



Annotated Bibliography of Law-Related Pollution Prevention Sources

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ARTICLES

Gail Achterman, *Strategies for Minimizing Hazardous Wastes in Oregon*, 18 ENVTL. L. 817 (1988).

Proposes waste reduction program for Oregon. Discusses components of a viable state waste reduction program. Stresses benefits of waste reduction and addresses barriers to and advantages of a state waste reduction program.

John Atcheson, *The Department of Risk Reduction or Risky Business*, 21 ENVTL. L. 1375 (1991).

Discusses the problems with risk reduction, which is the major determinant of current environmental policy. Criticizes the uncertainty and reactive (versus proactive) basis of risk reduction. Argues that because risk reduction excludes consideration of activities that are necessary but not necessarily "risky" (e.g., pollution prevention), risk reduction is an inadequate basis on which to build future environmental policy. Proposes proactive strategies, such as pollution prevention, sustainable development, and conservative technologies, as basis for new environmental policy.

Robert F. Blomquist, *The Conservation Foundation's Proposed "Environmental Protection Act": Prospects and Problems for an Integrated Pollution Control Code for the United States*, 40 DEPAUL L. REV. 937 (1991).

Discusses the key provisions of the Conservation Foundation's proposed environmental protection act, which are: 1) the establishment of a new department of environmental protection with expanded responsibilities; 2) streamlined pollution control standards focusing on "unreasonable risks;" and 3) unified permitting, including conditioning permits on the use of pollution

prevention methods. Also examines prospects and problems under the proposed act. Concludes that in the long run an integrated federal environmental code maybe in the best interests of the United States. In the short term, though, political realities and fragmentation at the federal level mean that improved coordination between federal and state agencies or executive reorganization of pollution control agencies would be most effective in achieving some progress toward integrated environmental management.

Robert F. Blomquist, *Beyond the EPA and OTA Reports: Toward a Comprehensive Theory and Approach to Hazardous Waste Reduction in America*, 18 ENVTL. L. 817 (1988).

Analyzes EPA's *Report to Congress on the Minimization of Hazardous Waste* (1986), OTA (Office of Technology Assessment)'s *Serious Reduction of Hazardous Waste* (1986) and OTA's reply to the EPA report *From Pollution to Prevention: A Progress Report on Waste Reduction* (1987). Reports were prepared in response to a Congressional mandate to study the feasibility of developing a federal waste reduction program. Evaluates their policy proposals and discusses their inadequacies, such as their emphasis on the short-term. Stresses that the traditional regulatory approach is uninformed, misinformed, illogical, and incomplete and that a comprehensive, multidisciplinary, and coordinated theory of hazardous waste reduction is necessary.

Bradley C. Bobertz, *The Tools of Prevention: Opportunities for Promoting Pollution Prevention Under Federal Environmental Legislation*, 12 VA. ENVTL. L. J. 1 (1992).

Discusses strategies the EPA might consider for encouraging pollution prevention in the industrial sector. Maintains that there are many opportunities for the

EPA to promote pollution prevention in this area, with a focus on approaches that might be tried under the Clean Water Act (CWA) and the Resource Conservation and Recovery Act (RCRA). Examines these two acts and concludes that, with little or no revision, they provide substantial authority to implement pollution prevention measures. Discusses four categories of government action: (1) direct regulatory action; (2) standard-setting initiatives; (3) the use of incentives; and (4) information management and outreach initiatives.

William Y. Brown, *Environmental Leadership: The Search for Priorities and Power*, 21 ENVTL. L. 1413 (1991).

Discusses the EPA's movement from a reactive risk assessment approach toward a more proactive role in anticipating and decreasing the likelihood of pollution problems. Discusses problems with a risk assessment-based approach. Urges corporate environmental leadership, using Waste Management Inc. as an example, in several areas: (1) compliance, (2) pollution prevention, (3) nature conservation, (4) communication with the public, and (5) executive attention to pollution problems. Calls for environmental groups to evaluate their principles as well, including: (1) their truthfulness, (2) practicing what they preach, (3) addressing real problems, (4) embracing experience, and (5) utilization of conflict as last resort. Concludes that the EPA, industry, and environmentalists all have stake in risk reduction. States that the key is finding common interest in reducing objectively identifiable risks and cooperating, to the extent practicable, in reducing risk.

CERCLA Liability as a Pollution Prevention Strategy, 4 MARY. J. OF CONTEMP. LEGAL ISSUES 131 (1992-93).

