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ABSTRACT

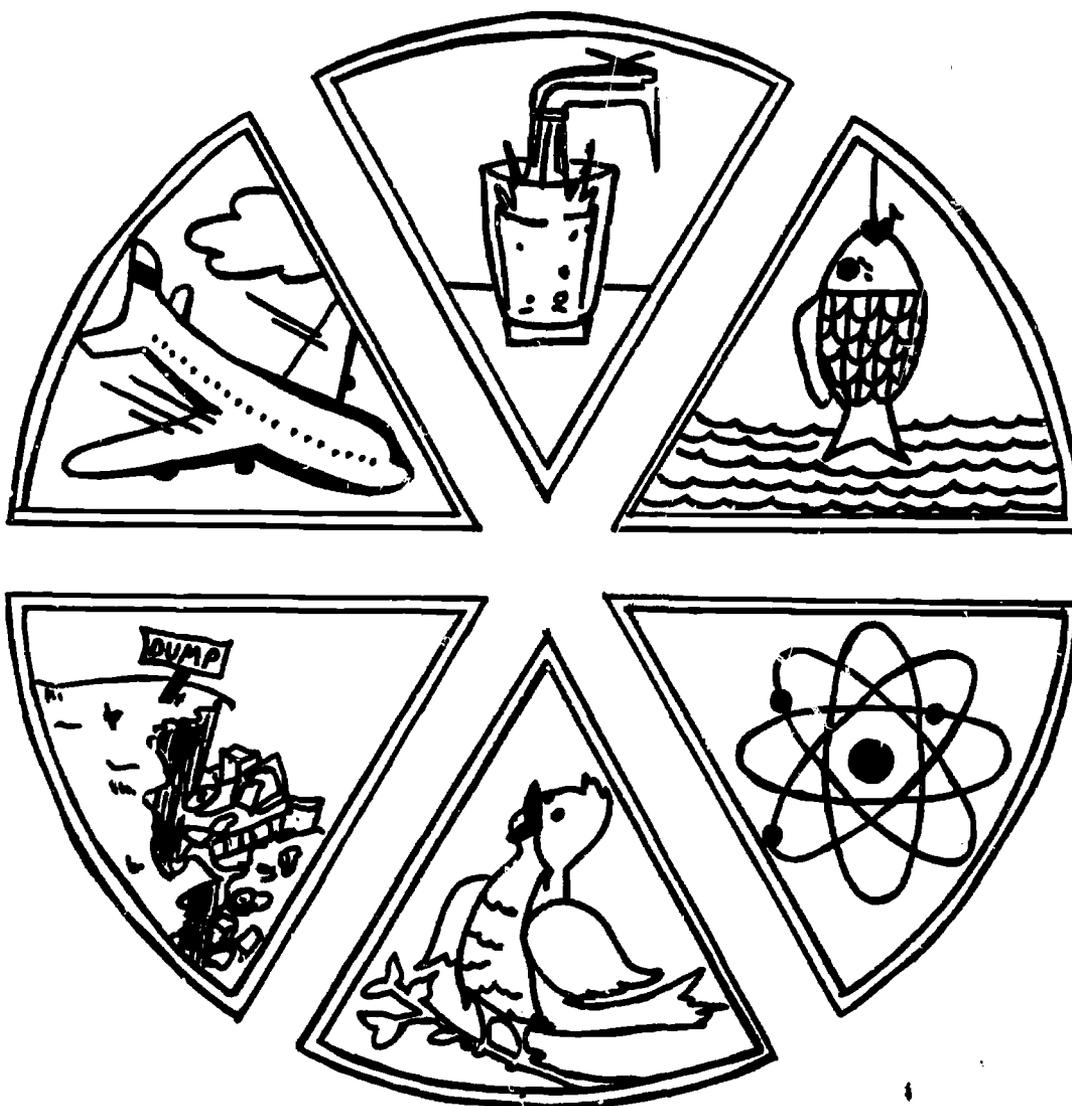
This bibliography is organized according to occupations: biology and agriculture, business, marketing, management, health, industrial, and public service. In addition, entries are further classified as air, water, public water supply, land pollution, noise, atomic radiation, and general. Over 130 books, publications, and articles are cited, with annotations. A related document is SE 017 085. (LS)

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# AN ANNOTATED BIBLIOGRAPHY FOR ENVIRONMENTAL EDUCATORS

THOMAS R. STITT



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## FORWARD

During the past year, the Professional and Curriculum Development Unit, Division of Vocational and Technical Education for the Board of Vocational Education and Rehabilitation, in cooperation with the Department of Agricultural Industries, School of Agriculture, Southern Illinois University, Carbondale, has funded two environmentally related projects.

1. Pre-Service Program in Environmental Education, Program Phase, Project Number MP-3a. September 1, 1972 to June 30, 1973.

2. Pre-Service Program in Environmental Education, Training Phase, Project Number MP-3b-OP5a. September 1, 1972 to August 31, 1973.

The projects operated simultaneously with two major objectives.

1. Develop a program for training students in one of the vocational majors in the field of Environmental Education.

2. In the time available, provide the participants with as much exposure to the proposed program as possible.

As the project developed, the participants began to collect information which they deemed valuable to the prospective teacher in the areas related to "Environment".

Publications include:

- a. An Environmental Glossary.
- b. An Annotated Bibliography for Environmental Educators.
- c. A Preview of Audio-Visual Materials Related to the Environment.
- d. Employment Opportunities and Job Analysis for Selected Environmental Occupations.
- e. A Pre-Service Program in Environmental Occupations.

These materials are specifically designed to serve as resource materials for Vocational Teachers who are teaching in Environmental Areas.

*Thomas R. Stitt.*

Thomas R. Stitt  
Project Director  
Agricultural Industries  
Department

## PROJECT INFORMATION SHEET

### Project Title:

Pre-Service Program in Environmental Occupations, Program Phase, Contract Number MP-3a.

