest seems essential. Subscription is \$5/yr. Or send donation and SASE for sample copy.



**"High Net Energy Environmental Farm Demonstration Proposal"** available from:

J. Anthony Angell, Supervisor  
Environmental Education,  
Northwest Section

Intermediate School District #110  
100 Crockett St.  
Seattle, Wn. 98109  
(206) 284-3660

Chinese farmers put 5 calories of food energy on the table for every 1 calorie used in the fields; that is, their methods produce a "net gain" in the amount of energy available to their society. They have a "high net energy" way of doing things. American agriculture, on the other hand, is so dependent on oil and gas for fertilizer, fuel, pesticides and herbicides that we put 20 calories in and get only 1 calorie out on our plates. Our methods produce either a "net loss" in energy or, at best, have "very low net energy efficiencies. With seed money already granted from the Washington State Supt. of Public Instruction, this proposal seeks federal and foundation funding to demonstrate a more energy-efficient farm-to-market-to-consumer system.

## ARCHITECTURE

**Solar Greenhouses**

\$40 to \$800 from:

Richard S. Speed

SOLTEC

70 Adams St.

Denver, Colo. 80206

(303) 333-8869

Kits for three models: mini solar greenhouse, residential solar-heated greenhouse and commercial solar greenhouse. Write for brochure.

**Paper Houses**, by Sheppard, Threadgill & Holmes, 1974. \$6.95 ppbk from:

Schocken Books

200 Madison Ave.

New York, N.Y. 10016

An entertaining "how to" by people who did. Paper house history and survey; geodesic, zome and folded-plate structure design; construction methods. They take you through the entire process in building an edge truncated cube. Clear photos and drawings. Bibliography. Remember, wood is one of our few renewable resources.

**Solar Energy Housing Design in****4 Climates**, 1975, 250 pgs. \$12.95

softcover from:

TEA-Total Environmental Action

12 Church Hill

Harrisville, N.H. 03450

(603) 827-3374

While analyzing solar heating systems for housing and designing solar homes for 4 different U.S. climates, under contract to the AIA, TEA learned how to 1) use energy conservation techniques to reduce energy demand 30 to 50 percent, 2) use passive (no moving parts, fluids, pumps, fans) and active solar energy collection methods to save another 25 to 45 percent and 3) use electricity and gas only during off-peak times to reduce utility company peak-load requirements on which the need for new power plants is based. Well-illustrated, technically correct and humanly sensitive. TEA's critique of the National Bureau of Standards' "Performance Criteria for Solar Dwellings" questions the idea that expensive mechanical systems should be designed using inflexible rules applied by the same professionals who specialized in providing us with energy-wasting shelter in the past. Should be in every architect and building system engineer's office: very useful to the layman "design-it-and-do-it-yourselfer."

**Interim Performance Criteria for Solar Heating and Combined Heating/Cooling Systems and Dwellings**

Government Printing Office

Washington, D.C. 20402

#003-003-01388, class c-13 6/2 so4

\$1.90

Developed by the National Bureau of Standards under contract to HUD.

**Retrofitting Existing Housing for Energy Conservation: An Economic Analysis.**

Government Printing Office

Washington, D.C. 20402

#c13.29: 2/c4. \$1.35

By the National Bureau of Standards. Studies the amount of insulation possible (above previously accepted averages) for maximum energy conservation.

See also pages 7, 8 & 9

## AUDIO VISUAL

**California Video Resources Project**

San Francisco Public Library

Civic Center

San Francisco, Ca. 94102

Newsletter. Coverage of news of use of video/cable in California libraries; evaluation of video equipment; reviews of commercial and community video tapes. \$20 for out of California libraries and institutions; \$10 individuals.

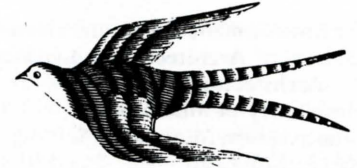
**Videotools**

CTL Electronics Inc.

56 W. Broadway

New York, N.Y. 10007

\$5.00. A consumer's guide (kind of like *Whole Earth Catalog*) to 1/2" and 3/4" video hardware. (Input for catalog by a broadbased group of people, including TVTV, Video America . . .).

**Media America**

P.O. Box 25032

Seattle, Wn. 98125

First annual small format film and video festival. Entry and fee by July 15. \$500 first prize. \$8 entry fee. Jeff Tobolski, festival director.

**ACCESS**National Citizens Committee for  
Broadcasting1346 Connecticut Ave., N.W. Rm. 525  
Washington, D.C. 20036

Started by Nicholas Johnson (*Talking Back to Your Television*). Information regards access to public/mass media (its focus); also developments in cable systems, watchdogging the FCC. Bi-weekly \$20/yr.

**Televisions**

Community Video

2414 18th, N.W. (P.O. Box 21068)

Washington, D.C. 20036

Previously *Community Video Report*—reviewed in *Rain* #4. 10 issues/yr., \$10. Broadcast TV, health and social services communications, women and minority use of media, hardware, print source review . . .

**Open Circuit Television**

Box 5463

Seattle, Wn. 98105

Currently working on documenting Ecotop's methane project and conducting video workshops at the Seattle Public Library (May 3, May 22).

continued on page 4

**AUDIO VISUAL**

continued from page 3

**Community Video Exchange**

**Milwaukie Public Library**  
814 W. Wisconsin Ave.  
Milwaukie, Wi. 53233

Lots of talk about attempts to get libraries involved in non-print materials; into image, video, audio, film collections; and this sounds like a project that's gone a long way. They have a catalog of over 200 tapes available and offer equipment and training to the public.

**Video Clearing House**

P.O. Drawer 33000 R  
Miami, Fla. 33133

A non-profit corporation with a growing library of video tape instructional material; especially designed for materials on the college level. (First newsletter lists video tapes now available.) Prices for purchases range from \$70 to \$120.

**Built Environment Communication Center**

**School of Architecture & Landscape Architecture**  
University of Minnesota  
Minneapolis, Minn. 55455  
(612) 373-2198

Though the tapes listed in their catalog are available for students at the university, they are into exchange with other video tape producers. And it sounds like some very good tapes, as well as ones of local importance: Ouroboros, Anthony Judge, Larry Pederson, Joel Schatz, Buckminster Fuller, sounds of dolphins . . .

**COMMUNITY**

**Assessing Your Community**

(on overlay maps)  
**Northwest Community Education Development Center**  
University of Oregon  
1724 Moss St.  
Eugene, Or. 97403

70¢. This is a good workbook for teachers and others involved in community understanding. A guideline similar to the Yellow Pages of Learning Resources, though with the goal of actual inventory of neighborhood community resources.

**Berkeley, California Pest Control**

Bill and Helga Olkowski (founders of the Berkeley Ecology & Recycling Centers) for the last three years have worked with the city of Berkeley and members of the Dept. of Entomological Science at the Univ. of California and have developed a system of pest control that has just about eliminated the use of chemicals, mostly by importing and using other insect enemies of the pests. In the process, the city of Berkeley has saved about \$22,500 a year.

**Institute for Local Self Reliance**

1717 18th St., N.W.  
Washington, D.C. 20009  
(202) 232-4108

Investigating the potential of a variety of economic and technological alternatives for urban self reliance. They provide information to individuals, cities, organizations concerned with local initiative and independence. Through Communitas, university without walls, they help in the design of urban and community development classes (leading to B.S., B.A. degrees).

The list of publications illustrates the range of concerns. They will soon be publishing a monthly newsletter, *Self Reliance*. (They, not as stated in our directory—Community Technology, will be publishing this magazine.)

*Energy, Agriculture and Neighborhood Food Systems* (75¢); *Proposal for a Neighborhood Food/Waste/Energy System* (75¢); *Hydroponics, 3 Parts* (\$1.00); *Composting in the City* (50¢); *Necessary Land for Various Diets and Production Schemes* (25¢); *Decentralized Food Production Research* (25¢); *Urban Aquaculture Comes of Age* (25¢); *Who Takes Out the Garbage in D.C.?* (75¢); *Waste Treatment in D.C.* (25¢); *Dawning of Solar Cells* (\$1.50); *Large Scale Sprouting: A Cottage Industry* (75¢); *Urban Gardening Chart* (\$2.00).

**EDUCATION**



**Acclimatization**

**Steve Van Matre**  
**American Camping Association**  
**Bradford Woods**  
Martinsville, In. 46151

\$3.25. What I think distinguishes this "field trip experience" book is the not-so-self-conscious, not-so-abstract teaching approach. Instead, the exercises and involvement tactics are sensuous, tactual, poetic, making it as useful for teachers as students (or for most any person).

**Household Energy Game**

**Sea Grant Communications Office**  
1800 University Ave.  
Madison, Wi. 53706

A nicely-done "game" similar in some ways to "Lifestyle Index," with ways of measuring personal energy habits. Good for school use.



**Oregon Small Schools Association**

**State Dept. of Education**  
942 Lancaster Dr., N.E.  
Salem, Or. 97310

A voluntary self-improvement program for small schools (public and non-public) to provide for themselves above and beyond what the Dept. of Education can offer. A summer institute planned. Newsletter. Write for details.

**Only One Earth**

**Dept. of Public Information**  
Pennsylvania Station  
312 Old Main  
University Park, Pa. 16802

It is a free, nicely done monthly, using a selection of prompting style articles written by Univ. of Penn. teachers (on energy, architecture, environment), with authors' addresses for reader participation.

**SCORE, Inc.**

(Student Competitions on Relevant Engineering)  
Rm. 5-336  
Mass. Institute of Technology  
Cambridge, Ma. 02139

Design competition aimed at encouraging students to experiment with alternative energy sources in home and small industries; contact Mark Radke.

**Alternatives in Secondary Education**

**School District #1**  
**League of Women Voters**  
208 Senator Bldg.  
Portland, Or. 97204

40¢. Short review of how the schools and schools within schools are working, with a listing of those programs available in the Portland area.

**Sunfund**

**Friends of Can Inc.**  
30 East 68th  
New York, N.Y. 10021  
(212) 879-9736

Projects include working on a solar exhibit for the Smithsonian, slide show, resource library, and plans to work on a large National Alternative Energy conference.

# Self-sufficiency, Energy, Rural Skills Schools and Programs

an in process listing; tell us what is missing.

## Antioch College West

Rt. 1, Box 28A  
Winters, Ca. 95694  
80-acre organic farm, work and studies program.

## Solar Utilization, now short courses

Arizona State University  
Tempe, Arizona 85281  
Short course in solar energy application to buildings, offered in January, will be repeated May 19-23, solar experts from around the country giving lectures. Coordinated by Jeffrey Cook and Dr. Byard Wood. \$325 tuition.

## Alternative Energy Fair

School of Environmental Studies & Planning  
California State College, Sonoma  
Rohnert Park, Ca. 94928  
May 10 and 11. An exchange of information, gathering, celebration, on alternative energy design. Low cost designs for alternative energy system. Compost privies, pyramids, methane digesters, solar collectors, working examples on campus.

## Central Washington State College Office of Continuing Education & Summer Session Ellensburg, Wn. 98926

The rural skills offerings are increasing as well as courses in "foods found in the wilds," plant ecology, elements of natural living. Contact: J. E. Baldi.

## Farrallones Institute

P.O. Box 700  
Point Reyes Station, Ca. 94956  
Apprenticeship program in four areas of study: architecture, small scale natural energy systems, design with nature, small scale coherence & economy, use and development of an integral urban homestead.

## Good Earth

Evergreen State College  
Olympia, Wn.  
Coordinated study for 60-80 students in small scale farming; reading a lab work; soil preparation, sowing, irrigating and harvesting of crop grasses; apiary practice; methane production, animal husbandry. Niels Skov, coordinator.

## Limesaddle

Rt. 1, Box 191  
Oroville, Ca. 95965  
20 acres of rock and manzanita, ripped apart by hydraulic mining. "We're going

to take this torn apart property and put it back together as an ecologically balanced highly productive mini-village learning center where we can develop, test and teach methods of reclaiming abused land, organic agriculture, homesteading skills, recycling, natural energy production and cooperative living."

## Energy Center Linfield Research Institute Linfield College McMinnville, Or.

5 week, 5 credit course on alternative energy. Summer session June to July.

## High Valley Summer Session

Rt. 1, Box 1670  
Washougal, Wn. 98671  
During the first three weeks in August, an educational-participatory summer session at High Valley, Skamania Co., Washington, will combine classroom instruction in energetics, ecology and productivity with direct involvement in the High Valley alternative life style. All good things from college transfer credit in anthropology to organic gardening or building your own shelter are in the program.

Costs for one, two or all three weeks will run \$110/week for living expenses and instruction; if transfer credit is desired, the costs will be \$100/week plus PSU summer term tuition for 2, 4 or 6 credits. Enrollment is limited, so plan now for Aug. 4 through 24th at High Valley.

## Living Lightly

Oregon Museum of Science & Industry  
4015 S.W. Canyon Rd.  
Portland, Or. 97221  
A week-long series of classes, demonstrations, discussions on resource-conserving lifestyles, underground houses, energy conservation in buildings, wood stoves, etc. Contact: Linda Craig.

## Living Learning Center Southern Oregon College Ashland, Or. 97520

Self sufficiency, appropriate technology classes and workshops.

## Living Systems Institute Marylhurst Education Center Marylhurst, Or. 97036

"A World of Sense," a series of ten

weekly workshops on principles of food production by organic, ecologically sound, money saving methods. Soil testing, garden design, plant propagation and care, nutrition and diet, pioneer agriculture. Fee \$20 for ten sessions.

## Pitzer College Office of External Studies Claremont, Ca. 91711

Art, alternative energy and environment summer workshop. June 16-July 11. A 4-week intensive workshop for two course credits. Conducted at Pitzer's Thompson Ranch wilderness preserve in San Gabriel Mountains. \$650 tuition, room and board.

## Rural Apprenticeship Program

Rt. 1, Box 14  
Perhastin, Wn. 98847  
Kind of like a foreign exchange student program for urbanites wanting to work and live, and thus learn, on small farms (I think still in formative stages).

## Red Barn Program

Eastern Washington State College  
Cheney, Wn. 99004  
For summer 1975: windpower, composting, organic gardening, traditional American crafts, primitive and folk medicines. Also workshops in spinning, weaving, blacksmithing, eating wild foods. Horace R. Simms, program coordinator.