Argues that the high costs associated with Comprehensive Environmental Response Compensation and Liability Act (CERCLA) cleanups and CERCLA's strict, joint, and varied liability schemes create incentives for businesses to prevent pollution.

David Clarke, *Chasing Rainbows: Is an Integrated Statute the Pot of Gold for Environmental Policy?* 22 ENVTL. L. 281 (1992).

Examines EPA's new push toward integrated environmental policy. Criticizes current fragmented policy (both tools and programs) and suggests that integrated environmental policy — with an emphasis on pollution prevention, multi-media permits, risk-based strategic planning, and market-based incentives — is the most effective response to pollution.

Scott W. Clearwater & Joanne M. Scanlon, *Legal Incentives for Minimizing Waste*, 10 ENVTL. PROGRESS, Aug. 1991, at 169.

Addresses the legal incentives for minimizing waste under current and proposed environmental laws and regulations. Incentives include reduced liability for civil, criminal, Superfund, and toxic tort violations.

Larry Edelman & David K. Rozell, *Oregon's Toxics Use Reduction and Hazardous Waste Reduction Act: A Bellweather for Pollution Prevention Regulation*, 20 ENVTL. L. Rep. (Envtl. L. Inst.) 10093 (1990).

Discusses Oregon's efforts to move toward an integrated pollution prevention approach through enactment of its Toxics Use Reduction and Hazardous Waste Reduction Act. Also describes barriers to voluntary toxic waste reduction programs.

Lois R. Ember, *Strategies for Reducing Pollution at the Source are Gaining Ground*, CHEM. ENG'G NEWS, July 8, 1991, at 7.

Provides an overview of legislative and industrial pollution prevention initiatives. Provides case studies (engineering focus) and discusses legal, accounting, and educational impediments to pollution prevention.

Lynn E. Grayson, *The Pollution Prevention Act of 1990: Emergence of a New Environmental Policy*, 22 ENVTL. L. Rep. (Envtl. L. Inst.) 10392 (1992).

Examines the federal Pollution Prevention Act of 1990 and defines "pollution prevention" and "source reduction." Discusses and evaluates the new reporting obligations the Act requires of businesses and analyzes the possible negative impacts the Act may have on industry, including implementation costs, mandated process changes, and potential enforcement ramifications. Provides an overview of EPA's motivation for promoting pollution prevention as its primary waste management strategy. Clarifies industry's concerns with the Act, which is intended to represent a more cooperative partnership between the EPA and industry.

Lakshman Guruswamy, *Integrated Thoughtways: Re-opening of the Environmental Mind?* 1989 WIS. L. REV. 462 (1989).

Discusses the fragmentation of current pollution policy and argues for the re-emergence of an integrated approach. Examines the historical evolution of current environmental policy and its transformation from integration to fragmentation. Concludes that enactment of

the Conservation Foundation's *Environment Integration and Information Act* — an attempt at integrated environmental policy — is futile because of insurmountable political difficulties. Proposes incorporating integrative programs into existing law. Uses the Toxic Substances Control Act (TCSA) to illustrate how existing law can be used to achieve integration across environmental media.

Fred Hansen, *Pollution Prevention Planning: A New Mandate for Oregon's Environment*, 6 ENVTL. FORUM, Sept.–Oct. 1989, at 30.

Discusses Oregon's pollution prevention legislation (Toxics Use Reduction and Hazardous Waste Reduction Act) and its legislative history. Discusses the Act's pollution prevention planning requirements and technical assistance program. Calls the program a successful mix of "carrots" and "sticks" to achieve goal of reduced generation and use of toxic and hazardous substances. Concise overview of a state program from policy creation to enactment.

Joel S. Hirschhorn & Kirsten U. Oldenburg, *Preventing Pollution is No End-Of-Pipe Dream*, ACROSS THE BD., June 1987, at 11.

Discusses flaws of current environmental policy system (e.g., end-of-pipe focus, failure to control cross-media effects). Proposes waste reduction as a way to shift policy from control to prevention. Lists ways to reduce hazardous waste generation, along with associated benefits to industry. Offers examples of corporate programs (Dow, DuPont, 3M). Discusses barriers to pollution prevention programs. Concludes by proposing possible pollution prevention programs that could be implemented by the government to persuade industry to adopt pollution prevention.

John Hodges-Copple, *The Economic Advantage of Preventing Pollution*, BUS. & ECON. REV., July–Sept. 1990, at 38.

Advocates state government involvement in pollution prevention, with a focus on what the state can do to promote it, such as providing pollution prevention services (e.g., technical and financial assistance), and fostering joint efforts between public and private organizations. Emphasizes the experiences of Southern states.