### Project Director:

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### Project Participants:

1. Julie Berg, Agriculture
2. Janice Edwards, Home Economics
3. Doug Patton, Agriculture
4. Roy Swanson, Enterprise
5. Kay Wafer, Home Economics
6. Mary Wietting, Home Economics

### Funding Agent:

Professional and Curriculum Development Unit,  
Division of Vocational and Technical Education,  
Board of Vocational Education and Rehabilitation,  
State of Illinois, in cooperation with Agricultural  
Industries Department, School of Agriculture,  
Southern Illinois University, Carbondale, Illinois.

### Project Duration:

September, 1972, through August, 1973.

The bibliography is a collection of books, articles and other publications prepared by the participants during their seminar program. It is presented according to occupational clusters: Applied Biological and Agricultural Occupations; Business, Marketing, and Management Occupations; Health Occupations; Industrial Oriented Occupations; Personal and Public Service Occupations. Each of these clusters is then organized according to the EPA designated pollution brackets: General, Air, Water, Public Water Supply, Land Pollution and Refuse Disposal, Noise, Atomic Radiation. The final section is a list of publications concerning environmental education.

## Applied Biological and Agricultural Occupations

### A. General

1. Benson, W.W. and Smith, Pamela. "Pesticide Levels in Deer." Bulletin of Environmental Contamination and Toxicology, Vol. 8, No. 1, July, 1972.

This article shows the results of a study conducted by the Iowa Fish and Game Department on the level of DDT and DTE in deer tissue after it was sprayed over Salmon National Forest in Idaho.

2. Bibliography of Agriculture. New York: National Agricultural Library and United States Department of Agriculture, CMM Information Corporation, Vol. 36, No. 7-11, 1972.

Lists a large number of references which pertain to environment and pollution in many areas. Listed alphabetically under "Environment" and "Pollution".

3. Committee on Pollution. Waste Management and Control. National Academy of Sciences, National Research Council, 1966.

This book is a good source of technological information on all types of pollution, management of ecosystems and environmental policy. Terms are defined well.

4. Commoner, Barry. "Soil and Fresh Water Damaged Global Fabric". Environment, Vol. XII, No. 3, April, 1970.

This noted author on the environment attacks man's misuse of the environment. Heavy emphasis is put on soil and water pollution causes, effects, and expectations. His approach accents the ecological interdependence of all life forms and suggests specific action.

5. Congressional Quarterly. "Man's Control of the Environment". Washington, D.C.: Congressional Quarterly, Inc., 1970.

This article explains the use and history of DDT in this country. It also explains how it is transferred via food chains and its effects on various organisms.

6. Crafts, A.S. The Chemistry and Mode of Action of Herbicides. Interscience Publishers, 1961.

Discusses the nature of herbicides and classifies them according to their specific characteristics. It would serve as a good reference for any teacher dealing with this subject.

7. Dustman, E.H., Martin, W.E., and Heath, R.G., "Monitoring Pesticides in Wildlife". Pesticides Monitoring Journal, June, 1971.

This article describes how researchers are testing the environment for pesticides in wildlife. Starlings, Mallards, and the Bald Eagle are some of the best indicators of pesticide levels.

8. Environment Report. Washington, D.C.: Trends Publishing, Inc., 1972.

Bi-monthly publication discussing different areas in the environment, such as auto emission standards, lead hazards, clean fuel, solid waste projects, water pollution, and environmental models, trends, and booklist.

9. Frome, Michael. "The Eagle Killings and Their End Result". Field and Stream, Vol. LXXVI, No. 8, December, 1971.

The author gives facts and statistics showing the slaughter of eagles in the western states. It seems the sheep industry is responsible for most of the predator killings with help from the federal government.

10. Goldman, Marshall I. Controlling Pollution. Prentice-Hall Inc., Englewood Cliffs, New Jersey, 1967.

This book is concerned primarily with air and water pollution in our cities. It is well documented and has some excellent examples of pollution. The author relates to the causes and nature of the problem, and he also suggests certain solutions.

11. Laird, Edith M. "Conservation and Wildlife". Field Research Projects, Coconut Grove, Florida, Bibliography V, Part 2, 1971.

This book contains a bibliography of articles in magazines and books on wildlife problems. It covers both recent and past writings.

12. Laycock, George. "Eradicate Them One More Time". Field and Stream, Vol. LXXVI, No. 8, December, 1971.

The author deals with the controversy in the southeastern states on the eradication of fire ants with Mirex, a chlorinated hydrocarbon. The federal government has given authorization to embark on a program using 450 million pounds of poisoned bait over much of the nine states in the southeast. Many conservationists feel this program could have harmful effects on fish and wildlife.

13. Leopold, Aldo. A Sand County Almanac, Oxford University Press, 1966.

Fictional story of the joy and beauty found in a style of life that protects the environment. Also, short essays on conservation.

14. "Malaria and DDT". Pest Control, April, 1971.

This article tells about the harmful effects of DDT in relation to the environment and its helpful effects. The author feels that because it has virtually eliminated malaria and other harmful diseases it is helpful.

15. McCue, James. "The Teton Marked For Death". Field and Stream, Vol. LXXVII, No. 5, September, 1972.

This article is concerned with the scenic and recreational value of the Snake River in Wyoming. If the U.S. Bureau of Reclamation has its way, this area will be lost to thousands of sportsmen and tourists. The Bureau wants to dam the Snake River and this will destroy its beauty and much of its wildlife.

16. McLane, Anne Ross and Hall, Linda C. "DDT Thins Screech Owl Eggshells". Bulletin of Environmental Contamination and Toxicology, Vol. 8, No. 2, August, 1972.

The results of the study prove that DDT is responsible for thinning of the eggshell of a screech owl. Study explained.