## Rural Skills Workshops

P.O. Box 6093  
Seattle, Wn. 98188  
Short workshop program in shelter, energy systems, spring planting, etc. Contact: Bill O'Neill.

## School of Country Living

c/o Carla Emergy  
Kendrick, Id. 83537  
This summer, courses in tanning, weaving, beekeeping, harnessing and working with horses. (Carla is the one who put together a rather incredible cookbook reviewed in *Rain* #3.)

## Solar Energy Center University of Oregon Eugene, Or. 97401

May 15: Forum—heat exchangers, controls, instrumentation. May 22: Eugene Water Electric Board progress report. May 29: U.S. Solar Thermal Collector Group progress report. June 5: U.O. Solar Applications group progress report.

# ENERGY

## Energy Environmental Center Update

### Passive Energy Systems Research and Consulting

**A.J. Davis**  
P.O. Box 499  
Blacksburg, Va. 24060  
Researching, building low technology alternative energy source hardware, mostly solar and wind. Involved in environmental education and energy building design. Publications: *Alternative Natural Energy Sources in Building Design*, \$7.00.

**Energy Information Center**  
James C. Logan, Exec. Director  
Newmarket, N.H. 03857  
(603) 659-5774

Professional evaluation of energy management in offices, factories and homes; staff training programs; general public, high school and college lecture series; new product consultation; resource library. Write for details.

**Alternative Sources of Energy Collective**  
Pam Hurd  
Environmental Studies Board  
University of California  
Santa Cruz, Ca. 95064  
(408) 429-2104

Resource library, community education on energy conservation and renewable sources of energy. Formerly Autonomous Dwellings Collective with emphasis on self-sufficient housing.

**Operation Sundance**  
Malcolm Lillywhite, Director  
Evergreen Open Living School  
Rt. 6, Box 63  
Evergreen, Colo. 80439  
(303) 674-6633

An interdisciplinary environmental education program which emphasizes solar energy and other natural energy as alternative energy sources. Children, staff, parents and community volunteers together develop solutions for local environmental programs, using the concept of domestic technology. Funded by Title III, ESEA Contract # 8767.

**Conservation Tools & Technology**  
Hugh Sharman & Derek Partridge  
4 Lonsdale Rd.  
London SW 13 England  
Formerly Andrew McKillop's Low Impact Technology, renamed and moved to London. Ask for their list of publications and conservation tools.

**Long Island Alternative Energy Study** is being undertaken by Dubin-Mindell-Bloome Associates, hired by Suffolk County Department of Environment. They will be studying energy consumption/use patterns and, among other things, will be exploring the possibilities of both solar and wind energy for the area's 2.5 million inhabitants. 42 W. 39th St., New York, N.Y. 10018.

**"Solid State Temperature Sensor Outperforms Previous Transducers." *Electronics Magazine*, March 10, 1975.**  
The silicon transducer only recently recently available to industry, though used by the military for nearly 10 years, is inexpensive (\$15) and very useful in measuring solar collector temperatures in order to adjust fluid flow rates, orientation or tilt for increasing heat collection and efficiency.

**Technology Application Center**  
University of New Mexico  
Albuquerque, N.M. 87131  
(805) 277-3622  
Designated by NASA-Lewis Research Center to disseminate technical reports produced by Lewis relating to terrestrial energy. Write for their flyer describing Lewis documents currently available.

**From:** Preliminary draft of update to *Solar Energy for Pacific Northwest Buildings*. John Reynolds & Steven Baker. With changes of important magnitude from previous findings. School of Architecture & Allied Arts, University of Oregon, Eugene, Or. 97403. (Send 50¢ for update.)

**Oilweek**  
Observer Publishing Co.  
2420 Wilson Blvd.  
Arlington, Va. 22201  
\$60/yr. A reporting service (Observer Co. has several) published weekly. Trends in the oil industry, national and international. Research and legislation affecting the oil industry.

### Profits slide in 4th quarter

	Net Income Fourth Quarter (in millions)	% Gain over 1973	Net Income 1974 (in millions)	% Gain over 1973
Amerada Hess	67.9	-39.3	201.9	-17.9
Arco	96.9	6	474.6	75.6
Ashland	38.6	12	203.8	50
Cirgo	46.4	10.7	7.15	-123
Clark	61.8	-30.8	327.6	35
Continental	854.5	9	\$ 3,100.0	28.5
Exxon	58.6	12.3	281.0	97.6
Getty	185.0	-20	1,065.0	33
Gulf	40.9	-28	170.5	32.0
Marathon	136.3	-51	1,040.0	22.0
Mobil	84.5	-3	402.1	74.7
Phillips	158.2	99.2	620.5	87.0
Skelly	35.5	---	113.3	158
Sohio	34.5	67.4	147.5	65.0
SoCal	293.0	4	970.0	15
Standard of Indiana	174.8	44	970.3	90
Sun	54.0	-38.8	378.0	64.3
Tenneco	76.5	-5.4	321.5	4
Texaco	319.8	-29.5	1,586.4	22.8
Union	55.5	8.8	288.0	60.0

**Battelle's Columbus Laboratories**, under the sponsorship of 12 Japanese companies, is conducting a worldwide survey of municipal incineration systems that permit recovery of energy.

**Funding for initial establishment of a Geo-Heat (geothermal) Utilization Center** has been granted by the Pacific Northwest Regional Commission to the Oregon Institute of Technology, Klamath Falls. Director: Paul J. Lienau.

**Energy Reporter (monthly). Free from:**  
Energy Reporter Registration  
Federal Energy Administration  
Old Post Office Bldg., Rm 307B  
Washington, D.C. 20461  
Also ask to receive notices of new FEA publications.

8 Year Average Daily Radiation in Langleys: Corvallis

(1 langley equals 3.69 btu's/sq. foot)

Horizontal Surface at National Weather Service - Hyslop Field Laboratory, Corvallis, Oregon (44 38'N)

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	85	112	174	195	378	549	569	495	399	331	144	70
2	78	124	189	314	480	503	673	541	446	312	181	68
3	120	111	163	387	448	480	681	533	428	300	136	87
4	101	97	165	306	420	549	554	420	421	267	129	75
5	87	89	182	330	374	516	556	506	368	289	144	64
6	95	121	205	326	316	453	508	494	380	268	144	90
7	92	168	259	339	419	539	533	515	399	276	111	73
8	85	161	275	288	408	468	512	532	401	281	93	65
9	102	124	199	239	353	453	469	533	406	235	114	72
10	109	135	163	351	457	518	516	578	359	202	118	89
11	77	145	213	359	478	474	575	552	432	168	134	97
12	82	125	214	302	488	601	655	450	397	208	109	74
13	68	142	223	353	539	568	590	471	384	210	108	58
14	87	125	207	339	519	456	623	508	361	261	101	55
15	57	123	249	410	445	481	638	489	350	260	97	46
16	71	125	243	326	535	571	543	446	389	261	112	50
17	104	112	331	320	502	538	600	507	382	210	67	93
18	99	134	288	270	511	620	591	473	310	225	73	43
19	110	137	268	331	535	600	606	446	320	150	138	39
20	129	182	324	420	572	549	572	459	263	132	61	39
21	122	165	249	348	558	560	599	434	271	139	65	66
22	123	168	211	394	408	516	570	469	297	129	63	55
23	98	183	269	339	470	528	595	428	349	147	42	57
24	117	181	241	353	442	473	596	381	357	180	74	67
25	129	208	241	424	484	516	562	484	347	172	80	97
26	116	191	206	334	494	538	566	472	346	164	70	72
27	122	183	242	367	544	499	541	441	403	121	97	82
28	137	126	257	400	576	552	607	469	306	168	111	54
29	114	293	347	514	541	561	470	311	205	114	66	64
30	93	308	376	532	597	569	332	345	152	77	64	64
31	113	292	373	573	573	514	341	118	118	118	78	78
Monthly Total	3,122	3,997	7,343	10,039	14,620	15,829	17,821	14,669	10,927	6,541	3,107	2,105
Average per day	101	143	237	334	472	528	575	473	364	211	104	68

**How to Set Up a Coal or Wood Stove, 2 pgs. and Home Heating in an Emergency, 15 pgs. Both free from:**

Cooperative Extension Service  
University of New Hampshire  
Durham, N.H. 03824

Does anyone know where to get booklets like this in the Pacific Northwest? Ask for their publications list.

**Wood Stove Plans and Manuals from:**

Jim Fisk  
c/o Toby Farm  
Dennis,  
Cape Cod, Mass.

Designs and instructions for building stoves for heat, cooking, oven baking, supplementary hot water, with after-burner system.

**The Complete Book of Heating with Wood, by Larry Gay. \$3 from:**

Garden Way Publishing  
Charlotte, Vt. 05445

It's all here: environmental impact, picking the tree, felling, hauling, bucking, splitting, seasoning, wood combustion, modern stoves, airtight, tile and soapstone stoves, old stoves, the chimney, heat exchangers. Nice drawings. Excellent companion to *Hot Water* (Rain 2, p. 8 . . . solar collectors and wood heat) and Jim Fisk's *Wood Stove Plans and Manuals*. Ask for publication list.

**Interim Report on Solar Heating and Cooling Program. Free from:**

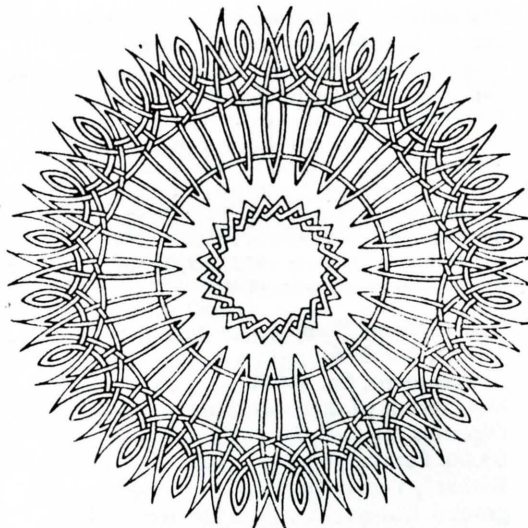
ERDA Technical Information Center  
P.O. Box 62  
Oak Ridge, Tenn. 37830

Submitted to Congress April 7, 1975, calls for the demonstration of solar heating by late 1977 and the demonstration of combined solar heating and cooling by late 1979. Approximately 25 percent of our nation's current energy use is to heat and cool buildings and supply domestic hot water. For each 1 percent of all U.S. buildings that could be equipped with solar H&C systems, about 30 million barrels of oil would be saved annually.

**Energy, Environment and Building, by Philip Steadman. \$5.95 ppbk from:**

Cambridge University Press  
32 E. 57th St.  
New York, N.Y. 10022

Energy conservation in buildings, solar energy for water and space heating, directory and maps of solar heated buildings in the U.S., windpower, small scale water power, composting waste treatment and methane gas, water conservation and local water collection covered in a clear and easy way. This and the *Energy Primer* (Rain 6, midsection foldout) will bring you up to date quickly.



**Save Energy: Save Money! by Sandra & Eugene Eccli, Dec. 1974, 40 pgs.**

Free from:

The National Center for Community  
Action

Network Services: Energy  
1711 Connecticut Ave., N.W.  
Washington, D.C. 20009

or from your county Energy Affairs Assistant (EAA) in your local Community Action Agency if you live in Washington state. See list this page. Well-illustrated, straightforward "how-to-do-it" home energy conservation booklet by the co-editors of *Alternative Sources of Energy* magazine. More tips on how to save energy than most manuals supplied by utility companies: sealing the house against heat loss, getting heat where you need it when you want it, using the sun, furnaces-stoves-fireplaces, appliance savings, do-it-yourself projects, what to do in emergencies. Includes a list of OEO Regional Offices who can help you winterize your home, get heating fuel and gasoline.

**Synergy: A Directory of Energy Alternatives. \$10 per year, twice yearly from:**

Jeff Twine, Publisher  
Synergy  
P.O. Box 4790  
Grand Central Station  
New York, N.Y. 10017

A real gold mine. Finally, a directory-bibliography-index to publications, products and organizations dealing only with alternatives to conventional fossil fuel and atomic power; for those who have gotten past solar, wind and bioconversion basics and need help keeping up with the latest developments. Also covers geothermal, steam power, heat pipes, heat pumps, hydrogen, electric vehicles, fuel cells, direct energy conversion, waterpower, tidal power, energy storage. Better, more concise services. (How about a monthly or quarterly, Jeff?)

**Windmill Survey**

New Mexico State University's College of Agriculture recently conducted a survey to determine the condition of U.S. windmills. Results: about 15,000 are in A-1 working condition, and 60,000-70,000 can be restored. About half the existing 175,000 windmills have deteriorated beyond repair. The college plans to add a course in windmill repair to its curriculum. According to the college's Morgan Rasmussen, "Ranchers and farmers all over are looking for ways to save on energy costs, and that explains the reason for the present windmill comeback. Windmills are much cheaper than conventional systems." (From *AERO*)

**Wooden Windmill Blades**

\$25 to \$60 from:  
Thomas R. Conlon  
Aero Power Research Co.  
P.O. Box 2001  
Burlingame, Ca. 94010

Straight, vertical-grained, kiln-dried Douglas fir or aircraft quality Sitka spruce blades of 5', 7'6" or 10' diameter. Supplied with complete balancing, finishing and mounting instructions and with complete plans for an economical wind generator.

**A Cost Comparison Between Large Scale Wind Electric Systems and Existing Generation Systems.**

Available from:  
Energy Center, OMSI  
4015 S.W. Canyon Rd.  
Portland, Or. 97221

Statement presented to local FEA Project Independence hearings in Portland by Lee Johnson. Revised April 1975.

**Staff Report on Wind Power, Sept. 1973. Free from:**

Bureau of Power  
Federal Power Commission  
Washington, D.C. 20426

Introductory pamphlet on windpower feasibility, with emphasis on Smith-Putnam scale windmills connected to utility grids.

**Simplified Windpower Systems for Experimenters. 1975, by Jack Park. \$6.00 from:**

Helion  
Box 4301  
Sylmar, Ca. 91342

From basics to exotica gently yet completely in workbook format with example problems next to clear drawings and graphs. Angle of attack; relative wind, blade layout, aspect ratio . . . all that will be clear enough to you when you're done reading that you'll be able to critique the plans you bought or design-it-yourself. Excellent for vocational and community college libraries.

continued on page 8



## ENERGY

continued from page 7

**Structural Analysis of Wind Turbine Rotors for NSF-NASA Mod-O Wind Power Systems**, by David Shea for NASA Lewis Research Center. \$3.75, NASA TM-X-3198 from:

N.T.I.S.