Stephen M. Johnson, *From Reaction to Proaction: The 1990 Pollution Prevention Act*, 17 COLUM. J. ENVTL. L. 153 (1992).

Argues that pollution prevention needs to replace pollution control in environmental policy. Discusses

methods of pollution prevention as well as existing disincentives. Examines the EPA's pollution prevention policy, including its pollution prevention strategy, and finds that it fails to provide adequate funding, specific enforcement for citizens and employees, specific goals, and regulatory incentives. Defines pollution prevention and waste minimization. Explains the pros and cons of both voluntary and mandatory pollution prevention programs and concludes that, to be successful, the Act must require mandatory programs to encourage the maximum amount of pollution prevention possible.

Joseph I. Lieberman, *Planning for Pollution Prevention*, 10 ENVTL. FORUM 22 (1993).

Argues that pollution prevention is the most efficient approach to environmental protection. Cites alleged failures, and the associated costs, of pollution control approaches under the RCRA, TSCA, CERCLA, and CWA, but maintains that effective pollution prevention measures can be adopted within these statutory frameworks. Concludes that the best way to achieve pollution prevention, and thereby environmental protection, is through careful planning and that regulatory agencies should play a more active role in this process.

Alan S. Miller, *Cleaning the Air While Filling Corporate Coffers: Technology Forcing and Economic Growth*, 1990 ANN. SURV. AM. L., Spring 1990, at 69.

Discusses traditional economic approaches to environmental regulation (e.g., "regulation lowers GNP"). Suggests that such theories may be short-sighted since environmentally superior technologies tend to be more energy efficient and may produce a superior product. Discusses the technology-forcing influence of regulations, using the example of CFC reduction and Corporate Average Fuel Economy standards in the auto industry. Proposes new system of flexible, technology-forcing regulations, such as the creation of markets for environmentally sound products or technologies, which encourage technological innovation. Contains a brief discussion on why the traditional view that environmental regulation reduces GNP is based on faulty assumptions. (Followed by a panel's critique.)

Barry G. Rabe, *From Pollution Control to Pollution Prevention: The Gradual Transformation of American Environmental Regulatory Policy*, 8 ENVTL. & PLAN. L. J. 226 (1991).

Discusses pollution prevention regulatory schemes developed in Massachusetts, Minnesota, and New Jersey, which link pollution prevention with cross-media

regulatory integration, and critically examines federal policy and potential innovations in pollution prevention policy.

John H. Sheridan, *Pollution Prevention Picks Up Steam: Industry Supports Voluntary "Front-End" Efforts*, *INDUSTRY WEEK*, Feb. 17, 1992, at 36.

Discusses use of pollution prevention as an industrial waste management strategy. Contains case studies of successful corporate pollution prevention programs by AT&T, Dow Chemical, Navistar International Corporation, Northern Telecom, Mead Corporation, and 3M. Briefly discusses economic benefits of corporate pollution prevention programs. Calls for industry to voluntarily reduce pollution before pollution prevention becomes mandatory.

James Gustave Speth, *EPA Must Help Lead an Environmental Revolution in Technology*, 21 *ENVTL. L.* 1424 (1991).

Emphasizes the conflicting goals of increasing environmental quality and sustaining an increase in economic activity; views the movement toward pollution prevention as a part of the effort to rectify this conflict. Discusses the need to overhaul environmental regulation to promote long-term innovation, pollution prevention, and more economic incentives for cleaner technologies.

Paulette L. Stenzel, *Toxics Use Reduction Legislation: An Important 'Next Step' After Right to Know*, 1991 *UTAH L. REV.* 707.

Analyzes and explains the basis for Toxic Use Reduction (TUR) legislation, discusses the evolution and purposes of Right To Know (RTK) legislation, and analyzes how TUR incorporates and adds to the RTK goals. Questions whether TUR laws should be federal or state. Proposes recommendations for a model TUR law.

David G. Stephan & John Atcheson, *The EPA's Approach to Pollution Prevention*, *CHEM. & ENG'G PROGRESS*, June 1989, at 53.

Overview of EPA's strategy for integrating pollution prevention into EPA programs. Lists elements needed for a successful program, such as education, coordination within the EPA, and consensus building. Defines waste minimization, source reduction and recycling. Details EPA's Waste Management programs: WRITE

(technical assistance), WREAPS (demonstration/evaluation programs), WRAP (waste minimization audits), and WRISE (researcher/implementor liaison programs). Includes table of state minimization programs.