17. Rienow. Man Against His Environment. New York: Ballantine Books, 1970.

The script to the T.V. series of the same title which described where man stood in relation to his environment and where he was headed.

18. Rudd, Robert. Pesticides and the Living Landscape. Milwaukee: University of Wisconsin Press, 1964.

This book contains a lot of good information on ecological relationships and the effect of pesticides, herbicides, and other chemicals on their well being. It is written strictly from a conservation viewpoint.

19. Seater, Steven R. "Native Wildlife Endangered As Exotics Invade Florida". Defenders of Wildlife News, Vol. 47, No. 2, May, 1972.

Florida is being subjected to a tide of biological pollution. Foreign plants, birds, mammals, and fish are upsetting the ecological balance. The primary cause is the pet trade.

20. Swatek, Paul. The User's Guide to the Protection of the Environment. New York: Ballantine Books, 1970.

Discusses how the consumer can protect the environment or keep it the way it is by means of wise purchases.

21. The Environmental Protection Act. Illinois: Environmental Protection Agency, U.S. Government Printing Office, 1970.

The Environmental Protection Act as approved June 29, 1970. It became effective July 1, 1970.

22. Toffler, Alvin. Future Shock. New York: Bantam Books, 1970.

This book tells what happens to people when they are overcome by change and how they cope with it. The major theme is the effect of the environment on man.

23. U.S. Department of the Interior Environmental Yearbook. Our Living Land. U.S. Government Printing Office, Washington D.C., 1971.

This book explains why we are in the "Age of Ecology". It stresses the point that man is the tenant and not the landlord of the earth.

24. U.S. Department of the Interior. It's Your World: The Grassroots Conservation Story. U.S. Government Printing Office, Washington, D.C., 1969, pp. 91-95.

This article gives many examples of how people got together in a group and improved the environment.

25. Van Sickle, Dirk. The Ecological Citizen. New York: Harper and Row, 1971.

This book thoroughly describes the types of pollution and the damages they have done, are doing, and will do. Many suggestions are given as to what can be done, both by the government and the individual.

Environmental law is discussed. It is very difficult for a citizen to fight polluters. Different cases are discussed.

This book gives a very good view of what environmental problems are and what needs to be done.

26. Wang, J.Y. Introduction to Environmental Studies (Human Ecological Problem). Milieu Information Service, San Jose, California, 1970.

The first part of this book gives you, rather technically, a description of the human environment, physical, biological, and social. It next tells what factors create environmental crises and describes solutions. There are many figures and tables given and there is an extensive bibliography of books and periodicals.

27. "War On Pollution: How Is It Faring?" U.S. News and World Report, Vol. LXXIII, No. 8, August 21, 1972.

The council on Environmental Quality made public their 1972 report with the findings following.

- 1) The air in the U.S. is getting cleaner.
- 2) The drive to clean U.S. rivers and streams is making little progress.
- 3) Overall cost of cleansing and protecting the U.S. environment is rising fast. The U.S. is expected to spend 287 billion dollars in the 70's to fight pollution.

28. Western Resources Conference. Man and The Quality of His Environment. University of Colorado Press, 1971.

Research papers discussing engineering the environment or man's activities on the natural world; and managing the environment for quality, such as, side effects of water pollution control programs.

29. Whitten, James L. "That We May Live". New Jersey: A Van Nostrand Company, Inc.

The author defends the use of pesticides and other chemicals for the production of food and fiber. It is written strictly from an agriculturalist point of view.

30. Woodwell, George M., Craig, Paul, and Johnson, Horton A. "DDT And The Biosphere, Where Does It Go?" Science, Vol. 174, December 10, 1971.

Global modeling permits an appraisal of the hazards of DDT residues in the biosphere. World wide pattern of movement of DDT residues appear to be from the land through the atmosphere into the oceans. Article also gives calculations based on the fragmentary data available on rates of movement and size of various pools of DDT residues.

#### B. Air

31. Hurley, W.L.B. Environmental Legislation. ed. by Charles C. Thomas, Springfield, Illinois, 1971, Chapter 3.

Encourages states and localities to cooperate with one another and with the federal government in establishing air pollution laws within a state. HEW encouraged to assist states in interstate prevention and control of air pollution. Also authorizes secretary of HEW to pay up to two-thirds the cost of state and local programs to develop, establish, and improve air pollution control programs.

32. National Air Pollution Control Administration. Air Pollution Publications, A Selected Bibliography With Abstracts. Washington, D.C.: Government Printing Office, 1968.

References with abstracts to literature on the subject of air pollution, published between July, 1966, and December, 1968.

33. Peterson, Eugene K. "The Atmosphere: A Clouded Horizon". Environment, Vol. XII, No. 3, April, 1970.

This report is on the condition of the atmosphere and what that condition holds for the future. It lays heavy emphasis on the drastic effects which may be heralded by the changing carbon cycle triggered by man. It also deals with the carbon-dioxide-oxygen ratio, global temperature, volcano and effects on plant growth.

34. Scorer. Air Pollution. London: Pergamon Press, 1968.

Gives a step-by-step explanation of air pollution as it is generated by natural and artificial means. Illustrated completely with color prints, it is a good book to pick up and read if you don't know anything about air pollution.

35. Stearn. Air Pollution. London: Academic Press, 1972.

A wealth of information in many subject areas discussed in the context of air pollution such as, reaction in the atmosphere, effects of air pollution on materials, visibility, plants, animals, humans, etc. Extensive bibliography at the end of each chapter.

36. U.S. Department of Commerce. The Automobile and Air Pollution, Washington, D.C.: U.S. Government Printing Office, 1967.

Autos are the source of most of the Co emitted into the atmosphere. The article lists other elements emitted into the atmosphere and explains the effects on man's health.