Springfield, Va. 22151

Presents preliminary estimates of vibratory loads and stresses in hingeless and teetering rotors for proposed 100-kw wind power system. Report gives stresses in the shank areas of the 19 meter blades for static, rated and overload conditions.

**Power from the Wind, 1948, 1974**, by Palmer C. Putnam. \$9.95 hardbound from:

Van Nostrand Reinhold Co.

Litton Educational Publishing

450 W. 33rd St.

New York, N.Y. 10001

In 1941 a large 175-foot diameter, two-bladed wind turbine was designed, fabricated and erected on Grandpa's Knob, a 2000' high mountain near Rutland, Vermont. Called the Smith-Putnam, it produced electricity for the Central Vermont Public Service Company's network at a cost close to that of today's nuclear/fission power plants. Putnam, an engineer and consultant to the U.S. government on renewable energy sources, describes the experiment from start to finish, in what is now the definitive and classic work on the planning and design of megawatt wind-electric systems. There stand today mighty wind mills, built because of this book, that are models of what we ourselves could do as individuals, if we wished. To be read with Prof. E. Wendell Hewson's *The Windpower Potential in Selected Areas of Oregon* (free, Atmospheric Sciences Dept. OSU, Corvallis, Or. 97331).

**A Nation of Energy Efficient Buildings by 1990**. Free from:

The American Institute of Architects

1735 New York Ave., N.W.

Washington, D.C. 20006

In their earlier report, *Energy and the Built Environment: A Gap in Current Strategies*, the AIA concluded, "We are now investing vast quantities of increasingly scarce capital resources in strategies which have less potential, less certainty and longer-delayed payoffs than an alternative strategy emphasizing a national program for energy efficient buildings." This new report shows how such a program can be economically, financially and administratively feasible, and presents recommendations for immediate action. Ask for a publications list.

The state of Oregon has been using less energy, but the costs are still rising.

For example, five state buildings on the Capitol Mall—the Capitol Building, Public Service Building, State Library, Labor and Industries Building and Highway Building—used a total of 1,016,000 kilowatt hours during February 1975, a 20 percent drop.

However, the state's power bill for the five buildings was \$7,620 in February 1973, and \$8,976 in February 1975, despite the smaller amount of power used.

New Alchemy West

P.O. Box 376

Pescadero, Ca. 94060

Most recent of their newsletters, *Methane Digesters for Fuel Gas and Fertilizers*, \$3.00. Put together by L. John Fry, Richard, Yedida Merrill. Covers background, history, as well as instructional material. Extensive bibliography. Good for both introduction to methane production and for those doing it.



**Environmentally Appropriate Technology: Developing Technologies for a Conserver Society in Canada**. March 1975, by Bruce McCallum

Advanced Concepts Centre

Office of the Science Advisor

Environment Canada

Ottawa, Canada K1A 043

91-page primer for government policy-makers on how a new school thought evolved from the environmental movement, the back to the land movement and biotechnics (life supporting technology); how renewable energy sources were re-discovered and how they can be put to best use in architecture, agriculture, transportation. Biomass energy, sailing ships, housing design, flywheel energy storage, clivus multrum, telecommunications, Darrius windrotors, heat pumps, all the options in the transition to a future conservation-oriented society. Bibliography.

**Energy, Vol. I: Demands, Resources, Impact, Technology and Policy**. 1974, by S.S. Penner and L. Icerman. \$8.50 ppbk from:

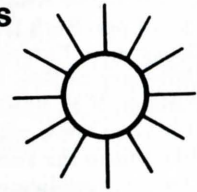
Addison Wesley Publishing

Advanced Book Program

Reading, Mass. 01867

Careful, comprehensive assessment of energy economics, the first of a three-volume set of lecture notes. Investment and electricity costs, utilization efficiencies, waste recovery, past societal costs of coal-generated electricity; college level material.

## Solar Energy Newsletters



**Solar News & Views**, monthly  
**International Solar Energy Society**

*News (ISES)*, quarterly**Solar Energy Journal**, quarterly

\$20 per year for all three from:

Dr. W.H. Klein, Secy-Treas

ISES, American Section

Smithsonian Radiation Biology Lab

12441 Parklawn Drive

Rockville, Md. 20852

\$20 yearly membership dues in ISES brings the American section newsletter, with 8 pages on U.S. local chapter activities, conferences, educational seminars, expositions, book reviews; the 8-page *ISES News* with international coverage, solar energy history; and the *Journal* with in-depth technical and academic studies by solar scientists, engineers, architects, inventors and economists the world around. A very good deal but please be patient. Membership has recently gone through the top of the charts. These are the people who can tell you how to organize a local chapter in your town. The American section is now compiling a directory listing members and their solar energy interests.

**Solar Energy Digest**, by William B. Edmondson. \$27.50 per year, monthly, from:

Lillian B. Edmondson, Circulation  
Manager

S.E.D.

P.O. Box 17776

San Diego, Ca. 92117

(714) 277-2980

The first and most widely read, started by the Edmondsons before the sun looked better as a result of energy crisis rising prices. Emphasis on all solar techniques, including wind and biomass conversion; covers only the most important legislation on all levels. Attention devoted to hand tools and reference books for the backyard "do-it-yourselfer" is unique and extremely useful. Especially recommended for high school libraries, vocational and community colleges. Ask for flyer on patented SOLARSAN collector invented by Mr. Edmondson.

**Advanced Solar Energy Technology Newsletter**. \$60 per year, monthly, from:

Carl M. Langdon, editor-publisher

A.S.E.T. Newsletter

1609 W. Windrose

Phoenix, Az. 85029

Emphasis on hi-tech developments in solar flat-plate collectors, solar thermal electric power plants, solar test facilities, storage, NSF-NASA level of applied technology. Covers important legislation, conferences. Succinct, very readable.

**Solar Energy Intelligence Report.** \$75 per year, twice monthly, from:  
Business Publishers  
P.O. Box 1067  
Silver Spring, Md. 20910  
(301) 587-6300

Covers significant developments and issues involving solar energy of all types . . . heating and cooling, wind energy, bioconversion to fuels, solar thermal-electric, photovoltaic, and ocean thermal conversion. Includes information on federal, state and local legislation, new technologies, publications, contracts and grants, marketing opportunities. Averages 8 pages. Excellent conference calendar. Name, address and phone contacts for further information. Ask about *Energy Resources Report*.

**Solar Energy Washington Letter.** \$75 per year, alternate Mondays, from:  
1001 Connecticut Ave., N.W.  
Washington, D.C. 20036  
(202) 393-1000

Emphasis on federal legislation, grants,

solar politics. Lists contacts for further information, solar seminars. Usually 4 pages long. Companion newsletter, *Solar Energy Industry Report*, covers corporate activities, new technology and marketing opportunities.

**Senator Mike Gravel's Energy Newsletter.** Donation, bi-monthly or monthly, from:  
Energy Newsletter  
Sen. Mike Gravel  
4107 Russell Senate Office Bldg.  
Washington, D.C. 20510  
(202) 224-6665

An early solar, wind and methane spokesman. 4 pages with emphasis on all types of solar energy as safe alternatives to nuclear power waste storage and sabotage dangers, usually criticizing the billions spent subsidizing atomic energy to the detriment of solar development and implementation. "ERDA is budgeted to spend only \$60 million (the cost of 1 medium-sized oil tanker) on solar in 1976 versus 14 times that, or \$840 million, for nuclear power." Sen. Gravel will help you 1) start an anti-nuclear club in your town, 2) back initiative drives, like the successful one in California, to require nuclear power plants to meet safety standards before construction, 3) supply you with Clean Energy petitions, 4) help you work for nuclear moratorium legislation.

**Biomass Energy Institute Newsletter**  
\$5 per year, quarterly, from:  
Biomass Energy Inst.  
304-870 Cambridge St.  
Winnipeg, Manitoba  
Canada R3M 3H5  
(204) 284-0472

Annual dues includes 4-page newsletter emphasizing biomass (bioconversion) energy conversion to fuel, anaerobic decomposition of organic wastes to methane gas and fertilizer.

**Canadian Solar Energy Society Newsletter.** \$5 per year, from:  
William A. Reid, Publications Ed.  
Solar Energy Society of Canada  
P.O. Box 1353  
Winnipeg, Manitoba  
Canada R3C 2Z1

Annual dues includes 4 page newsletter, which covers solar activities in Canada, including direct solar, wind and biomass energy.

**New England Solar Energy Association Newsletter.** \$5 per year, from:  
John T. Schnebly, Jr., Acting Coord.  
NESEA  
P.O. Box 121  
Townshend, Vt. 05353  
(802) 365-4084

Annual dues includes 8-page newsletter.

## Energy Center

The OMSI Energy Center responds to twenty to forty requests weekly from people who are interested in building or learning about alternative energy systems. The requests are extremely varied. Students or teachers may want better to understand "alternative energy sources;" an engineer may be considering manufacturing solar heating system components; or a homesteader with a small family may be trying to decide whether she can build her own wind or solar heating system. These requests are gratifying. They assure us that there is a market for our services; however, many of them send us scurrying about for information because we're not well supplied with complete files or sufficient knowledge yet.

While trying to keep up with requests, we're also working toward more systematic operating procedures for the future. We're cataloging our books and ordering new ones; we're rearranging files; and we're continuing and improving a periodical abstract service.

Beginning September 1, 1975, the Junior League of Portland will support the OMSI Energy Center both financially and with volunteers. \$19,500 has been granted to be used over a three-year period. Joan Smith of the Junior League will chair the project. Junior League volunteers will lead tours, teach classes, answer telephone questions, and add information to the files. Joan and two other Junior League members will begin planning with the staff this spring for their fall involvement.

We're reassigned some staff responsibilities and located some new staff members and volunteers.

- Mary Lawrence has assumed responsibility for the Energy Center's library, files and information requests.
- Lee Johnson, in addition to working on RAIN, is our consultant and the source of much of our information.
- Francis Rohrbaugh, volunteer, reads numerous periodicals weekly and abstracts the energy articles for an information file on current literature.
- Joan Smith chairs the Junior League Energy Center project. She'll plan with the staff the training for Junior League volunteers and will coordinate their activities beginning this fall.
- Walt Cundiff will begin July 1 to plan classes and tours for OMSI visitors. Walt currently teaches environmental science to junior high students in the Beaverton District. He'll be on one year's leave of absence from the district next year.
- Temple Larrabee, aeronautical engineer, teaches alternative energy classes.
- Shabtay Levy, OMSI exhibits designer, is planning Energy Center exhibits.
- Richard Siewert assists Shabtay in planning and building the exhibits.
- Linda Craig of the OMSI education staff plans the programs of the Energy Center, is responsible for the budget, and sets Energy Center policies.

The Energy Center invites questions, comments, and suggestions for needed services. We'd also appreciate your letting us know of work you have done or sources of information you find especially valuable, including books, periodicals, articles, and films. Write OMSI Energy Center or call 503/248-5920.

## FUTURES

**First International Syncon  
Committee for the Future**  
2325 Porter St., N.W.  
Washington, D.C. 20008  
(202) 966-8776

For Oct. 22-26, 1975. Cape Canaveral, Fla. An officially recognized project of the American Revolution Bicentennial Administration, to bring together approximately 600 people representing a cross section of the world to explore constructive opportunities for humanity.



**Mineral Resources and the Environment  
National Research Council  
National Academy of the Sciences**  
2101 Constitution Ave.  
Washington, D.C. 20418

This 348-page report comes up with some estimates of America's energy resources that undercut estimates made previously by the Dept. of the Interior. Including the estimate that the U.S. would run out of oil and natural gas (assuming the consumption remains the same) in 25 years and not the 40 to 60 years forecast by the government.

**The Futures Book**  
Whole Futures Catalog  
Earthrise  
Box 120, Annex Station  
Providence, R.I. 02901

In preparation stage. A guide to futures research and study: curricula, futures design, organizations, tools and forecasting techniques, bibliographies. (Hoping for a preliminary document in time for the June 2-5 World Future Society assembly.)

## GOVERNMENT

The Washington State Office of Community Development has assigned an Energy Affairs Assistant (EAA) to each Community Action Agency in the 13 counties of the state. Their job is to do a state-wide inventory of home winterization (i.e., getting ready for cold

weather) needs of low-income, fixed income, senior citizens and handicapped persons, and then, with the State Office of Energy Management, provide services and technical assistance to those who need help staying warm, saving energy and saving money. This year-long program is presently funded by Washington State at \$172,000 in anticipation of federal funding to the \$100,000 level through the Community Services Administration-OEO (Region X). The following is a list of EAAs and CAAs in each county. Ask about their booklets on home energy conservation.

**Aluster "Les" Jackson**  
Blue Mountain in Action Council, Inc.  
19 East Poplar  
Walla Walla, Wn. 99362  
(509) 529-4980

**Benton/Franklin Community Council**  
P.O. Box 2280  
Pasco, Wn. 99301  
(509) 547-0777

**Larry Knight**  
Chelan/Douglas Community Action Council, Inc.  
620 Lewis Street  
Wenatchee, Wn. 98801  
(509) 662-6156

**Lloyd Johnson**  
Clallam/Jefferson County Community Action Council, Inc.  
P.O. Box 553  
Port Townsend, Wn. 98368  
(206) 385-0776

**Al Rose**  
Grays Harbor Community Action Council, Inc.  
P.O. Box 187  
Aberdeen, Wn. 98520  
(206) 533-5100

**Gregory J. Higgins**  
Grant County Community Action Council, Inc.  
60BA East Third Ave.  
Moses Lake, Wn. 98837  
(509) 765-9206 or 754-4052  
P.O. Box 777  
Soap Lake, Wn. 98851 (office address)

**Robert McCormick**  
Kittitas County Action Council, Inc.  
Box 462  
Ellensburg, Wn. 98926  
(509) 925-1448

**Michael West**  
Lower Columbia Community Action Council, Inc.  
1208 Broadway  
Longview, Wn. 98632  
(206) 425-3430

**Clint Lougheed**  
Mason/Thurston Community Action Council  
202 Capital Theater Building  
Olympia, Wn. 98501  
(206) 943-7617

**Bill Ringrose**  
Okanogan County Community Action Council, Inc.  
Box 1067  
McManus Building  
Okanogan, Wn. 98840

**Edward Miers**  
North/East Washington Rural Resource Development Association  
219 South Elm  
Colville, Wn. 99114  
(509) 682-2515

**Jerry Purcell**  
Community Action Council of Snohomish County, Inc.  
P.O. Box 1185  
Everett, Wn. 98206  
(206) 252-5141  
**Thomas Olmstead**  
Whatcom County Opportunity Council  
P.O. Box 159  
Bellingham, Wn. 98225  
(206) 734-5121

## GROUPS/ASSNS

**Oregon Environmental Foundation**  
P.O. Box 42113  
Portland, Or. 97242  
(503) 222-1963 (Carol Fletcher)

OEF is the education and research arm of the Oregon Environmental Council.