Symposium, *Corporate Environmentalism*, 27 *COL. J. OF WORLD BUS.*, Fall/Winter (1992) (selected entries):

- Scott Barrett, *Strategy and the Environment*, 202. Discusses strategic considerations for business in a climate of heightened environmental concern. Describes how companies might gain a strategic advantage through environmental innovation; explains how firms such as DuPont and Henkel of Germany profited in the face of environmental regulations directed at pollutants they used or produced in their manufacturing processes.
- Norman E. Duncan, *The Energy Dimensions of Sustainable Development*, 164. Argues that business will have to play a lead role in making the development catch-up process of non-industrial economies sustainable. Gives particular attention to the problem of controlling world carbon emissions.
- Hans W. Micklitz, *The German Packaging Order: A Model for State-Induced Waste Avoidance?* 120. Discusses the German experience with waste avoidance through imposing a duty on industry and retailers to take back packaging material. Touches on concerns such as issues of national sovereignty and the role of nongovernmental organizations in making waste a public concern.
- Richard Poduska, Richard Forbes & Maria Bober, *The Challenge of Sustainable Development: Kodak's Response*, 286. Discusses Kodak's experience integrating environmental concerns, including waste reduction techniques, into its corporate operations.
- Robert Repetto, *Environmental Taxes and U.S. Competitiveness*, 128. Proposes a tax policy whereby the tax burden would be shifted from economically productive activities, such as work, savings, and investment, to unproductive activities, including pollution and resource waste.

Symposium, *Integrated Pollution Control*, 22 ENVTL. L. 1 (1992) (selected entries):

- J. Clarence Davie, *Some Thoughts on Implementing Integration*, 139.

Discusses how both external (i.e., across agencies) and internal (i.e., within EPA) integration can be realistically and usefully advanced and achieved. Proposes using the existing statutory framework to move pollution control efforts in a more integrated direction via incremental steps, such as pollution prevention, risk-based decision making, strategic planning, data collection and monitoring, enforcement, research, and use of TSCA.

- Guruswamy, Lakshman, *Integrated Environmental Control: The Expanding Matrix* 77.

Argues that pollution caused by energy generation, transportation, and use and global warming in particular must be addressed within the framework of preventative integrated environmental control (IEC), which he defines as a combination of pollution prevention and modification of product demand. Discusses the shortcomings of the current fragmented system of environmental control (e.g., focus on separate media, fragmented agencies, focus on effects rather than cause). IEC accounts for both inputs and final products with a view toward changing the output of waste. Argues that IEC will result in more informed, responsible energy decisions, such as the use of renewable "soft" energy sources.

- Frances H. Irwin, *An Integrated Framework for Preventing Pollution and Protecting the Environment*, 1.

Discusses the need for an integrated approach to environmental problems, ways of achieving an integrated framework, and technical tools for pollution prevention and the particular programs/approaches of different states and countries. Mentions obstacles to as well as opportunities for achieving and implementing integrated environmental policy.

- James E. Krier & Mark Brownstein, *On Integrated Pollution Control*, 119.

Examines the new trend toward Integrated Pollution Control (IPC) and its historical evolution. IPC is an approach to environmental regulation that seeks to link air, water, and waste programs. Its concern is institutional changes that reduce total risk to the environment from pollutants. Critiques EPA's IPC strategy and questions whether IPC can work given the EPA's current fragmented organizational structure and focus on risk assessment.

- Barry G. Rabe & Janet B. Zimmerman, *Cross-Media Environmental Integration in the Great Lakes Basin*, 253.

Examines key institutional and intellectual forces that are facilitating environmental integration in the Great Lakes basin. Discusses the establishment of basin-wide prevention efforts and future developments in integrated approaches to cross-media pollution. Provides an overview of legislative initiatives from the states and organizations involved in the integrated efforts. Criticizes basic flaws in current environmental regulation. Concludes by examining impediments to integration, such as political fragmentation at the federal level and regional lack of authority for environmental problems. Calls for more integrated efforts via pollution prevention, mass balancing accounting, permit coordination, and agency reorganization.

- Manik Roy, *Pollution Prevention, Organizational Culture, and Social Learning*, 189.

Discusses how the behavior of organizations involved in environmental policy can be better understood in terms of organizational culture. Uses four illustrative case studies (two businesses, an environmental advocacy group, and a state agency) to demonstrate how organizational behavior is influenced by norms and theories in action. Applies organizational culture concepts to explain past business behaviors in response to environmental policy (e.g., single-pipe pollution focus). Specifically discusses how organizational culture relates to pollution prevention efforts. States that government should encourage a change in existing organizational culture through new programs so that pollution control moves toward more comprehensive strategies such as pollution prevention. Such programs can include whole family regulation, pollution prevention planning, targeting chemicals, readable regulations, employee and citizen right-to-know laws, and technical assistance.