#### C. Water

37. Canada and U.S. Agricultural Pollution of the Great Lakes Basin. Washington, D.C.: U.S. Government Printing Office, July 1, 1971.

Concerns abatement of pollution of the Great Lakes Basin, as influenced by agricultural and related sources. It is a joint effort by Canada and the United States. It touches on pesticides, herbicides, by-product degradation as a result of agricultural chemicals, etc.

38. Coevering, Jack. "The Truth About Mercury". Field and Stream, Vol. LXXVI, No. 1, May, 1971.

This article gives a very good account of mercury poisoning. It gives the recommended amount for safety in water. It tells how fish take mercury in and store it in their bodies; and it gives facts that high levels of mercury are fatal to wildlife and humans.

39. Furniss, Richard A. and Nelson, N. Jr. "River On Its Deathbed". Outdoor Life, Vol. 149, No. 4, April, 1972.

This article describes a different type of water pollution. The river is the Large Columbia on the Oregon-Washington border. Supersaturation of nitrogen or nitrogen poisoning has resulted in drastic numbers of fish kills of Steelhead and Salmon. The dams on the river are the cause of this unnatural phenomena. The article gives the process by which this occurs and its effects on the fish.

40. Hansen, Edward A. Sediment In A Michigan Trout Stream. Washington, D.C.: U.S. Government Printing Office, 1971.

Talks of sediment source and measurement, its movement and effects on fish habitat.

41. Hershey, John; McLoy, Stephen; Powers, Albert; and Sexton, Alan. A Curriculum Activities Guide To Water Pollution and Environmental Studies. Cleveland Heights, Ohio: Institute for Environmental Education, 1970.

This publication contains practically all the facets of water pollution. It describes many physical properties connected with pollution such as the hydrologic cycle and ecological perspectives of water in our environment. From an educational point, it contains lesson plans and student activities involved in water pollution and quality.

42. Uniroyal, Inc. Feasibility Study of Regenerative Fibers For Water Pollution Control. Environmental Protection Agency, U.S. Government Printing Office, October, 1970.

The feasibility of making fibers which have the ability to absorb minerals from water has been investigated.

43. "The Ladies Save The Lakes", Look. April 21, 1970.

Tells how housewives in Florida campaigned and got action in cleaning up lakes and in stopping pollution processes from going on in lakes.

44. U.S. Department of the Interior Environmental Report. "The Story of Water". River of Life; Water: The Environmental Challenge. Washington, D.C.: U.S. Government Printing Office, 1970.

There are 326 million cubic miles of water on the earth and only .06% of this is available for the use of man. This article cites many cases where man has polluted the water so that it can no longer support life. (Hudson River, Lake Erie, etc.)

45. U.S. Department of Commerce. Mercury. Washington, D.C.: U.S. Government Printing Office, 1970.

This booklet explains the uses of mercury in industry, medicine, and agriculture. The mercury that is discharged into streams is consumed by microorganisms and it is brought into the food chain where it accumulates in fish. It shows mercury levels in various fish and states that restriction of mercury waste will stop this problem.

## D. Public Water Supply

46. Battelle, Northwest and South Tahoe Public Utility District. Waste Water Amonia Removal By Ion Exchange. Environmental Protection Agency, U.S. Government Printing Office, February, 1971.

Pilot plant investigations were conducted on the ion exchange removal of amonia-nitrogen from clarified and carbon-treated secondary effluents and from clarified raw sewage.

47. Chainbelt, Rex Inc. Amenability of Reverse Osmosis Concentrate to Activated Sludge Treatment. Environmental Protection Agency, U.S. Government Printing Office. July, 1971.

Documents a laboratory scale feasibility study for the treatment of domestic sewage. Objective was to produce potable water from chemically clarified sewage via reverse osmosis and determine amenability of reverse osmosis concentrate to biological treatment.

48. Eilers, Richard G.; and Smith, Robert. Cost To The Consumer For Collection and Treatment of Waste Water. U.S. Environmental Protection Agency, U.S. Printing Office, Washington, D.C. July, 1970.

Discusses cost for collection and treatment of municipal waste water in the U.S. and estimate of change in the expenditure in the future.

49. Kreush, Ed; and Schmidt, Ken. Waste Water Demineralization by Ion Exchange. Environmental Protection Agency, U.S. Government Printing Office, Washington, D.C. December, 1971.

Report concerns pilot plant studies which were conducted on sewage effluent from an activated sludge treatment plant. Ion exchange system was main interest of the project.

50. Ogg, A.G., Jr. "Pesticides In Water". Pesticides Monitoring Journal. March, 1972.

Dichlobenil is registered for aquatic weed control in ponds, resevoirs, and lakes. This article is an abstract dealing with the persistence of this pesticide. Its persistence lasted 126 days in one case.

51. Southern Research Institute. Demineralization of Waste Water By The Transport-Depletion Process. Environmental Protection Agency, U.S. Government Printing Office, February, 1971.

The transport-depletion process was investigated for demineralization or filtration of municipal secondary effluent.

52. Starnes, Richard. "Dead Sea II". Field and Stream, Vol. LXXVI, No. 3, July, 1971.

This is a stirring article about the pollution of the Mediterranean Sea. In all probability, if it continues it will become the next dead sea. For example, along the Italian Riviera alone, there are 67 open sewers flowing along the beaches.

53. State of Illinois, Environmental Protection Agency, Water Pollution Regulations of Illinois. 1972.

Gives data on the percentages of various pollutants in Illinois waterways and regulations for the standards to be met concerning the degree of purity of the waterways.

54. The Soap and Detergent Associations. Soluble Phosphorous Removal In The Activated Sludge Process, Part I Chemical-Biological Process Performance, Environmental Protection Agency, U.S. Government Printing Office. May, 1971.

Objective - to develop and evaluate, at full plant scale, combined chemical-biological process of phosphorous removal, two phase research.