The foundation's goals are to emphasize and support environmental education and research that will help to conserve and protect our environment. To this end, the OEF supports such activities as publishing the handbook *To Live With the Earth and the Environmental Bibliography*. It also sponsored the Oregon Shores Conservation Coalition's "Coastwatch/Oregon," an educational program for Oregon estuarine and shoreline problems. It has purchased the slide/tape presentation of Limits to Growth which the foundation, with the aid of a speaker, shows to any interested group. The first annual environmental excellence award was granted to Bob and Shirley Coffin for their work in recycling. Funding has also been provided for a research study into the effectiveness and advisability of the use of the poison 1080 for predator control.

OEF has sponsored other studies and activities and is always seeking more worthwhile projects to fund and support and will help others find funding if OEF can't provide the backing.

Supported mostly by volunteers OEF is looking for others to help. (Gay Bower)

## INFORMATION

**Ecotopia**, by Ernest Callenbach. \$2.75 (\$7.95 hardbound) from:

**Banyan Tree Books**  
1517 Francisco St.  
Berkeley, Ca. 94703

This not-so-fictional vision of an ecologically sane future perfectly complements *Sharing Smaller Pies (Rain 7)*. In 1999, newspaper columnist Will Weston is granted permission to visit and report on life in Ecotopia, the states of Washington, Oregon and Northern California, which became independent in 1980. We read his personal diary interspersed with articles on what he finds . . . ritual war games, community ownership and production in factories and farms, dependence on solar and solar-based energy systems, total recycling, an attention to trees and reforestation which borders on tree worship. Highly recommended.

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# ROUGH DRAFT IV

## Networking



Oregon Historical Society

### WHY NETWORKING?

The idea of networking does not at first seem puzzling. Systems science people began to use the term in the '50s to denote the path of operations to be completed. Most networking systems—whether they be the CIA or the antibodies in the digestive tract of the Australian termite, behave similarly, as processors of information along a path.

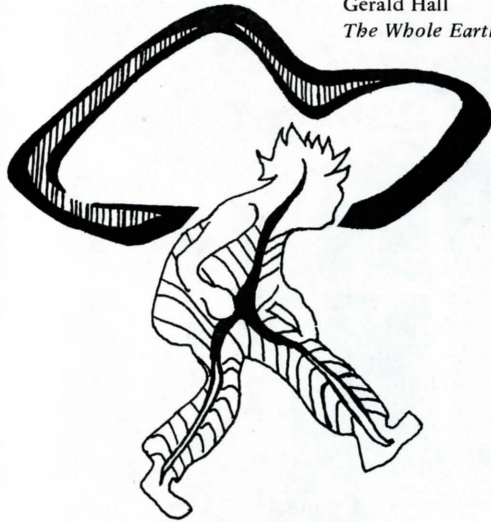
Gregory Bateson (*II Cybernetics Frontiers*) used to send his students out on this assignment: "Obtain a dead organism and, from what you can see in it, derive arguments to show that it's an information-processing entity. For which you have to deal, obviously, with things like its symmetry, the fact that nothing is rigid in its structure, that every 'straight' line is in fact a self-corrected straight line. . . . Often it comes as news to the students that an octopus is not a sea mammal or that a 'petal' of a sunflower is in fact a whole flower."

Then again, Geoffrey Vicker ("Changing Patterns of Communication" in *Futures Conditional* [Vol. 3 #2]) has reminded us that the bomb is a form of information.

*But there are old and mysterious networks carved on rocks by the sea and washed up with morning: syllables pronounced on the graves of the Druids were to have been taken from the "alphabet of the trees." The ancient, world-wide society of alchemists passed their hermetic secrets from crucible to vial, believing that their information would lead from the transmutation of matter to the transmutation of the experimenter himself. Not the least, Ariadne's thread, like the networks of the mind, leads out of the labyrinth toward home; Henry the Fiddler, a real person who sings, carries the news from friend to friend on his tours—and the reddleman's shadow appears on the ridge, whose cart is full of gossip and wool. —A.H.*

*A revolution has been going on that doesn't get into the newspapers or magazines. Development in cybernetics, information and communications theory, general systems theory and mathematical logic have come together to require a restructuring at the foundations of our knowledge.*

Gerald Hall  
*The Whole Earth Epilog*



## I. REAR-VIEW MIRROR

Searching for the roots of networking concepts raises the problem of the third chameleon. What color is the chameleon on the mirror? If ours is indeed a universe in which messages are carried from flower to flower, from cell to cell, and from the cell to the not-cell on the surface of the skin, then it is impossible to separate an "idea" about networking from the very structure and metabolism of our perceptual apparatus. The past, the present and the future appear in collusion on the mirror.

For the most part, Roughdraft IV will consider the idea of networking as a strategy for modern society, a strategy based upon socio-cultural values, technological discovery and ecological crisis.

### A. THE CULTURAL BASIS

*It would be a terrible sin to reveal to the soldiers the secrets of your art. Beware. Do not allow even an insect to be in the room where you are working.*

A Chinese alchemist

Information has always been, to some extent, subversive. *The Morning of the Magicians* by Jacques Bergier and Louis Pauwels documents countless examples of the ways in which networks have been used to protect truths unacceptable to official philosophy, while disseminating those truths in disguise.

Some information has always been the special property of some groups—and that information has, almost more than anything else, determined the "quality of life" for individuals. Issues of information control, secrecy and power have grown directly out of an historical context. Some weighty examples:

- During pre-revolutionary periods, advanced thinking takes on the cloak of another medium (pardon me, Marshall McLuhan). Often, science fiction prophesies science fact.
- Jacques Bergier and Louis Pauwels (*The Morning of the Magicians*) claim that in June of 1955 the American govern-

ment was planning a *cryptocracy*—an operation simulating an actual war condition, complete with arrangements for the government to transfer its powers to a shadow government that had already been constituted.

- The People's Yellow Pages (1971: *Vocations for Social Change*) is a contemporary access directory which grew out of the need to tap community resources in developing alternatives and job counseling programs. Its editor states that "most of us still rely on the system we are trying to change for our jobs and for the services we need. The People's Yellow Pages is a step in building a non-exploitative, alternative way to meet our daily needs."

In the modern era of an information explosion, ecological crisis and information processing innovations, the subversive role of networks is being overturned. It is beginning to be recognized that the public's ability to make decisions regarding the future depends on putting information-seeking tools in the hands of the public. Groups like Eco-Net provide open access to information networks through their files, through computer access and through video—at the same time encouraging the development of user-oriented research skills.

At the heart of the matter is a book called *Revolting Librarians* by Celeste West, a book which reflects recent movements within that bastion of modern networking institutions, the public library. "Revolting libraries" are those which attempt to be viable and democratic community resources and which seek to eliminate the prejudices of the Dewey Decimal System (the way we organize information begins to represent the value of that information) as well as those associated with censorship laws.

### B. THE TECHNOLOGICAL BASIS

While networks have always been used as strategies for transmitting new, unpopular or untested ideas, the technological capacities of computers, as well as other telecommunication devices like video, Telefax and time-sharing computer components, render access to information for more people, raising issues of public privacy and individual rights.

At what point does ready access to information make it public property? What rights do individuals have against the intrusion of 1984-style public information devices in their homes (Portland's C.R.I.S.S. system is a prime example of police-record networks which arouse a great deal of controversy). For citizens of the global village, is "dropping out" an inalienable human right or an irresponsible action?

It is unlikely that the plethora of telecommunication developments in the last twenty-five years will ever replace completely the sense of trust and intimacy associated with personal networks of family, friends, and specialized information—which touch every aspect of our lives. The tools, and the visions for larger, more public systems are, however, indisputably present.

- The idea of a Community Information Utility (CIU) has received a good deal of attention from critics and proponents alike. CIU is "envisioned as consisting of a computing and video broadcasting center connected to remote terminals. The terminals would be located in all homes in the community, in schools and in various commercial and governmental offices. Communications between the central facility and the terminals

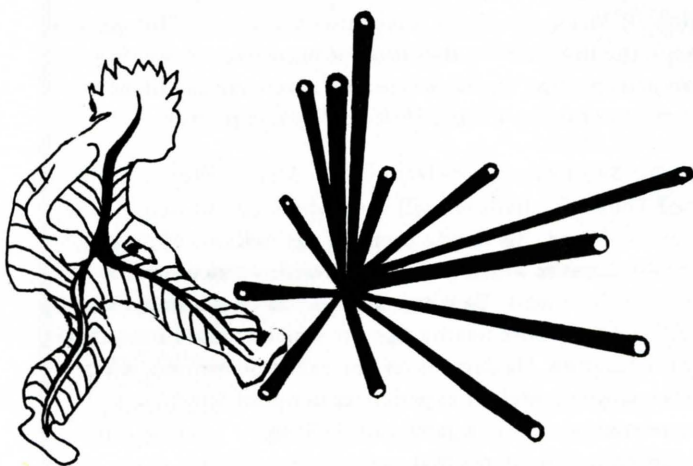
would be via television cables, and the terminals would be built around television sets augmented with, at the very least, keyboards for input to the computer, and 'framegrabbers' would freeze still pictures on the screen." ("Arguments for a Moratorium on the Construction of Community Information Utilities").

- The National Technical Information Search (N.T.I.S.), providing access to government agency publications of a technical nature, and E.R.I.C. (Educational Resources Information Center) with its huge curriculum information memory bank, have both been precedents for mega-computers systems. Community projects like Resource One, Inc., in San Francisco go one step further by introducing user-oriented computer systems where people enter their own names and interests by simple procedures. Critics of CIU point out that unless public computer literacy is introduced along with the information utility, computer systems will be subject to dangerous centralized controls.

- The development of neighborhood videocable projects like Community Focus in Portland's Corbett-Terwilliger neighborhood points to the potential of decentralized neighborhood information video networks.

### C. THE ENVIRONMENTAL BASIS

It is obvious that information networking can substitute for transportation in an energy-conserving society. On the grass-roots level, this means that neighborhoods can use telephone trees to call meetings and make ad-hoc decisions. On another level, the substitution means that people at home may not have to travel away from home to the office, but can work at home through communication. On still another level, networks like Jaybird (Republic, Washington) and the Rural Resources Information Network (Toppenish, Washington) can save agricultural resources by sharing information on the best products to buy and where to market.



## II. MODELS—THE ECO-CONNECTION

*... If Lake Erie is driven insane, its insanity is incorporated into the larger system of your thought and experience.*

Gregory Bateson  
*Steps to an Ecology of the Mind*

Networking, as we have said before, describes the way in

which information is transmitted, and the principles of networking are lodged inextricably in all living things. The universe of creation is full of models by which we can understand them and—as McLuhan suggested when he said that “computers constitute an extension of the human nervous system” (*The Medium is the Message*)—new models are constantly being created through the medium of old ones. Buckminster Fuller adds that we are moving from a world governed by the laws of matter to a “metaphysical” world, whose events are the “impinging of information on information” (*No More Second-hand God*).

Cybernetics was described by Norbert Wiener back in 1946 as the study of the way living systems are regulated through a non-linear self-organizing system which informs them with purposes and goals (*Cybernetics*, 1946). In a sense, the original model is the nervous system, charging the muscles to action and being recharged by the lactose which is distributed into the bloodstream.

In *Steps to an Ecology of the Mind*, Bateson discusses the idea of “climax ecology.” Living systems are continually evolving toward maximum complexity. When pathology enters the cell, or when deviance breaks out in a society, or when the aquatic temperatures are altered by industrial pollutants, the system falls apart. The “circuit” is essential to system adaptation and adjustment—but there are limits to the capacity of the “circuit.”

These models have tremendous social and organizational applications. Organizations, for example, tend to be self-perpetuating, and tend to find the influence from outside ideas to be damaging. Hence, in human systems, hierarchies become, in many cases, defenses against the invasion of other people's purposes. Anthony Judge, in the “Harmony of Interaction and the Facilitation of the Networking Process,” delivered at the Expo Environmental Symposium in 1974, calls the related tendency of organizations to isolate themselves from outside influences “organizational apartheid.” There's a paradox here, however, because without collaboration and inter-communication and cross-pollination of ideas, the social organism lacks integration, sanity and stability.

During 1974, Eco-Net initiated a series of conferences designed to strengthen and extend the Northwest Environmental Information Network. Only through relaxation of an agenda and an “opening up” of the format could these purposes in fact be accomplished.

Interested environmental education and information resource people were invited to a conference in fairly neutral territory—not on turf too strongly identified with any group. The conference facilitator did not impose an agenda of pre-planned events upon the group but instead allowed plenty of time for each organization to establish its ground by sharing interests and problems. Participants did not leave the conference with a “big plan” to consider but rather with a sense of commonness and mutual interaction.

Similarly, intra-organizational communication can be distorted by bureaucratic or top-down decision-making patterns. In an information rich system, a degree of control and self-determination is felt by all elements of the system. Bureaucracies, on the other hand, stifle individuals by imposing comprehensive plans, developed by the “experts.” New ideas and

people are included as they meet the criteria of an infrastructure.

Lateral decision-making in an ad-hoc situation begins with people who are interested in knowing what others are doing and initiating synergy wherever it seems feasible. Networks slowly emerge from crude linkages. Unlike bureaucracies, which calcify information networks in hierarchical form, ad-hocracies preserve and maximize options and independence of the individual.