- Strock, James M., et al., *Integrated Pollution Prevention: Cal-EPA's Perspective*, 311.

Describes California's move toward integrated multi-media environmental policy. Its approach focuses on pollution prevention, which can be accomplished by (1) reducing production and use of hazardous chemicals or (2) minimizing the generation of waste. Discusses current, fragmented regulatory framework and the associated structural problems. Discusses outreach assistance, planning, and integrated permitting, enforcement, and monitoring. Refers to two cases: the Blackstone Project and the Amoco-EPA project in Yorktown, Va.

BOOKS AND PAMPHLETS

BUSINESS AND ENVIRONMENT: TOWARDS COMMON GROUND (Kent Gilbreath ed., 1984).

Contains a collection of brief articles discussing the recent emergence of a growing partnership between business and the environment. For example, in *Industry's Environmental Challenge: Prevention*, J.T. Ling, author and Vice President of Environmental Engineering at 3M, outlines the evolution of society's views on environmental problems and stresses the importance of prevention rather than clean-up. Sketches the history of the U.S. approach to the environment since 1970 and then discusses 3M's 3P ("Pollution Prevention Pays") program. Concludes that pollution control efforts should continue while more comprehensive pollution prevention technologies are adopted.

FRANCES CAIRNCROSS, COSTING THE EARTH: THE CHALLENGE FOR GOVERNMENTS, THE OPPORTUNITIES FOR BUSINESS (1991).

Encourages the 'intelligent' use of markets in environmental policy. First half of the book examines the challenges that environmental policy poses for government, such as concerns about resource conservation, energy efficiency, and the allocation of environmental costs. Second half looks at the implications of environmental policy for companies, and addresses possible changes in product types, production processes, and management approaches. Devotes two chapters to the international consequences of environmental policy, including discussion about the role of industry in the global environment, and the role of government in international environmental management.

BARRY COMMONER, MAKING PEACE WITH THE PLANET (1992).

Analyzes present-day pollution concerns in terms of "a clash between the ecosphere and the technosphere." Discusses how these two spheres interact and what can be done to harmonize them. Criticizes pollution control approaches as ineffective for achieving significant, and sustainable, reductions in pollution levels, and argues for a shift to pollution prevention measures. Supports this argument with reference to successful pollution prevention efforts for lead, mercury, DDT's, and PCBs. Argues for public participation in the until-now private decisions of production technology. Insists that the technological basis for a transformation to ecologically sound systems of production is largely in hand.

CORPORATE STEWARDSHIP OF THE ENVIRONMENT (Barbara H. Peters & James L. Peters eds., 1991).

Contains a collection of brief articles by different corporations on current environmental issues, including:

1. *The Commitment to Corporate Environmental Excellence*, by Robert Kennedy (Union Carbide Corp.), which discusses Union Carbide's belief that manufacturing pollution can be cut by at least one-half.
2. *Long-range Planning for Environmental Management*, by Sigvard Hoggren (AB Volva), which discusses how customers will not tolerate unsafe production if satisfactory alternatives exist. Gives examples of customer-driven change and the incorporation of environmental policy into long-term planning.
3. *Involving the Community*, which discusses how Dow Chemical U.S.A. responded to community concerns and environmental policy in its Louisiana Division.
4. *Communicating Environmental Performance to Stakeholders*, by Harry Fatkin of Polaroid Corp., which discusses how the "end-of-pipe" approach does not work, and how Polaroid involves the community and the shareholder in its environmental program. Also discusses Polaroid's 1987 change of focus to pollution prevention in conjunction with the traditional compliance approach. Discusses what pollution prevention and waste reduction can accomplish.

CORPORATIONS & THE ENVIRONMENT: HOW SHOULD DECISIONS BE MADE? (David L. Brunner et al. eds., 1980).

Summarizes the Symposium on Corporate Environmental Decision Making. Discusses three case studies: "Bethlehem Steel Case: A Regulation Dilemma," "3M Co.: Creating Incentives," and "AMAX, Inc.: A Corporation & the Public Interest."

ENVIRONMENTAL DEFENSE FUND, APPROACHES TO SOURCE REDUCTION: PRACTICAL EVIDENCE FROM EXISTING POLICIES AND PROGRAMS (June 1986).

Gives guidance as to practical action and contains material from 21 states.