55. The Soap and Detergent Associations. Soluble Phosphorous Removal In The Activated Sludge Process. Part II. Environmental Protection Agency, U.S. Government Printing Office, October, 1971.

Sludges containing aluminum phosphorous precipitates from an activated sludge waste water treatment plant were digested in a high-rate digester. Analysis was then made.

E. Land Pollution and Refuse Disposal

56. Barlowe and Johnson. Land Problems and Policies. New York: McGraw-Hill Book Co., 1954.

History of land problems and policies. Discussion of changing roles of lands in our society and how economics, industry, population, and agriculture affect land development.

57. Brown, Malcolm and Webb, John N. Seven Stranded Coal Towns. New York: Da Capo Press, 1971.

This book is about the coal fields in Southern Illinois, mainly the counties of: Saline, Franklin, and Williamson. It speaks of the dramatic growth of mining-then of its quick decline. The effects on the employment rate and other economic structures are mentioned. It also mentions how these depressed areas are being helped.

58. Emmons. Garden In The Grasslands. University of Nebraska Press, 1971.

A study of land promotion in the United States. History of how the midwest and western frontiers were paved, ploughed, and railed.

59. Land Economics Institute. Modern Land Policy. University of Illinois, 1960.

A study of land use and demand for land in the United States. Discusses various existing land systems in our country.

60. Marx, Wesley. Man And His Environment: Waste. New York: Harper and Row, 1971.

This book is concerned with man as a polluter. What on the earth he pollutes, the threats this pollution causes, and how man is trying to correct the problem. Ways of reclaiming polluted resources are discussed.

61. Peterson, Bill. Coaltown Revisited: An Appalachian Notebook. Chicago: Henery Regnery Co., 1972.

This book is about the coaltown in its death. The poverty, ruination of the land and some political information. (What politics has done for the situation.) It has a few pictures.

62. U.S. Department of the Interior. Man...An Endangered Species. Washington, D.C.: U.S. Government Printing Office, 1968.

The subject is man in relation to the earth's resources and how wisely he uses them. By depleting these resources he is endangering his own well being.

63. U.S. Environmental Protection Agency. California Solid Waste Management Study. Washington, D.C.: U.S. Government Printing Office, 1971.

This article explains the effects on the environment when solid wastes are improperly disposed of. It effects our health, water, air, and land. Some solutions are proposed.

64. "Why the U.S. Is In Danger of Being Engulfed In Its Trash". U.S. News And World Report. September 8, 1969.

Discusses the problem of how the U.S. is running out of space to dump its solid refuse.

65. Yule, W.N. "DDT In Forest Trees And Lumber". Bulletin of Environmental Contamination And Toxicology.

This article gives data on the amount of DDT found in the soil around the tree, the root hairs, branch rootlets, etc. It can be assumed that raw pulp and paper produced from these same trees are not contaminated with significant amounts of DDT.

#### F. Noise

66. Cohen, Alexander. "Physiological and Psychological Effects of Noise on Man." Industrial Noise: A Guide To It's Evaluation And Control. U.S. Government Printing Office, Washington, D.C., 1967.

It explains that noise can cause temporary and permanent hearing loss, speech disruption, loss in performance capacity and annoyance in man.

67. Industrial Hygiene Foundations of America, Inc. An Annotated Bibliography On Noise, It's Measurement, Effects, and Control. Pittsburgh, Mellon Institute, 1955.

Bibliography containing references on almost any subject you can think of which pertains to noise.

68. Starnes, Richard. "They're Finally Doing Something To End The Din." Field and Stream, Vol. LXXVI, November, 1971.

Gives some interesting facts and opinions about noise pollution.

69. "The Current Status of Metals In The Environment." Good Housekeeping. Vol. 173, November, 1971.

Three metals that experts watch, because of their toxicity, are; mercury, cadmium, and lead. Explanation of each metal is given.

## G. Atomic Radiation

70. "Fallout From Cannikan," Time. October 30, 1972.

Discusses the Atomic Energy Commission's multimegaton nuclear test under Aleutian Island in November. Claims no lasting damage to the environment and that fluctuations in the earth's magnetic field which resulted from the test, could help in developing accurate methods of predicting major earthquakes.

## Business, Marketing, and Management Occupations

### H. General

71. Amberg, Herman. "The Cure Can Be Worse Than The Pollution!" Nations Business. Vol. 60, No. 8. August, 1972.

By using inflexible, narrow-minded pollution standards, we create more pollution than we prevent. The article cites several examples, such as; some strict pollution standards cause recycling mills for paper to close down, and other regulations call for the use of vast amounts of electricity to only decrease slight amounts of pollution emissions from factories.

72. Brown, Joseph E. "Alaska Pipeline Plan Spins Off A Science Bonanza." Popular Science, Vol. 202, No. 1, January, 1973.

The article explains some of the 400 separate environmental impact studies generated by the proposed Alaska pipeline. Man is learning much about his environment from these studies. He also found if the pipeline is environmentally safe.

73. "How To Recycle Your Throwaways." Good Housekeeping Needle Craft. Spring-Summer, 1973.

Tells how the housewife can recycle household items that she would normally throw away, such as plastic containers, cardboard tubes, and egg cartons. It is a regular article and is made up of suggestions from the readers.

74. Jaffe, Louis Leventhal. Environmental Protection. Chicago, Illinois. Bracton Press, Vol. 702, 1971.

Collection of legal and other materials to provide introduction to character, causes, and consequences of environmental problems. Also contains case studies pertaining to different phases of pollution. Air, water, etc.

75. Landau, Norman J. The Environmental Law Handbook. New York, Ballantine Books, 1971.

This book is a guide to the citizen on legal process to improve the environment. Contains court cases concerning people and protection for environment against pollution. Also has information concerning different conservation groups.