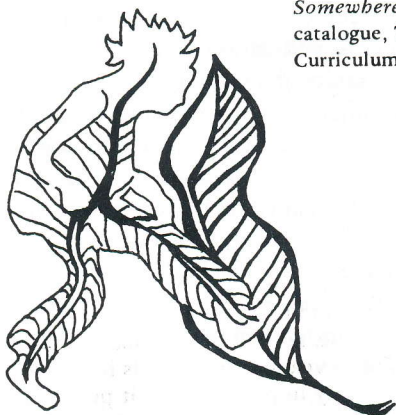
The idea that inter-disciplinary groups make better decisions also finds an antecedent in the inter-dependency of eco-systems. "Just as species in the natural environment are embedded in complex food chains, so organizations are embedded in complex formation webs," says Judge, the director of the Union of International Associations in Brussels. "The eco-system does interlink the species and contains even those species which attempt to take over the whole system. . . . We need a rich psycho-social gene pool."

Another aspect of organizational networking is apparent at any conference: networks generate other networks. At the Northwest Conference on Alternative Agriculture in November of 1974, this was illustrated by the large number of special interest group networks which developed from the large body of conferences with generalized interests.

But it is relatively easy to stand in a hotel lobby and agree to meeting-in-a-few-months-to-talk-over-that-idea-further. Back home, the good intentions often disappear with all the dittoed material from those yawning hours. The purpose of people-to-people directories like that prepared by the organizers of the Northwest Conference on Alternative Agriculture is to reinforce the development of new networks. As Lee Johnson put it, "it's hard not to feel that something happened when you see your name there with five hundred other people."

*Would you believe . . . a whole city as a learning exchange.*

*Somewhere Else*, a living learning catalogue, The Center for Curriculum Design



### III. EDUCATIONAL NETWORKING SYSTEMS

Usher into the vocabulary of the little red schoolhouse: multi-versities, learning exchanges, exploration centers, alternative

schools, community schools, schools of living, schools-for-the-future, free schools, learning communities. The appearance of a new "learning" vocabulary directly reflects a shift from thinking about knowledge information "out there" to be ingested by the student, to thinking about knowledge as a part of the information gathered by applying skills to experience.

In recent years it has become patently evident—especially to environmental educators—that people must be able to make judicious value judgments about the future of this planet, and that doing so demands knowledge of how whole systems work together, a method that employs the interaction of many of the "separate" disciplines, and an information system which helps clarify those choices by providing accurate, well-organized information. Hence, environmental educators have sometimes taken the lead in broadening the resources of the school to include those of the community and its information accessing networks (see Centers, RD III).

- One of the most influential of these experiments was publicized through a series of workshops held in 1973 known as the Total Environment-School-Community Program, an outgrowth of the Madison Man's Environment Communications Center (MEC). Dave Archbald, originator of the program, based a large part of his information package on the E1 System kits, which encouraged student involvement in all phases of school-community networking—from data gathering, researching the resources of the community, and identifying community problems and issues, to selecting and evaluating instructional materials.

- *Something Else* (1973: the Center for Curriculum Design) is probably the most complete directory to Alternative Learning Centers and Schools. Therein find the Ali Akbar Khan College of Music, the Coast Navigation School, the Holography School, the Institute for the study of non-violence, writing farms and spinning farms—a veritable adventure-catalogue that makes ordinary college look dull by comparison.

- In *The Self-Learning Society* by Don Stotler, there's a boy named Tom, who finds himself somewhere on our planet on a day in the future. His family is one of the millions of mobile American families which make nation-wide curriculum co-ordination imminent. Tom consults his Searchovision wrist-watch to locate those nearby Centers which would be available for his education. He decides on one called Sensorium, where he has environmental-art experiences in optics, kinetics, and an opportunity to play a game called "Insight." Before leaving the Center, he comments that one can find out just about anything from any Center which, like the one he has just visited, is part of an education network of information.

Far out? Well, maybe not so far.

ROUGH DRAFTS are written and published by the Environmental Education Center, a U.S. Office of Education funded project located at 373 Lincoln Hall, Portland State University, Portland, Oregon 97207. Thanks to Don, Steve and Lee for kibbitzing on this Roughdraft. Anita Helle, editor; Victoria Johnson, graphic artist; Mary Wells, layout and design.

## INFORMATION

continued from page 10

**B.C. Alternative**

c/o Alternative Community Group  
1520 West 6th Ave.  
Vancouver, B.C. Canada

An outgrowth of the B.C. Access Catalogue, preserving much of that good catalog's format and range of information for B.C. (like 63 food coops). Good how-to: how to organize a small school, community centers, tree planting, community credit unions (also an interesting excerpt from a talk by Murray Bookshin).

## ACCESS POEM

Caretaker of these parts,  
I am an immigrant  
Lost between home and everywhere,  
Needing a native to tell me the way.

What are your customs?  
Do you have families?  
How do your children grow?  
What work is done  
By the people who live here?  
What is it like inside your houses?  
How does your food grow?

Tell me the things known to everyone.  
The names of the insects,  
The trees, the mountains, the rivers,  
And the roads.

What are the names of the villages?  
What is the word for a man?  
For a woman? For friend?  
For love?

— Fitch Cady

from: B.C. Alternative

**Madness Network News**

2150 Market St.  
San Francisco, Ca. 94114

\$4 for 6 issues. With a wonderful sense of humor, though sometimes scary or sad, reports on definitions of insanity and societies' and professional psychiatrists' reactions, procedures and therapeutic methods. Subtitled "all the fits that's news to print." Archeologists finding this might feel they had found the concluding clue to our age (maybe along with a TV guide and Sears catalog?). Glide Publications has recently published a "Best of . . ." volume. \$5.95.

**Environment Improvement Case History**

Report Service  
Fred Publishing Co.  
P.O. Box 1144  
FDR Station  
New York, N.Y. 10022

This seems to be one of the more interesting moderate to expensive abstracting services (\$35/yr.), reporting on environmental enhancement projects being carried out by industries, communities, governments. With a for-more-information-contact-format, I would think it would be especially useful for urban, regional planners, though there is also a focus on environmental education programs, especially those with emphasis on community work studies approach.

**Our Corner of the Earth**

(A New Mexican's Guide for Environmental Living)

New Mexico Citizens for Clean Air  
& Water

P.O. Box 4524  
Albuquerque, N. M. 87106

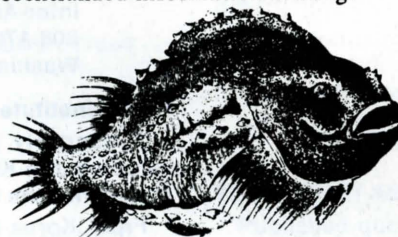
This is a well-conceived/executed booklet (150 plus pages), giving an overall view of environmental problems, with both individual and group responsibilities and possible actions—though mostly individual. A good how to keep your house clean (environmental Hints from Heloise) section. Might serve well as a model for the kind of project other local groups could work on.

**Eco-Leaflets**

\$2 for 5 leaflets air mail from:

Daniel Fargas  
Vingrau Village  
66600 Riversaltes  
France

"Eco-Leaves" on everything from agrobiology, biodynamic "Steiner agriculture, to hammocks, soap recipes, solar electric car, "do-it-yourself" xylophone. True, decentralized information sharing.

**Directory of Oregon Manufacturers**

Dept. of Economic Development  
317 S.W. Alder St.  
Portland, Or. 97205

\$7.50. 5,000 manufacturing concerns. Information includes brief description of products, number of employees. Uses, I suppose, are obvious: hard to find products, indication of Oregon economy, a lesson or several about economic systems. Index by subject, name, geographic location and product makes it really nice.

**Modern Filter Theory and Design**

Temes and Mitra  
John Wiley & Sons, Inc., \$27.50

From basic principles through design the subject material of this book is clearly and succinctly presented. Modern concepts are emphasized throughout, making this a valuable textbook which can lead the practicing EE student to an in-depth understanding of state-of-the-art techniques. Although an advanced level text (familiarity with complex functions and linear algebra is almost essential), necessary fundamental concepts are reviewed, giving a continuity between theory and practice which is a delight to the analytically minded EE.

(Vernon Chil)

**National Referral Center**

Science and Technology Division  
Library of Congress

10 First St., S.E.  
Washington, D.C. 20540  
(202) 426-5670

The center has three basic tasks: (1) to inventory all significant U.S. information resources in science and technology; (2) to provide any organization or individual working in science and technology, on request, with information regarding these resources and (3) to compile and publish directories and other listings of scientific and technical information resources.

In future *Rains* we will describe in detail these services, especially, though, now we'd like to point to their series of excellent "resource guides": *LC Science Tracer Bullet Bibliographies and Selected Sources of Information Lists*.

Both cover wide areas and, I suppose, are prepared in response to request overload. The sources of information lists include: *Nutrition* (sl 74-4); *Energy* (sl 73-7); *Environmental Education Materials* (sl 72-20); *Population* (sl 72-15); *Petroleum and Natural Gas* (sl 73-5); *Solid Wastes* (sl 72-6); *Air Pollution* (sl 72-9). Each one describes governmental and private agencies, groups that can provide information in special areas. (Free)

The LC Science Tracer Bullet series is really admirable: using a format adapted from the MIT pathfinder series, information includes basic texts, conference proceedings, journal article citation, other bibliographies, library subject headings where other material may be found. Subjects include: *Acupuncture* (tb 72-1); *Aquaculture* (tb 74-10); *Wind Power* (tb 73-17); *Algae* (tb 72-14); *Dolphins* (tb 72-15); *Optical Illusions* (tb 73-5); *Telecommunication* (tb 73-9) . . . (free). Write for publication list.

**Spectrum, An Alternative Technology Equipment Directory. Prepared by:**

Alternative Sources of Energy  
Rt. 2, Box 90A  
Milaca, Mn. 56353  
\$2.00

A catalog style source book of products available from manufacturers: wind generators, wood stoves, flat plate collectors, photovoltaics, insulation, heat exchangers, hydro power units, waste disposal equipment. Very simple to review because nothing else like it exists and because it is one outcome of the ASE network which has existed for several years. For sure it is incomplete, but they hope to update it periodically. (And how nice—only \$2.00)

**Applied Research on Energy Storage and Conversion: program solicitation.**

National Science Foundation. \$1 million for research on energy storage applied to three categories: photovoltaic energy conversion, solar thermal energy conversion and wind energy conversion. Deadline for applications May 22. Write to National Science Foundation, Washington, D.C. 20550.



# Small Industry Development Network

**Small Industry Development Network**  
**Industrial Development Division**  
**Engineering Experiment Station**  
**Georgia Institute of Technology**  
**Atlanta, Georgia 30332**

Their quarterly newsletter sent free to those interested, involved in developments of small scale industry, is the best resource we've seen, similar in scope of information to *Appropriate Technology*. Importantly, as illustrated by the ongoing listing of resources, the network is international and points to an industrial development in foreign countries as theoretically proposed in E.F. Schumacher's *Small Is Beautiful*, and has direct application to our (U.S.) development of technology applicable to a transition, energy-short economy.

This issue of the *SIDN Newsletter* briefly describes newsletters of organizations in developing countries and those of international organizations that deal with aspects of industrial development. Complete ordering information is included for those wishing to subscribe.

The following serials are all characterized by their emphasis on brief announcements and notices, short articles, and current information. They are invaluable to those desiring up-to-date factual reports of the industrial, educational, agricultural, or socio-economic situation in a particular area.

## **ADB Quarterly Newsletter**

Reports activities of the Asian Development Bank, describing loans and technical assistance projects for selected countries.

Free: Information Office  
 Asian Development Bank  
 P. O. Box 789  
 Manila, Philippines

## **APO News**

A monthly publication of the Asian Productivity Organization providing news of meetings, conferences, and mission projects.

Free: Asian Productivity Organization  
 Aoyama Daiichi Mansions  
 4-14, Akasaka 8-Chome  
 Minato-Ku  
 Tokyo, Japan

## **Centro de Desarrollo Industrial del Ecuador. Boletin Industrial**

A monthly newsletter (published in Spanish) of the Industrial Development Center of Ecuador (CENDES).

Free: CENDES  
 Avenida Orellana 1297  
 P. O. Box 2321  
 Quito, Ecuador

## **Colombia Today**

Each issue concentrates on a specific area; for example, a recent topic was small-scale industry in Colombia. A continuing feature, "Basic and Economic Indicators," provides concise statistical information for Colombia. Published irregularly.

Free: Colombia Information Service  
 Colombian Center  
 140 East 57th Street  
 New York, New York 10022, U.S.A.

## **Ecuadorean American Association, Inc. Bulletin**

Each month's issue notes the current industrial and financial situation in Ecuador.

Free: Ecuadorean American Association, Inc.  
 55 Liberty Street  
 New York, New York, U.S.A.

## **ICAITI Boletin Informativo**

A bimonthly newsletter in Spanish of the Central American Research Institute for Industry highlighting the current industrial and technological situation in Central America.

Free: Instituto Centro Americano de Investigacion  
 Tecnologia Industrial  
 Avenida La Reforma 4-47, Zona 10  
 Apartado Postal 1552  
 Guatemala, C. A.

## **IDB News**

The Inter-American Development Bank's monthly newsletter includes feature articles on development activities as well as brief notes. English and Spanish editions.

Free: Editor  
 Inter-American Development Bank  
 808 17th Street, N. W.  
 Washington, D. C. 20577, U.S.A.

## **Korea Institute of Science and Technology. Newsletter**

A quarterly publication dealing with industrial development in Korea as well as KIST's efforts abroad. Includes notices of seminars and lectures.

Free: Korea Institute of Science and Technology  
 P. O. Box 131  
 Cheong, Ryang  
 Seoul, Korea

## **Latin American Free Trade Association Newsletter**

Each bimonthly issue surveys trade and development activities in LAFTA member countries.

Free: Asociacion Latinoamericana de  
 Libre Comercio  
 Cebollati 1461  
 Casilla de Correo 577  
 Montevideo, Uruguay

## **L.I.F.E. Newsletter**

Published monthly by the League for International Food Education, the newsletter highlights current projects concerning the critical world food situation.

Free: Editor  
 League for International Food Education  
 1155 Sixteenth Street, N. W.  
 Washington, D. C. 20036, U.S.A.

## **Survey of International Development**

The survey "reports on current news in the areas of economic and social development and is based on information from official documents, newspapers, periodicals and private sources." Bimonthly.

Free to members of the Society. Write:  
 Society for International Development  
 1346 Connecticut Avenue, N. W.  
 Washington, D. C. 20036, U.S.A.

**TAICH News**

The Technical Assistance Information Clearing House "serves as a center of information on the socio-economic development programs abroad of U.S. voluntary agencies, missions, and foundations and other non-profit organizations." The newsletter, which appears irregularly, includes new publications and conference announcements.