GETTING IT GREEN: CASE STUDIES IN CANADIAN ENVIRONMENTAL REGULATION (G. Bruce Doern ed. 1990).

Argues that in the 1990's a market approach to environmental problems will be far more crucial than it has been. Chapter 1, "Regulation and Market Approaches," discusses different case studies. Gives a good overview and contains interesting case studies.

JOEL S. HIRSCHHORN & KIRSTEN U. OLDENBURG, *PROSPERITY WITHOUT POLLUTION: THE PREVENTION STRATEGY FOR INDUSTRY AND CONSUMERS* (1991).

Very comprehensive source. Argues that achieving effective unified action to prevent further pollution requires public demand for a prevention strategy. Emphasizes how the consumer needs to shift from being a victim or a cause of environmental problems to being part of the solution. Cites the shift of responsibility from institutions to individuals as a key element of the international green movement and the grass-roots activism that has been growing in the U.S. Discusses pollution prevention issues, such as green marketing and source reduction, and the obstacles to achieving pollution prevention goals.

INTEGRATED POLLUTION CONTROL IN EUROPE AND NORTH AMERICA (Nigel Haigh & Frances Irwin eds., 1990).

Discusses integrated pollution control in North America and Europe. Of particular interest are:

1. Terry Davies, *The United States: Experiment and Fragmentation*. Discusses the history of U.S. environmental policy beginning with the creation of the EPA. Discusses the major forms of integration tried in the U.S. and new perspectives on pollution control. Stresses an integrated approach rather than pollution prevention or source reduction.
2. Barry Rabe, *Cross-Media Innovation in the American States*. Argues that a system of integrated environmental management must involve state government if integration is to be achieved. Examines the history of state environmental efforts. Discusses thoroughly the integration institutions in Illinois and New York, and the Great Lakes integration efforts.

MAKING POLLUTION PREVENTION PAY: ECOLOGY WITH ECONOMY AS POLICY (Donald Huisingsh & Vicki Baily eds., 1982).

Contains papers from a symposium held in Winston-Salem, N.C., in May, 1982. Relevant pieces include:

- Russell H. Susag, *Pollution Prevention Pays: The 3M Corporate Experience*, 17.
Susag, Director of 3M Environmental Operations, discusses the 3P Program, its benefits and accomplishments.
- Dan Meyer, *In Every Dark Cloud...* 23.
Discusses Dow Corning's pollution prevention approach and its focus on philosophy, procedure, and performance.

- Carlisle Ford Runge, *Positive Incentives for Pollution Control in North Carolina: A Policy Analysis*, 115.

Proposes a "negative pollution tax" as a solution that promotes economic development while maintaining a high level of environmental quality. Examines pollution from an economic point of view; discusses negative externalities, non-market and positive market incentives for reduction, and a negative pollution tax proposal for reduction.

STEPHAN SCHMIDHEINY, *CHANGING COURSE: A GLOBAL BUSINESS PERSPECTIVE ON DEVELOPMENT AND THE ENVIRONMENT* (1992).

Calls for active business involvement in sustainable forms of development. Argues for a market approach: one that integrates command-and-control regulations, economic instruments, and self-regulation. Describes the roles capital markets and international trade will play. Addresses issues related to managing corporate change brought about by a move toward environmental protection, with emphasis on technological innovation, technology cooperation, sustainable management of renewable resources, and the management of sustainable development on developing countries. Devotes second half of book to case studies addressing particular issues in business management implicated by these changes.

R. SULLIVAN, *FACILITY POLLUTION PREVENTION PLANNING: A MATRIX OF THE PROVISIONS OF TWELVE STATE LAWS* (1990).

Summarizes pollution prevention legislation of 12 states in matrix form. Intended to provide a comparative analysis of State facility pollution prevention laws to act as models for States that are considering enactment of State facility planning laws. Matrix divided by specificity, enforceability, and funding. (Available from Ohio EPA, P.O. Box 1049, 1800 Watermark Drive, Columbus, Ohio 43266-0149, 614/644-3020).

WASTE REDUCTION INSTITUTE FOR TRAINING AND APPLICATION RESEARCH, INC., *SURVEY AND SUMMARIES: STATE LEGISLATION RELATING TO POLLUTION PREVENTION* (1992).

Outlines the evolution of national pollution prevention programs, providing a historical perspective. Defines terms, suggests applications, and provides both a legislative and economic framework for developing pollution prevention programs. Focuses on Washington State programs. Discusses controversy surrounding definitions of terms such as "waste reduction," "pollution prevention," and "source reduction." (Available from WRITAR, 1313 5th St. S.E., Minneapolis, MN, 55414-4502; 612/379-5996.)