76. Muddox, John. "The Doomsday Syndrome." Readers Digest. Vol. 102, No. 610, February, 1973.

The article briefly describes the history of ecology and the environmentalist. The environmentalist has always used fear and over-statements to motivate people. This could cause the environmental movement to fall flat on its face, when it's most needed.

77. Sax, Joseph L. Defending The Environment. New York, Knopf, Vol. XIX, No. 252, 1971.

Pertains to the need of the citizen to re-assert initiative in the management of the environment through the court-room. Contains case studies and examples.

78. "Technology Isn't The Villian-After All." Business Week, No. 2265, February 3, 1973.

Technology is not to blame for our environmental crisis. Industry motivated by profit has used technology to cause these problems.

79. User's Guide To The Protection Of The Environment. Friends of the Earth, Ballatine, 1970.

Lists the consumer recommendations as what to buy and what not to buy; what will save the environment and what will help destroy it.

## I. Air Pollution

80. "Clean Air Counter Attack." Newsweek. February 26, 1973.

The article explains how the Clean Air Act is not flexible enough. It is so strict that it is driving prices up and causing many industries to shut down. This advocates making the Clean Air Act more flexible.

## J. Water Pollution

## K. Public Water Supply

## L. Land Pollution And Refuse Disposal

81. Eitel, Michael Jr.; Fain, Clifford; and Hulbert, Samuel F. Design Of A Water Disposable Glass Packaging Container. Washington, D.C.: U.S. Government Printing Office, 1971.

Interim reports combined findings in the development of water soluble glass containers.

82. Grinstead, Robert. "Bottlenecks." Environment, Vol. 14, No. 3, April, 1972.

This article explains how and how much solid waste Americans dispose of each year. It shows how much this waste is worth and why it should be recycled. It also points out the problems involved in recycling.

83. Meyer, Judith. "Back in Circulation." Environment, Vol. 13, No. 7, September, 1971.

This article tells how a group of young people put collecting glass and paper for recycling into a profitable business-like basis.

84. "The Battle Over Bottles and Cans." Changing Times, Vol. 25, No. 12, December, 1971.

There are strong arguments both in favor of and against using disposable beverage containers (glass and metal). The EPA says the ideal system would be to have no packaging which would be discarded. Until an efficient, inexpensive system is devised which will take care of a large portion of waste, there needs to be more done to discourage littering, including anti-litter education programs.

M. Noise

M. Atomic Radiation

## Health Occupations

### N. General

85. Theodorson, George, editor. Studies In Human Ecology.  
New York: Harper and Row, 1961.

This book tells how the different areas have developed in the field of human ecology. It shows how they may be integrated.

Human ecology had three main areas: plant and animal ecology, geography, and studies of the spatial distribution of social phenomena.

### O. Air

86. Berlin, Edward and Craig, Paul P. "The Air of Poverty." Environment, Vol. 13, No. 5, June, 1971.

This article shows how auto exhausts cause lead pollution in the cities. It mostly affects the children in poor black communities. It can cause genetic defects, liver, kidney, and brain damage.

87. Farber, M., Semour, and Wilson, H.L., The Air We Breathe.  
Springfield, Illinois: Charles C. Thomas, 1961.

The authors deal solely with air pollution and its problems both from an environmental concern and a medical concern. Properties of the atmosphere are explained and the nature and causes of air pollution are reviewed.

### P. Water

## Q. Public Water Supply

88. F.M.C. Corporation. Improving Granular Carbon Treatment. Environmental Protection Agency, U.S. Government Printing Office, July, 1971.

Major aspects of the project were comparisons of relative effectiveness of aerobic and anaerobic conditions in the bed-systems. A comparison of relative treatment effectiveness of expanded carbon beds of high and low sorptive activity under aerobic operating conditions. Very technical.

## R. Land Pollution And Refuse Disposal

## S. Noise

89. Yerges, Lyle F. Sound, Noise, and Vibration Control. New York: Van Nostrand Reinhold Company, 1969.

Deals with the theories of sound and vibration, and how the noise man makes affects his environment. Discusses the sources of noise in our environment and goes into legal and medical problems having to do with noise pollution. Contains a thorough glossary.

## T. Atomic Radiation

## Industrial Oriented Occupations

### U. General

90. "Careers Doing Something For The Environment." Changing Times, Vol. 24, No. 7, July, 1970.

Public awareness of the pollution crisis has created many career opportunities in government and industry for those qualified to lead the attack on environmental deterioration. There is a list of examples of programs offered in different universities that deal with the environment.

91. Commoner, Barry; Corr, Michael; and Stawler, Paul J. "The Causes of Pollution." Environment, Vol. 13, No. 3, April, 1971.

This article states that the equation of population size x per capita consumption x environmental impact per unit of production = level of pollution. It shows that modern technology is the primary contributor.

92. Fenner, David and Klarmann, Joseph. "Power From The Earth." Environment, Vol. 13, No. 10, December, 1971.

This article explains geothermal power. The heat deep within the earth is used by pouring H<sub>2</sub>O on the hot rock deep within the earth causing steam, which provides power to turn generators making electrical power. There are only two experimental plants, but it seems to be the most pollution free way of getting energy.

93. Mauersberger, Herbert R. American Handbook of Synthetic Textiles. Textile Book Publishers, New York, 1952.

Discusses uses of rayon waste products.

94. Padgett, Rose. Man's World Reliance On Textiles For Clothing And His Environment. Carbondale, Illinois: Southern Illinois University, 1971.

Summarizes material drawn from many sources in order to satisfy man's search for apparel and environmental needs at the national and international level. It stimulates the interest in how man's relationship to his environment is changing.

95. "Pollution and Industry: Pros, Cons Of A Growing Fight." U.S. News and World Report, Vol. LXXI, No. 21, November 22, 1972.