Free: Technical Assistance Information  
Clearing House  
200 Park Avenue South  
New York, N. Y. 10003, U.S.A.  
Kay Auciello  
International Development Data Center  
Georgia Institute of Technology

**IMF Survey**

The International Monetary Fund spotlights the international economic and financial situation semimonthly (except December). Features include brief excerpts from pertinent international publications, notes on the Fund activities, and a Financial Calendar of meetings and events. Published in English, Spanish, and French.

Subscription rate varies (\$5.00 - \$12.00). Apply to:

The Secretary  
International Monetary Fund  
Washington, D.C. 20431, U.S.A.

**Korean Trade News**

A weekly news sheet that briefly outlines current trade and industry developments affecting Korea.

Free: Korea Trade Service, Inc.  
460 Park Avenue - Room 600  
New York, New York 10022, U.S.A.

**LTC Newsletter**

The newsletter, published in English and Spanish, "serves as a forum for the presentation and discussion of important issues related to land tenure and agricultural development, including the presentation of conflicting points of view." Each quarterly issue includes annotated announcements of research papers.

Free: Land Tenure Center  
University of Wisconsin - Madison  
310 King Hall  
Madison, Wisconsin 53706, U.S.A.

**REPORT: News of the World Bank Group**

Descriptive articles provide information on the World Bank Group's international activities. Subjects include agriculture, industrial development, technology selection, and trade. Bimonthly.

Free: Publications Office  
World Bank  
1818 H Street, N. W.  
Washington, D. C. 20433, U.S.A.

**Research and Training Network (RTN) Newsletter**

Published irregularly by the Agricultural Development Council, "the newsletter reports on the progress of workshop groups, summarizes seminars, and provides information regarding materials generated through RTN activities."

Free: Agricultural Development Council, Inc.  
630 Fifth Avenue  
New York, New York 10020, U.S.A.

**Rural Development Network Bulletin**

Published irregularly, the *RDN Bulletin* "will focus on a wide range of rural development activities which seek to improve the lives of rural people in developing nations. Emphasis will be given to applied research and action programs. It is designed to facilitate interregional contacts among scholars, researchers, administrators and practitioners involved in rural development throughout the world." Published in English, French, and Spanish.

Free: Editor  
*Rural Development Network Bulletin*  
Overseas Liaison Committee  
American Council on Education  
One Dupont Circle  
Washington, D.C. 20036, U.S.A.

**SOUNDINGS From Around the World**

A quarterly newsletter serving as "an idea exchange in rural development communications." Provides description and order information for a wide variety of teaching and training materials, including programs, books, films, and filmstrips.

Free: World Neighbors  
5116 North Portland  
Oklahoma City, Oklahoma 73112, U.S.A.

**Taiwan Industrial Panorama**

A monthly newsletter that provides information on industrial and investment projects in the Republic of China.

Free: Industrial Development and Investment Center  
Ministry of Economic Affairs  
5th Floor Hwaining Building  
53 Hwaining Street  
Taipei, Taiwan, Republic of China

**TECHNONET ASIA Newsletter**

Published quarterly as an Asian Network for Industrial Technology Information and Extension and supported by the International Development Research Centre. Each issue highlights extension and industrial research activities of the six participating organizations in the Asian region.

Free: *TECHNONET ASIA*  
Tanglin P.O. Box 160  
Singapore 10  
Republic of Singapore

**UNCTAD Monthly Bulletin**

The bulletin of the United Nations Conference on Trade and Development contains notes on international meetings dealing with trade and development and a selective listing of recent documents with ordering information.

Free: UNCTAD Information Service  
Palais des Nations  
1211 Geneva 10, Switzerland

**UNDP Business Bulletin**

A monthly publication that "covers contract and recruitment opportunities, project approvals and reports, country program details and other business-related activities of UNDP."

Free: United Nations Development Programme  
866 United Nations Plaza  
New York, New York 10017, U.S.A.

Kay Auciello  
International Development Data Center  
Georgia Institute of Technology

# LAND USE

## Seattle Shoreline Environment

Dept. of Community Development  
City of Seattle  
Seattle, Wn.

A document which is the result of a comprehensive planning grant from HUD, and published as part of the Washington Sea Grant program. Maps and general guidelines to areas of concern, like geography, wildlife, plant life, etc. Through utilization of information in this report, the Seattle Shoreline master program has been developed (in its fifth draft currently).

(I'm continually surprised by how one result of comprehensive planning is the creation of potentially good environmental education resources, or more generally guides to the land.)

**Ecology and Economy**, the well-received study prepared by the Urban and Rural Lands Committee of the Pacific Northwest River Basins Commission, with its whole systems, "carrying capacity" methodology of land use planning, will be tested by students of the applied environmental studies group, Evergreen State College, Olympia, in an area of the Yakima basin of Washington.

**Oregon Institute of Land Use Research** has been established at the University of Oregon. The institute will coordinate faculty research, such as already underway in the Department of Landscape, Architecture, Urban Planning and Geography, the Atlas of Oregon Project, Bureau of Gov. Research and Services. Also aid community service projects and graduate programming in broad areas of landscape, land use planning and related policy analysis. Director: Jerome Diethelm.



# OUTDOOR ED

Classification of 8,969 individual food items found in 5,086 coyote droppings gathered in Yellowstone National Park

Food items	Number of individuals	Percent
<b>LARGE MAMMALS</b>		
Elk, <i>Cervus canadensis nelsoni</i> .....	1,153	12.85
Elk Calf .....	300	3.34
Deer, <i>Odocoileus hemionus macrotis</i> .....	91	1.01
Deer Fawn .....	2	.02
Antelope, <i>Antilocapra americana americana</i> .....	17	.18
Antelope Fawn .....	32	.36
Mountain Sheep, <i>Ovis canadensis canadensis</i> .....	2	.02
Buffalo, <i>Bison bison bison</i> .....	18	.20
Moose, <i>Alces americanus shirasi</i> .....	1	.01
Domestic cattle .....	5	.05
Black Bear, <i>Euarctos americanus cinnamonomum</i> .....	43	.47
Fragments of large bones .....	47	.52
<b>SMALL MAMMALS</b>		
Field Mouse, <i>Microtus sp.</i> .....	3,044	33.93
Pocket Gopher, <i>Thomomys fuscus fuscus</i> .....	1,939	21.61
Snowshoe Hare, <i>Lepus timidus timidus</i> .....	305	3.40
Marmot, <i>Marmota flaviventris mosophora</i> .....	120	1.33
Muskrat, <i>Ondatra zibethica oregonensis</i> .....	98	1.09
Ground Squirrel, <i>Citellus armatus richardsoni</i> .....	46	.51
Jackrabbit, <i>Lepus texianus campanus</i> .....	37	.41
Porcupine, <i>Erethron epixanthum epixanthum</i> .....	35	.39
Deer Mouse, <i>Peromyscus maniculatus osgoodi</i> .....	34	.37
Pine Squirrel, <i>Sciurus hudsonicus ventorum</i> .....	25	.27
Beaver, <i>Castor canadensis missouriensis</i> .....	17	.18
Coyote, <i>Canis latrans</i> .....	13	.14
Cottontail Rabbit, <i>Sylvilagus nuttalli eragrum</i> .....	10	.11
Jumping Mouse, <i>Capus princeps princeps</i> .....	7	.07
Chipmunk, <i>Eutamias sp.</i> .....	6	.06
Woodrat, <i>Neotoma cinerea orestes</i> .....	4	.04
Mink, <i>Mustela vison ermineus</i> .....	3	.03
Shrew, <i>Sorex sp.</i> .....	2	.02
Goney, <i>Ochotona princeps ventorum</i> .....	1	.01
Weasel, <i>Mustela frenata ssp.</i> .....	1	0.01
Bat, <i>Myotis sp.</i> .....	1	.01
House Cat .....	1	.01
Flying Squirrel, <i>Glaucomys subrinus bangsi</i> .....	1	.01
Marten (immature), <i>Martes caurina urigenes</i> .....	1	.01
<b>BIRDS</b>		
Duck .....	81	.90
Duckling .....	1	.01
Bird .....	62	.69
Small Bird .....	55	.61
Large Bird .....	18	.20
Canada Goose, <i>Branta canadensis canadensis</i> .....	13	.14
Richardson's Grouse, <i>Dendragapus obscurus richardsoni</i> .....	5	.05
Ruffed Grouse, <i>Bonasa umbellus umbelloides</i> .....	2	.02
Grouse .....	5	.05
Sparrow (immature) .....	5	.05
Sparrow .....	1	.01
Warbler .....	2	.02
Steller's (black-headed) Jay, <i>Cyanocitta stelleri annectens</i> .....	2	.02
Spotted sandpiper, <i>Actitis macularia</i> .....	1	.01
Short-eared Owl, <i>Asio flammeus flammeus</i> .....	1	.01
Eared Grebe, <i>Columbus nigricollis californicus</i> .....	2	.02
Domestic chicken (refuse) .....	3	.03
Large bird egg .....	10	.11

Classification of 8,969 individual food items found in 5,086 coyote droppings gathered in Yellowstone National Park—Continued

Food items	Number of individuals	Percent
Small bird egg .....	7	.07
Domestic chicken eggshell (refuse) .....	13	.14
<b>COLD-BLOODED VERTEBRATES</b>		
Fish .....	12	.13
Garter Snake .....	9	.10
<b>INVERTEBRATES</b>		
Grasshopper .....	711	7.92
Cricket ( <i>Anabrus simplex</i> ) .....	123	1.37
June Beetle .....	14	.15
Snail .....	4	.04
<b>VEGETABLE MATTER</b>		
Grass .....	88	.98
Pine Nuts, <i>Pinus albicaulis</i> .....	51	.57
Rose Seed ( <i>Rosa</i> ) .....	20	.22
Strawberry .....	19	.21
Mushroom .....	4	.04
Blueberry, <i>Vaccinium sp.</i> .....	1	.01
Oregon Grape, <i>Berberis repens</i> .....	1	.01
<b>MISCELLANEOUS FOOD AND NONFOOD ITEMS</b>		
Horse manure .....	48	0.54
Garbage .....	12	.13
Trash .....	13	.14
Muskmelon .....	9	.10
Apple .....	7	.07
Corn (refuse) .....	7	.07
Paper .....	11	.12
Canvas-leather glove .....	6	.06
Rag .....	5	.05
Butter wrapper .....	5	.05
Twine .....	4	.04
Banana peel .....	4	.04
Orange peel .....	3	.03
Leather (1 piece containing rivet) .....	3	.03
Cellophane .....	2	.02
Steak bone .....	2	.02
Grape seeds .....	2	.02
Mouse nest material .....	1	.01
7 inches of curtain .....	1	.01
Pear .....	1	.01
Prune seed .....	1	.01
Match .....	1	.01
2 sq. inches rubber .....	1	.01
Tinfoil .....	1	.01
Shoestring .....	1	.01
Mud .....	1	.01
Paint-covered rag .....	1	.01
8 inches of rope .....	1	.01
3 sq. inches towel .....	1	.01
Lemon rind .....	1	.01
Bacon rind .....	1	.01
Two pieces of shirt .....	1	.01
Canvas .....	1	.01
Gunny sack .....	1	.01
Isinglass .....	1	.01
Bottle larvae .....	1	.01

Copies of *The Ecology of the Coyote in the Yellowstone* (Bulletin #4, Fauna of the National Parks) may be obtained without charge from the Chief Scientist, National Park Service Science Center, National Space Technology Laboratories, Bay St. Louis, Mississippi 39520.

**OUTDOOR**

continued

**International Backpackers Assoc.**

P.O. Box 85

Lincoln Center, Maine 04458

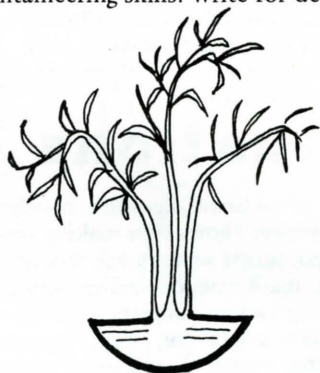
Two 6-day sessions this summer, June 2-7, and August 25-30, on survival and back-packing skills. \$20 registration, no tuition fee. They also provide a hiking partner matching service for free. Write for details or send complete information.

**Mt. Adams Wilderness Institute**

Flying L Ranch

Glenwood, Wn. 98619

10-day and 2-week sessions this summer in survival skills, environmental education, mountaineering skills. Write for details.

**Living Education: A Teacher's Guide to Overnight Sites in Oregon**

Oregon State Dept. of Education

942 Lancaster Drive, N.E.

Salem, Or. 97310

A state-wide guide to camp sites and other overnight facilities for environmental, outdoor education. Also introductory materials: how to plan overnight trips. And good listings of resource material: maps, films, books, etc.

**NETWORKS****Workforce**

Vocations for Social Change

5951 Canning St.

Oakland, Ca. 94609

VSC has been around quite awhile now and has spawned innumerable centers through the country. The centers often become general community resource information access centers, not only through employment counseling, but because of the counseling style (lifestyle: what do you really want to do?). *Workforce* has a radical perspective (liberation, struggle, rights), is published bi-monthly, usually with a focus on an area (day care, prisoners, labor, media, education, etc.) Serves as one of the few national links for job openings in collective, alternative political groups, projects. (Usually good source listings). Donation for subscription.

**Amateur Computer Users Group**

(Homebrew Computer Club)

558 Santa Cruz Ave.

Menlo Park, Ca. 94025

An informal bay area computer group of about 60 members. A page, so far, of alternative goals (and even the name not settled on yet); information exchange, software development, reaching out to other groups in the country.

**RECYCLING****"Getting Rid of Sewage—Isn't There a Better Way?"***Environmental Action*

Rm. 731

1346 Connecticut Ave., N.W.

Washington, D.C. 20036

March 29, 1975 issue. Robert Mueller, senior research scientist with NASA proposes an alternative to municipal sewage treatment operations based on the utilization of Bio-gas, called the domestic sewage methane cycle.

"The daily production of solid organic waste in the Washington D.C. Metropolitan area is about 250 tons. . . . Utilization of this waste through production of bio-gas, the 250 tons of organic material is equivalent to 2.5 billion BTUs per day . . . enough to heat 10,000 single-family homes. . . ."

**Recycle**

Children's Museum Resource Center

The Jamaica Way

Boston, Ma.