GOVERNMENT DOCUMENTS

Reports and Hearings

H. REP. NO. 101-555, 101st Cong., 2d Sess. (1990).
Recommends passage with amendments of H.R. 1457, the Waste Reduction Act, to establish EPA programs to encourage industries to reduce the generation of toxic chemical wastes at manufacturing facilities and other waste sources. Includes provisions to: (1) require EPA to establish an office to develop and implement source reduction activities; (2) to authorize EPA grants to states for programs to promote industry voluntary use of source reduction techniques, (3) provide technical assistance for innovative waste reduction programs; and (4) establish an EPA clearinghouse to compile and disseminate information on source reduction technologies.

S. REP. NO. 101-526, 101st Cong., 2d Sess. (1990).
Recommends passage with amendment of S. 585, the Pollution Prevention Act of 1990, which directs EPA to implement strategies to prevent or reduce the generation, emission, or discharge of hazardous wastes and other pollutants at their source. Includes provisions to require EPA to: (1) establish an Office of Pollution Prevention to coordinate source reduction programs; (2) make matching grants to States for technical assistance to business seeking information on source reduction; and (3) establish a national clearinghouse on source reduction techniques and technology transfer.

EPA, POLLUTION PREVENTION STRATEGY, 56 Fed. Reg. 7849 (Feb. 26, 1991).

Sets forth EPA's blueprint for a national, comprehensive pollution prevention strategy. Strategy seeks to incorporate pollution prevention into EPA's existing programs. Defines pollution prevention. Provides guidance to Headquarters and Regional Offices for integrating pollution prevention into EPA's existing regulations and programs. Sets forth a voluntary program for industry (33/50 Program) that sets forth specific reduction target levels for 17 priority toxic pollutants. (Available from the EPA's Pollution Prevention Information Clearinghouse, Washington, D.C., 202-260-1023.)

EPA, POLLUTION PREVENTION 1991: PROGRESS ON REDUCING INDUSTRIAL POLLUTANTS (EPA/21P-3003) Oct. 1991.

Describes major public and private sector activities undertaken in the pollution prevention field. (Available for \$27 from the EPA's Pollution Prevention Information Clearinghouse, Washington, D.C., 202-260-1023.)

EPA, PROPOSED POLLUTION PREVENTION POLICY STATEMENT, 54 Fed. Reg. 3845 (Jan. 26, 1989).

Provides a statement of EPA's pollution prevention policies, the steps the EPA has already taken, and development of EPA's multi-media pollution prevention program. Proposal encourages organizations, facilities, and individuals to utilize source reduction techniques in order to reduce environmental risks. Proposes creating a pollution prevention office within the EPA that would provide educational, technical assistance, and funding in order to build pollution prevention programs in the public and private sectors.

EPA, SPECIAL PROJECTS OFFICE, THE 33/50 PROGRAM: FORGING AN ALLIANCE FOR POLLUTION PREVENTION (July 1991).

Discusses EPA's 33/50 Program, which asks companies to voluntarily reduce their releases of 17 high priority toxic chemicals 33% by 1992 and 50% by 1995. Defines pollution prevention. Outlines 33/50 Program's goals and objectives. Lists target chemicals. Addresses advantages of voluntary approach to pollution prevention versus a mandatory one. (Available from the EPA's Pollution Prevention Information Clearinghouse, Washington, D.C., 202-260-1023.)

EPA, EPA'S 33/50 PROGRAM, A PROGRESS REPORT: REDUCING RISKS THROUGH VOLUNTARY ACTION (July 1991).

Summary of EPA's 33/50 Program, which is a voluntary pollution prevention initiative aimed at achieving overall national reductions of 17 high priority toxic chemicals (33% by the end of 1992 and 50% by the end of 1995). First in a series of reports that will document the program. Tracks: (1) extent of industry participation in and commitment to the 33/50 Program; (2) amount of types of waste reduced; (3) the extent to which waste reduction at the source — pollution prevention — contributes to overall reductions. Lists companies committed to Program as of June 1991.

EPA, OFFICE OF SOLID WASTE AND EMERGENCY RESPONSE, WASTE MINIMIZATION: ENVIRONMENTAL QUALITY WITH ECONOMIC BENEFITS (EPA/530/SW-90/044). April 1990.

Addresses the economic paybacks of a voluntary industrial waste minimization program. Discusses both incentives and obstacles to voluntary adoption of a program. Examines EPA's *Report to Congress on Waste Minimization*, which concluded that a mandatory waste minimization program was feasible at the time, and examines whether existing incentives to encourage the adoption of a voluntary program have been sufficient.