The high expenses of pollution control equipment has shut some plants down. The consumers will have to pay for pollution control through higher prices for many items. A recommended four-point program for environmental control is stated.

96. The Textile Institute and The Society Of Dyers and Colourists. Review of Textile Progress. London: Butterworth, Vol. 13, (1961), Vol. 14, (1962), Vol. 15, (1963).

Contains short chapters on the disposal and reuse of wastes from textile mills.

97. U.S. Department of Commerce. The Engineers Responsibility In Environmental Pollution Control. Washington, D.C.: U.S. Government Printing Office, 1971.

It explains the role and the great need of environmental engineers in the future.

98. "What's Happening to Mother Earth." U.S. News and World Report. November 23, 1970.

This article tells what's happening to the environment in the U.S. due to haphazard development and neglect.

## V. Air

## W. Water

99. Blumer, Max; Grassle, Howard L.; Humpson, George R.; and Sanders, Fred J. "A Small Oil Spill." Environment, Vol. 13, No. 2, March, 1971.

This article explains the visible disasters of oil spills such as, foul beaches and dead birds. It also explains the long range and unseen destruction of the oceans' environment due to oil spills.

100. "NTA is Best." Chemical and Engineering News, Vol. 98, February 9, 1970.

This article is concerned with the various phosphate groups found in detergent which are polluting because they cannot be broken down biologically. Nitriolotriacetic acid (NTA) is 70% degradable by biological sewage treatment.

## X. Public Water Supply

101. Hurley, William D. LL.B. Environmental Legislation. Charles C. Thomas, Springfield, Illinois, 1971.

This act replaced the oil pollution act of 1924. Sets heavy fines for those responsible for oil spills, and requires vessels over 300 gross tons using the ports of U.S. to carry oil spill liability insurance.

102. Hurley, William D., LL.B. Environmental Legislation. Charles C. Thomas. Springfield, Illinois, 1971.

Congress gave primary right and responsibility for the control of water pollution to each state. Also, gave surgeon general of Public Health Service the authority to make investigations into the conditions of interstate waterways, and the nature of industrial waste, etc., into the interstate waterways.

103. Willem, Rudolfs. Industrial Wastes, Their Disposal And Treatment. Reinhold Publishing Corporation. New York, 1953.

A clear presentation of water problems connected with chemistry and process industries including the fields of ceramics, plastics, rubber, dairy, textile, oil and gas, brewery, pulp and paper, laundry, municipal, and engineering. Complete information on the scope of the waste treatment problem in general, the basic principles of stream pollution and self-purification, and modern views of treatment problems.

#### Y. Land Pollution And Refuse Disposal

104. Bateman, Alan M. Economic Mineral Deposits. John Wiley and Sons, Inc., New York, 1967.

This book deals with mineral deposits, how they are formed, what they are, how and where they occur, and what they are used for. It has 3 parts: I. Principles and Processes, II. Ore Deposits, and III. Non-Metallic Mineral Deposits.

105. Caudill, Harry M. My Land is Dying. New York: E.P. Dutton, 1971.

A book about the strip mining in the Appalachian area. Pictures and descriptions are given to show the maiming of the land. It has some legal references. This is written by a lawyer from the Appalachian area.

106. Clawson, Marion. America's Land And It's Uses. Baltimore: The Johns Hopkins Press, 1972.

This book is a survey of facts and issues about land and land policy. It considers such things as quality of the environment, land reservation, and management, and public controls over private land use.

107. Johnstone, Sydney J., Minerals For The Chemical And Allied Industries. London: Chapman and Hall, 1961.

The object of this book is to present in a concise form, essential information on properties of minerals and metals. Also, their source of supply, processing, and metallurgy. It connects all of their uses in the particular industries.

108. McClellan, Grant S. Land Use in the United States. New York: H.W. Wilson Co., 1971.

Section one of this book touches on emerging land use policies. Section two raises the issue of new urban-rural balance, and building or rebuilding of our cities. Questions of conservation, proper use of water, forest, and mining resources are in section three. Section four deals with parks, wilderness, and scenic lands. Lastly, the new report of the Public Land Law Review Commission is given in digest.

109. "Refuse is Reusable." National Civic Review. February, 1968.

Extremely interesting article on how European disposal plants turn trash into heat and electric power by incineration.

Z. Noise

AA. Atomic Radiation

## Personal and Public Service Occupations

### A.B. General

110. Dasmann, Raymond. A Different Kind of Country. Macmillan Company, New York. 1968.

Concerned with the human environment, what we are doing to it, and what we must do to keep it fit for people to live in.

111. Elliott, Robin and Landman, Lynn C. and Lincoln, Richard, and Tsuroha, Theodore. U.S. Population Growth and Family Planning: A Review of the Literature, August, 1970.

The paper gave views of the nation's leading scientists and social theorists who addressed the question of U.S. Population Growth and the consequences. Also states some of these problems and methods of achieving control.

112. "Science." Environmental Legislation: 1971 Not a Year For Conclusive Action. Vol. 174, December 3, 1971.

Since the passing of the National Environmental Policy Act of 1969, legislation has decreased in effectiveness because of disagreement in the executive legislative branches. E.P.A. is struggling to consolidate itself, and at the same time it is trying to act as chief interpreter of the environmental policies.

### A.C. Air

### A.D. Water

### A.E. Public Water Supply

### A.F. Noise

### A.G. Atomic Radiation

## Education

1. Allen, James E. "Education For Survival." American Education, Vol. 6, No. 2.

Since the realization that the world is in such bad shape, our education on the subject of the environment has been inadequate. The technology of living that we have created has gotten out of control. New laws are the key to survival because in a free society it is the citizen who bears the ultimate responsibility. The Office of Education plans for correction are listed.