Here's a 60-plus-page booklet (funny simple sketches) of uses for junk or easy findables, for making musical instruments, looms (what to do with popsicle sticks), games, etc. And the ones presented here may inspire your own recycle ideas. (I have no price.)

Minnesota has a packaging environmental impact review process coordinated by the Minnesota Pollution Control Agency, that allows either individuals or manufacturers to submit a package for review, with possible denial of sale, based on energy use, economic effects on labor, problems of disposal, etc.

**Clivus Multrum USA**

14A Eliot St.

Cambridge, Ma. 02138

(617) 491-5820

Now distributing Clivus compost toilet systems (around \$900 to \$1,000), and developing/researching modifications of the Clivus and other on-site waste digestion methods.

**TRANSPORTATION****Transportation Pooling**

National Technical Information Service

5285 Port Royal Rd.

Springfield, Wn. 22151

Collection of 10 reports developed for the U.S. Dept. of Transportation. Approaches to matching, transit taxi coordination, pooling for the disadvantaged, others. Order #pb 236 157/as. \$7.50.

**Hitchhikers for America**

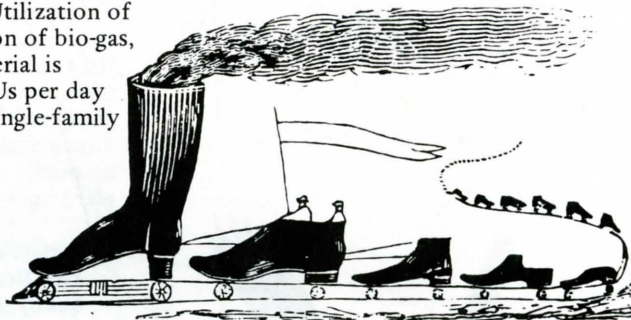
Oregon Office:

408 S.W. 2nd, Suite 220

Portland, Or. 97204

(503) 227-2419

A nationwide effort with offices in Los Angeles, New York, Coconut Grove, Fla. and Portland. The idea is registration of drivers and hitchhikers, issuance of I.D. cards, and referral for members to rides from one place to another.

**People's Bicycle Workshop**

4003 S.E. 63rd

Portland, Or. 97202

(503) 238-0137, 236-0418

Community bike shop. Workshops in bicycle repair, eventually providing low cost parts, and tool loaning.

**WATER****Washington Sea Grant Program Communications**

Division of Marine Resources

University of Washington

Seattle, Wn. 98195

(206) 543-6396

For people who want to know about events (conferences, hearings, TV programs) concerning marine resources/problems. Ask to be placed on mailing list. Emphasis on Seattle area.

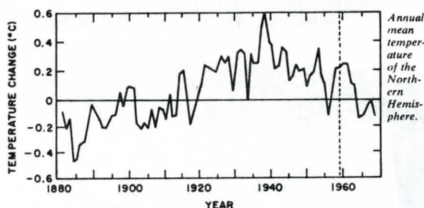
**WATER**  
continued

*The Problems and Potentials of Recycling Waste for Aquaculture*

Marine Resources Information Center  
Room 5-331  
Mass. Institute of Technology  
Cambridge, Ma. 02139  
\$3.00

**WEATHER**

Douglas County weather prediction: A herd of long-haired goats living on Mt. Nebo are observed regularly, and their locations are used to make weather predictions on radio station KRSB. An ad hoc study showed that the goats were 90 percent accurate in their prediction (compared with 65 percent for the U.S. weather bureau during the same period).



**Potential Implications of Trends in World Population, Food Production and Climate.**

A study done by the CIA (OPR-401, Aug. 74) describes the future strategic position of the U.S. based on our continued ability to produce food, and use it as a negotiating tool (as our version of oil embargo). Describing the potential in studies showing we are moving towards a cooler climate, the report states, "In a cooler and therefore hungrier world, the U.S. near monopoly position as food exporter . . . could give the U.S. a measure of power it had never had before—possibly an economic and political dominance greater than that of the immediate post World War II days. . . . In bad years . . . Washington would acquire virtual life and death power over the fate of the multitudes of the needy. . . . (From *Elements*)



**WHOLE SYSTEMS**

World Game Workshops  
Workshop/Earth M.D.  
Box 2016 Yale Station  
New Haven, Ct. 06520

This summer, June 21 through July 18, multidisciplinary workshops about "comprehensive anticipatory design science" with lectures by Buckminster Fuller, Nicholas Georgescu-Roegan, Gene Youngblood, Ervin Laszlo . . . Workshops to include applications process to world food problems, transition economy and communication development. \$350 full workshop, \$150 orientation week only.

**Positions-Situations**

**Evergreen Environmental Resources Center**  
Evergreen State College  
Olympia, Wn.

Quarterly environmental magazine slated for June publication. First issue to deal with nuclear energy in the Northwest. Short articles desired, up to 5 pages, double-spaced. (Also, for second issue, on public involvement in comprehensive planning.)

**La Mamelle**  
P.O. Box 1413  
Sunnyvale, Ca. 94088

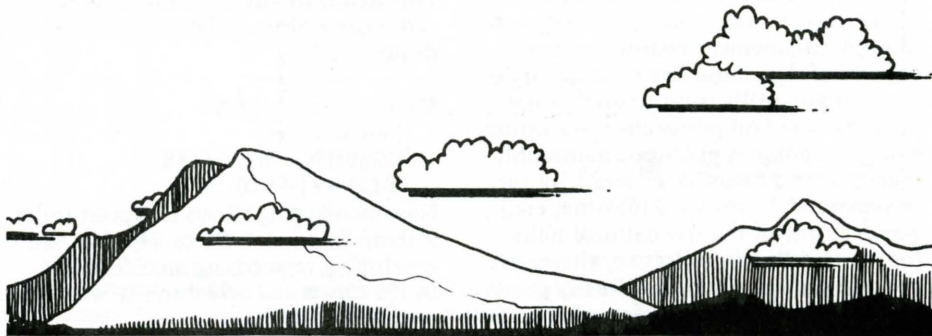
An alternative anthology of contemporary art is looking for contributors (photos, personal histories, conceptualizations, interviews, poems, etc.), especially with a west coast, not New York, consciousness.

**David House, founder of Earthmind** (see *Rain* insert, Vol. 1, No. 6) and co-author of *Wind and Windspinners* (*Rain*, same issue, pg. 3) is leaving that situation for greater personal satisfaction and moving to the Salem-Portland area. Has experience in graphic design, offset lithography, color and B&W photography, scientific and technical or freelance writing. Samples sent on request. Has experience or know-

ledge of methane digestion, bio-dynamic agriculture, 16mm film making (most phases), script writing, psychological counseling, math/science/english tutoring, teaching various subjects to either children or adults, organizing people, natural foods cooking, nutrition, and other areas. Can give lectures or slide shows on: net energy, ecology and various problems of society, nutrition, wind/electric machines and solar energy devices, and many others. He is looking for a job or a situation, full or part-time, temporary or permanent, and also looking for a place to live for 12 to 16 months in the North Marion County area only. Contact him at *Earthmind*, Josel, Saugus, California 91350, Earth, until approximately May 20.

**Larry Parker**  
Environmental Studies Center  
11 PLC Hall  
University of Oregon  
Eugene, Or. 97403  
(503) 686-5006

Is looking for others who would like to implement alternative sources of energy work-studies in schools and would like feedback on the idea of a catalog of intermediate technology tools for the N.W.



# Transition

**Transition**

Office of Energy Research & Planning  
Office of the Governor  
State Capitol  
Salem, Or. 97310  
\$5.00

We've mentioned the availability of *Transition*, the final report from the now disappearing Office of Energy Research. But, looking at it once again, I attempted to

describe it in ways that would set it in perspective: the history of the office; why, regardless of shortcomings, it may well be one of the most important documents produced by a state agency. It seemed after some consideration that the most graphic way of describing it was through some of the accompanying charts and diagrams. (For excellent background material, see *Oregon Times*, April 1975, 1000 S.W. 3rd, Portland, Or. 97204). The

shortcomings, perhaps even errors, are pretty irrelevant—it is very difficult to not to get caught up in a new form of dialogue, "Honesty is asking: What does it cost to do anything? What are the implications in terms of non-renewable resource systems?" Whether you're talking about cutting down more forests or building new freeways or tourism, what does it take? What does it take to support a tourist for 24 hours?

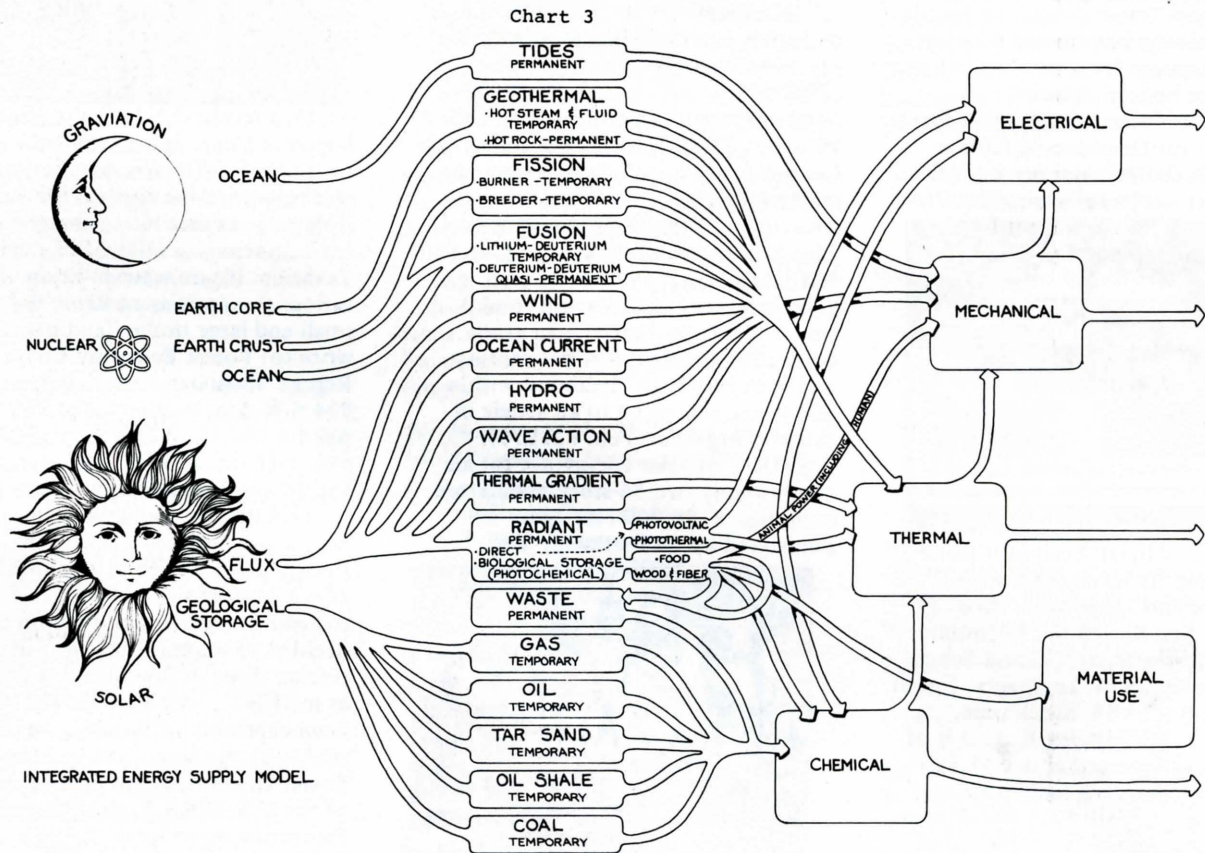
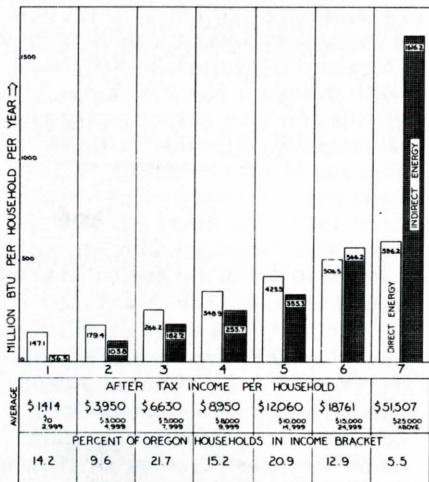


Chart 50  
PER HOUSEHOLD DIRECT AND INDIRECT ENERGY USE BY INCOME BRACKET - OREGON - 1973



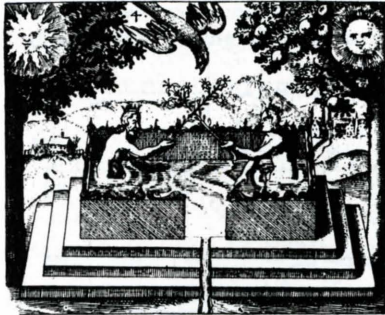
Oregon and U.S. Direct Energy End Uses Accounting  
for More than 1 Percent of Energy Consumption

U.S. (1970)	%	Oregon 1973	%
1. Private Automobile	13.8	1. Private Automobile	23.4
2. Home Heating	10.4	2. Home Heating	13.4
3. Primary Metals	6.8	3. Lumber and Wood	7.0
4. Chemical Industry	6.3	4. Paper Products Industry	6.7
5. Trucks	5.3	5. Construction	5.1
6. Petroleum Refining	3.9	6. Primary Metals (52% aluminum)	4.6
7. Residential Hot Water	2.7	7. Trade	4.2
8. Defense	2.6	8. Trucks	4.0
9. Agriculture (direct use)	2.0	9. Agriculture	2.5
10. Natural Gas Loss	1.9	10. Residential Hot Water	2.3
11. Air Passenger Traffic	1.7	11. Food Processing Industry	2.2
12. Food Processing Industry	1.7	12. Services	2.0
13. Paper Products Industry	1.7	13. Air Passenger Traffic	1.7
14. Government (non-defense)	1.7	14. Government	1.6
15. Stone, Clay, Glass	1.6	15. Natural Gas Loss	1.5
16. Home Refrigeration	1.1	16. Stone, Clay, Glass	1.1
17. Home Cooking	1.0	17. Chemical Industry	1.0
	66.2		84.3

Source: U.S. data from Steinhart and Steinhart, 1974. p. 234.