2. Carpenter, Richard J., An Ecological Glossary. New York: Hafner Publishing Company, 1962.

This book would be very helpful to an environmental teacher. It lists ecological terms in alphabetical order and gives their definitions.

3. Council on Environmental Quality. "Environmental Education," American Education, Vol. 6, No. 8, October, 1970, pp. 21-25.

When people first realized what was happening to the environment, they looked toward education. The educational system is challenged to include a new perception of environmental education.

Environmental education has never been adequately defined. It should at least help the student understand how the natural world works and how man is changing it. It cannot wait, and it must be from kindergarten through high school. Innovations in environmental education are described.

4. DeBell, Garrett. The Environmental Handbook. New York: Ballantine Books, 1970.

A study of the major environmental problems as seen by students, teachers, scientists, writers, and others. Suggests action that can be taken right now in any community.

5. Department of Health, Education and Welfare. A New Role For American Education, Washington, D.C., 1970.

Relates to man and his environment. Outlines a need for education in this area and a way to go about it. Suggests training program to follow education and has an outline which follows up with education response.

6. Education That Cannot Wait. Washington, D.C.: U.S. Government Printing Office, 1971.

Touches on subject of awareness of environmental needs and values. Also includes educational expectations, curriculums, and improvements. Good outline.

7. "Environmental Ecological Education 1970." Junior College Journal. American Association of Junior Colleges, Re. Vol. 41, No. 4, December-January.

Related to curriculums for environmental ecological education. Offers information on newly developed courses in the area of environmental technology.

8. "Environmental Education." Parks and Recreation. Vol. V, No. 6, June, 1970.

The National Park System has developed an environmental education program called National Environmental Education Development for children. Its focus is developing an environmental awareness and the important action to preserve and protect our resources. There is different emphasis at different grade levels. It is hoped that what the children learn will be put to work for a better quality of life.

9. Environmental Education 1970. New York: Scientists Institute for Public Information, 1970.

A public information workbook pertaining to environmental education curriculums and projects in different colleges. Reports from different professors are included concerning what they do for environmental education. Also, a good bibliography and suggested readings.

10. Environmental Pollution: A Guide to Current Research. New York: CCM Information Corporation, 1973.

Includes 4,394 in-depth summaries of ongoing research projects at universities and research centers in the U.S. indexes by subject, investigators sponsoring agency, and geographic area. It has 700 pages, clothbound, and costs \$24.00.

11. Fanning, Odom. Opportunities in Environmental Careers. New York: Educational Books Division of Universal Publishing and Distributing Corporation, 1971.

Speaks of the condition of the environment at present, the awareness of this condition, and the careers related to it. Appeals to one's sense of duty.

12. Harrison, Charles H. "Environmental Education Needs You!" Scholastic Teacher, October, 1971.

Environmental education must become interdisciplinary and universally taught or we might all become the final victims of the abuse, misuse, and misunderstanding of the environment. This could cause a lot of animosity between the people because they will be forced to change their way of life. A teacher of environmental education might be taking a risk in taking on a certain company about its effects on the environment, or at least use a lot of time and energy. A number of actual cases of environmental education are cited.

13. Keller, George. "New Courses On The Environment." Seventeen, May, 1970.

This article describes which colleges have environmental courses and what the courses are like.

Ecology may well be the biggest problem that academics have thus far tried to study. What happens to the environment all over the world effects us.

14. Marland, S.P. Jr. "Environmental Education Cannot Wait." American Education, Vol. 7, May, 1971.

American people will make the 1970's the Environmental Decade. Unless the present environmental crusade is deeply rooted in the education system and therefore, into people's consciences, public interest will falter. The society must develop "environmental literacy." The co-ordination of environmental education is through the Office of Education. Small grants are available for exploring possibilities in it. Environmental education should become something not to be taught, but a condition to be lived.

15. Miller, Harlean. Environmental Education in Five Area High School Home Economics Classes. (Unpublished thesis, Department of Home Economics Education, Southern Illinois University, June, 1971).

Summary of responses by students in five area high school home economic classes to questions about the environment and conclusions about the student's concept of their own relationship to the environment.

16. Roberts, A.D., and Davis, O.E. "The Clear House." Journal For Modern Jr./Sr. High School. Environmental Education, Vol. 45, No. 8, April, 1971.

Educational programs at all levels should view specific educational roles. Emphasis should be placed upon involvement of the total educational enterprise. It identifies the general role of the school in environmental education. Also, gives suggestions and recommendations on a level by level development of responsibilities in the formal educational system.

17. "Support For Environmental Education," American Education, January, 1972.

Kirkwood Community College in Cedar Rapids, Iowa, reports on their training plans for environmentalists in sewage treatment plants. Sponsored by E.P.A.

18. Task Force Report. "Update on Report of the NEA Task Force on Environmental Education." Today's Education, Vol. 60, No. 6, September, 1971.

The United Teaching Profession must immediately assume responsibility for environmental education of the American public of every age. Guidelines are given for developing, applying, and evaluating environmental curriculums.

A panel discussion they held is described. The NEA is concerned for an improved environment conducive to physical, emotional, and intellectual well-being.

Some projects of the NEA and the National Park Service for environmental education are described.

19. The Case For Environmental Education. Washington, D.C.: U.S. Department of Health Education and Welfare, 1971.

A collection of readings in environmental awareness which covers topics such as environmental literacy, or elements of environmental ethic. General.

20. U.S. Department of Agriculture. Conservation Tools For Educators. Forest Service, Pacific Northwest Region, 1968.

Suggests good ideas on teacher training and teaching aids. Also, has curriculum outlines and a bibliography of teaching materials.

21. "What Can You Do To Clean Up The Environment? Plenty!" Changing Times. Vol. 26, No. 3, March, 1972.

Accounts are given of how different people are helping cure environmental problems.

There are several organizations listed who are working for the environment which you can join or write to for information. Some publications about the environment are given.