# Rush

WIND Energy, Hearings before the Subcommittee on Energy, May 21, 1974 (No. 49). Available from U.S. Gov. Printing Office. . . . REVISED Willamette River Greenway plans are available from Robert K. Potter, Rm. 316, State Hwy. Bldg., Salem, Or. 97310. . . . WITH the 70s version of the 1930s WPA, the Comprehensive Employment and Training Act, the Seattle Arts Commission has created 60 part-time job openings for artists, including a film of the history of Seattle. . . . BETWEEN 1964 and 1970, according to the National Oceanic and Atmospheric Administration, there was a 1.3 percent decrease in sunshine. . . .



“THE Role of Small Scale and Rural Industry and Its Interaction with Agriculture and Large Scale Industry in China,” Jon Sigurdson, Economic Research Institute, Stockholm School of Economics, 1974, 167 pages. From: Grevgatan 8, 114 53, Stockholm, Sweden. . . . MRS. Betty Reynolds of Nampa, Idaho, earned about \$1,800 last year by returning recyclable cans and bottles. . . . THE FEA has estimated that at maximum the barrel of oil replacement value of 1974 U.S. production of high temperature solar collectors was 56 bbl/day out of a total national consumption rate of 17 million bbl/day. . . . GOODWILL collections are down 50 percent since last September. . . . THE state of Maine plans to have a methanol power plant in operation by the end of 1976. . . . STATE Farm Mutual Auto Insurance Co. is now offering reduced auto insurance rates for people participating in car pools or using public transportation. . . . MATERIAL shortages, industry perceptions of shortages, report of study/survey done of 258 U.S. companies and their present, future perceptions of shortages. Permanent subcommittee on investigations of the committee on government operations, U.S. Senate, Aug. 74. U.S. Gov. Printing

Office, Washington, D.C. 20402, No. 5270-02468, 55¢. . . . SENATOR Mike Gravel’s report from Washington is now entitled “Energy Newsletter” and is sent to 150,000 people. . . . THE design and construction of an alternative energy system for a rural college is an NSF grant awarded to Ms. Prudence Smith, Marlboro College, Marlboro, Vt. 05344. . . . IN a study of rats in 40 U.S. cities, biologists from Bowling Green University found that as many as 77 percent of the rats in most locations had developed immunity to anticoagulant rodent killers. . . . THE Netherlands Industrial Council for Oceanology is designing a major wind conversion plan for construction of 158 power plants on small islands in the North Sea. . . . SENATOR Hatfield’s March 1975 newsletter is a good summary of the world food problem. . . . MT. St. Helens may erupt again before the turn of the century and with very high likelihood within 100 years, according to an article in *Science* magazine (Feb. 7, 1975). . . . A STUDY of solar energy use for air conditioning two 56-story Manhattan buildings, \$186,000 NSF grant administered by MIT’s Energy Lab. . . .



CITY of Seattle is accepting proposals for conversion of municipal solid waste to methanol or ammonia. Robert Sheehan, Seattle Solid Waste/Methanol/Ammonia Project, 402 Municipal Bldg., Seattle, Wn. 98104, 583-5792. . . . THE Bureau of Outdoor Education’s Land and Water Conservation Program is going to use some of its money for “acquisition and development of community recreational gardening lands and facilities. . . . SYLVESTER Graham, of graham cracker fame, claimed that excessive verbiage could be cured by eating whole wheat. . . . OREGON *People* magazine looks a lot like a statewide version of the Chamber of Commerce’s *Portland* magazine, minus the industry update kind of thing. P.O. Box 10145, Portland, Or. 97210, 227-5994. . . . IN England, the Dept. of

Industry has set up a “waste materials exchange,” project to link companies who will be able to use a variety of waste with the producers of the waste.



. . . IN a recent decision, the Michigan Supreme Court upheld the state’s 1970 Environmental Protection Act, which grants citizens the right to file suit to stop projects that may damage the environment. . . . OREGON Timber Taxation. If you want to know the various tax options available to both small and large timber land owners, write to: Forest Economy Council Report, Chamber of Commerce, 824 S.W. 5th, Portland, Or. 97204. Ask for No. 38. 2-28-75. . . . FOR the first time since 1952, U.S. energy use has declined, according to a preliminary report from the Bureau of Mines. U.S. energy use declined 2.2 percent in 1974. Energy use has risen at an annual rate of 4.1 percent since 1960. . . . THE Federal Energy Administration has decided to support “lifeline” utility pricing through funding local projects as models. . . . 40 MUSK oxen have been captured on Numivak Island, west of Alaska mainland, and airlifted by Soviet air transport to Siberia, as part of the U.S.-U.S.S.R. Environmental Protection Agreement of 1972. . . . MAY 27-29, International Solar Exposition, Sheridan Park Hotel, Washington, D.C. . . . SELF sufficient forms of community living on the ocean? Ocean Living Institute, 23 River Rd., North Arlington, N.J. 07032. . . . TAX incentive for solar heating and cooling bill tentatively approved by House Ways and Means Committee, part of the energy conservation and conversion act of 1975. U.S. House Bill 5005. . . . IN Russia a “book premium” is offered for each 44 lbs. of old paper that citizens recycle; the books are chosen from a selected list. . . . MAY 17, Pacific Northwest Chapter Environmental Education meeting, Sispus Environmental Center, Randal, Washington. Contact Doris Cellarius, Environmental Education Committee, 2439 Crestline Dr., Olympia, Washington 98502 (943-6875).

"Arguments for a Moratorium on the Construction of a Community Utility," by Lawrence I. Press in *Association for Computing Machinery, Inc.*, Vol. 17 #12, from:

Dept. of Quantitative Business Analysis  
School of Business Administration  
UCLA  
Los Angeles, Ca. 90007

CIU has received a good deal of criticism by noted social analysts like Paul Goodman, who claim that the CIU development should be (Press's paraphrase) "prudent, ecological, decentralized."

*II Cybernetic Frontiers—1974*, Stewart Brand, Random House.

Bookworks  
1409 Fifth Street  
Berkeley, Ca. 94710

Two pieces by the *Whole Earth Catalog* editor: "Both Sides of a Necessary Paradox," an interview with Gregory Bateson, and "Fanatic Life and Symbolic Death Among the Computer Bums."

*Cybernetics*, by Norbert Wiener, 1946.

The MIT Press  
50 Ames St.  
Cambridge, Mass.

Norbert Wiener's theory uncovers possibilities for artificial intelligence.

*Embodiments of Mind*, by Warren S. McCulloch, 1965.

The MIT Press  
50 Ames Street  
Cambridge, Mass. 02139

Sublime theorizing on nerve nets of the mind.

*The Encyclopedia of Associations*, 1975

Margaret Fisk, Editor  
Gale Research Company  
Book Tower  
Detroit, Michigan 48226

A guide to national and international organizations, about 1,200 pp. Everything from "New England Knitted Outerwear Association" to "United States Ski Writers Association."

*Futures Conditional*, Vol. 3 #2

P.O. Box 5296  
Spokane, Wn. 99205  
Robert Stilges, Ed.

A publication of the N.W. Regional Foundation, a non-profit educational corporation committed to encouraging people to take a more active and responsible role in planning for the future.

Issue on communications deals with video as an information tool, the computer and the community, community memory experiments, speculation on communications and the future.

"Energy & Information"

*Scientific American*  
415 Madison Avenue  
New York, N.Y. 10017

The age of telecommunication will grow out of the age of transportation, in which the world is made smaller by efficient transportation. In the future, energy can be conserved by allowing telecommunications to transmit messages which might otherwise need to be transported by expensive means.

"How to do a Whole Earth Catalog," Stewart Brand.

The Last Whole Earth Catalog  
588 Santa Cruz Ave.  
Menlo Park, Ca. 94025

A look inside the workings of the editor and the catalog.

"Manual for Student Development of a School Environmental Information Clearinghouse." 1972, Barbara Peckorsky and David Archbald.

E1 Systems  
P.O. Box 3304  
Madison, Wisc. 53704

Networking package for the Total Environment—Total Community Program.

*The Morning of the Magicians*, by Louis Pauwels & Jacques Bergier.

Avon Books  
The Hearst Corporation  
959 Fifth Avenue  
New York, N.Y. 10019

An intense, encyclopedic discussion of secret networks of information—from the alchemists to the Nazis.

*New World Communications*

P.O. Box E  
MIT Branch  
Cambridge, Mass. 02139

Broadsheet format associated with New Community Projects of Boston. Serves as an alternative communications network in the form of classifieds, display ads, flyers.

*People to People Index*

The Evergreen State College Library  
Olympia, Wn. 98505

An important link between the university and community resources. A reference card available at and through the library was filled out by people with experiences and resources to share. The format was very simple: name, address, phone, interest area, self rating (1 2 3 4 5 6 7, Beginning Lively Interest to Crackerjack).

*The People's Yellow Pages*, 1971.

Vocations for Social Change  
351 Broadway  
Cambridge, Mass. 02139

In developing an alternative job counseling program, Vocations for Social

Change found themselves necessarily concerned with—and dependent upon—the resources of the community. *People's Yellow Pages* was a model for similar projects across the country.

*Planning Community Information Utilities*, H. Sackman and B.W. Boehm  
HFIPS Press

Montvale, N.J.

The CIU proposal takes community memory projects one step further by institutionalization in the form of a public utility. Imagine—a commission of community information utilities relating people-information needs to government and adding to the economic infrastructure distribution networks analogous to loads, telephone and power networks.

*Scientific American*, Sept., 1966.

*Scientific American Inc.*  
415 Madison Avenue  
New York, N.Y. 10017

Issue devoted to information largely as it is processed by computers for education, research and industry.

*Somewhere Else*, 1973.

The Center for Curriculum Design  
The Swallow Press, Inc.  
1139 S. Wabash Ave.  
Chicago, Ill. 60605

"A catalog of places to learn for those who can't bring themselves to go to college, for those who shouldn't go to college go to college or those who don't want to go to college."

*Synergy People's Pages*, 1973.

Project Synergy  
P.O. Box AH  
Stanford, Ca. 94305

Directory growing out of "Synergy: A Working Conference on Transitions and Social Change" (Stanford, 1973) and "A Spring Festival of Alternatives." Project Synergy, an alternative information resource collective who put together this people-to-people accessing directory, published computer printouts to try to deal with the updating problem.

*The Universal Traveler*, Don Koberg and Jim Bagnell, 1972.

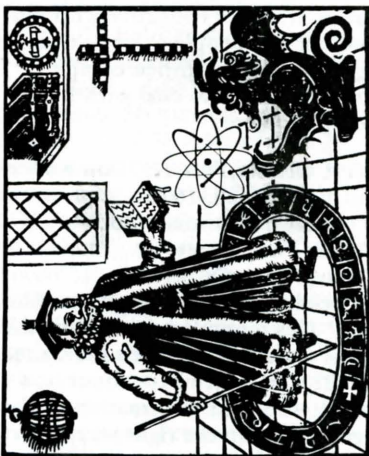
Willison Kaufmann, Inc.  
One First Street  
Los Altos, Ca. 94022

Especially a "Communications Checklist." This reminded me of something Carol Costello said when she visited the EEC in December—about how getting the right information to the right person in the right way is part of establishing a relationship; notions of personal regard and consideration prevail.



# CALENDAR

- May 7-10** 2nd Annual Inventors Carnival, with theme of environment and alternative energy systems. Tarzana, Ca., P.O. Box 251, 91356.
- May 8-10** Workshop on Ocean Thermal Energy Conversion. Shamrock Hilton, Houston, Texas. Sponsored by U.S. Energy Research & Development Ad. Reservations: P.O. Box 2848, Houston, Tx. 77001.
- May 9-11, 15-18** Acclimatization Workshop. Exploration of self in relation to environment. Contact ACC, George Williams College, Williams Bay, Wi. 53191.
- May 9-10** American Society of Heating, Refrigeration & Air Conditioning Engineers (ASHRAE). Madison, Wisconsin. With sessions on solar energy, building codes. Al Wilkins, 4717 Hammersley Rd., Madison, Wi. 53711.
- May 10** Environmental Education Association of Oregon Charter Meeting. 9 a.m., Oregon State University, Room 130, Peavy Hall. Contact: Mary Lewis, Oregon State Dept. of Education, 942 Lancaster Dr., N.E., Salem, Or. 97310.
- Impact Evaluation of Technological Assessment in Puget Sound Region.** Providence Heights, Issaquah. Details: TA 75, Program in Social Management of Technology, 428 Aerospace Research Lab, University of Washington, Seattle, Wn. 98195, 543-7029.
- May 12-13** Northwest Electric Light and Power Assn. Customer Services and Marketing Conference. Missoula, Mont. Sessions to include discussions on national energy dilemma, food and energy, consumer advocacy, heat pumps. NELPA, Suite 200, Mohawk Bldg., Portland, Or. 97204.
- May 12-14** Oil Crisis—International Affairs Symposium. Lewis and Clark College, 615 S.W. Palatine Hill Rd., Portland, Or. 97204.244-6161 for details.
- May 13** Benefit for Cherry Grove Community Center. *Diet for a Small Planet* film, slide presentation on Cherry Grove Center. \$2.00 donation suggested. Portland State Ballroom, 8 p.m. Call Bob for details, 232-7650, x607.
- May 19-20** National Conference on Land Use. Sponsored by Center for Science Tech. and Political Thought. Details from: Land Use Conference, 1321 Bannock St., Denver, Colo. 80204.
- May 24-25** Politics of Food and Land. Port Townsend, Wn., conference. Contact: Melissa Queen, 1000 Harris St., Bellingham, Wn. 98225.
- June 3** Energy From Wastes. Lecture. Portland State University, Science II, Room 245, 3-4 p.m. Fred McConnell, Manager, Organic Waste Pilot Project Plant, ERDA, Albany, Or.
- June 3-6** National Working Conference on Emerging Issues in Environmental Education. Ann Arbor, Mi. Environmental Education Program, School of Natural Resources, University of Michigan.
- June 9-11** Wind Energy Conversion Systems Workshop. Washington, D.C. Coordinated by Mitre with cooperation of American Institute of Aeronautics and Astronautics. Details: Frank R. Eldridge, MITRE Co., Wetgate Research Park, McLean, Virginia 22101.
- June 13** Professor John Reynolds, University of Oregon. Solar energy, architecture, color film-lecture in Main Auditorium, OMSI, sponsored by OMSI Energy Center. Free to OMSI members, \$1 adults, 50¢ students. 7:30 p.m. Call (503) 248-5920 for information.



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