Suggests ways for industry to set up a waste minimization program. Lists State hazardous waste agencies and waste exchanges. (Available by calling the RCRA Hotline, 800/424-9346.)

POLLUTION PREVENTION, 1990: HEARING BEFORE THE SUBCOMM. ON ENVIRONMENTAL PROTECTION OF THE SENATE COMM. ON ENVIRONMENT AND PUBLIC WORKS, 101st Cong., 2d Sess. (1990).

Hearing to examine strategies for preventing environmental pollution, including initiatives to reduce source generation of wastes and encourage recycling of waste materials. Contains examples of federal and state pollution prevention programs and initiatives in the Northeast, focusing on waste reduction and recycling and discusses the roles of federal, state, and local governments in pollution prevention.

SOLID WASTE REDUCTION, RECYCLING, POLLUTION PREVENTION, 1990: HEARINGS BEFORE THE SUBCOMM. ON NATIONAL RESOURCES, AGRICULTURAL RESEARCH, AND ENVIRONMENT OF THE HOUSE COMM. ON SCIENCE AND TECHNOLOGY, 101st Cong., 2d Sess. (1990).

Hearing to examine strategies and legislative proposals for preventing environmental pollution, including initiatives to reduce source generation of wastes and encourage recycling of waste materials. Briefly considers the following bills: (1) S. 932 to amend the Solid Waste Disposal Act to establish EPA for solid waste reduction and recycling; (2) H. R. 1457, the Waste Reduction Act, to establish an EPA database on waste reduction practices and to make grants to States for innovative waste reduction programs; (3) H.R. 3693, The Pollution Prevention Advancement Act, to establish EPA program of coordinated research, demonstrations, evaluations, and technology transfer of new waste reduction technologies; and (4) H.R. 3735, the Omnibus Reauthorization Bill, to amend the Solid Waste Disposal Act to encourage reduction and recycling of solid and hazardous waste.

WASTE MINIMIZATION AND POLLUTION PREVENTION, 1989: HEARINGS BEFORE THE SUBCOMM. ON ENVIRONMENT LABOR OF THE HOUSE COMM. ON SMALL BUSINESS, 101st Cong., 1st Sess. 12 (1989).

Hearing to review strategies to promote recycling and other pollution prevention activities by industry, including small business. Describes: (1) EPA pollution prevention activities; (2) possibilities for small business involvement in pollution prevention; and (3) implications for small business of regulatory and legislative pollution prevention and control programs.

U.S. CONGRESS, OFFICE OF TECHNOLOGY ASSESSMENT, SERIOUS REDUCTION OF HAZARDOUS WASTE: FOR POLLUTION PREVENTION AND INDUSTRIAL EFFICIENCY (1986).

Examines definitions of hazardous waste, waste reduction, and waste reduction technology, and examines a range of policy options aimed at waste reduction. Discusses ways companies can promote waste reduction. Concludes that current national policy does not explicitly address comprehensiveness or other possible Federal activities that could help companies overcome site-specific waste reduction impediments. Argues that there is a need for a full policy debate on waste reduction before specific regulatory actions are taken. Concludes that nonregulatory approach should be initiated to encourage companies to voluntarily reduce their waste. (Available for \$36.50 from National Technical Information Service, Springfield, VA, 703/487-4650.)

U.S. CONGRESS, OFFICE OF TECHNOLOGY ASSESSMENT, FROM POLLUTION TO PREVENTION: A PROGRESS REPORT ON WASTE REDUCTION (1987).

OTA's follow-up to 1986 Report: *Serious Reduction of Hazardous Waste*. Analyzes Congressional options to reduce the generation of hazardous wastes and environmental pollutants at the source (waste reduction). Provides a comprehensive analysis of the EPA's "Minimization of Hazardous Waste" (1986) and OTA's "Serious Reduction of Hazardous Waste: For Pollution Prevention and Industrial Efficiency" (1986). Compares the two reports and provides Congress with new information on waste reduction. (Available for \$19.50 from National Technical Information Service, Springfield, VA, 703/487-4650.)

POLLUTION PREVENTION STATUTES

FEDERAL

Pollution Prevention Act of 1990, 42 Pub. L. No. 101-508, §§6601-6610, 104 Stat. 1388 (codified at U.S.C. §§ 13101-13109). Available from PPIC, 202-260-1023.

STATE – Mandatory

Arizona: Ariz. Rev. Stat. Ann. §§ 49-961 to -73 (Supp. 1992).

California: Cal. Health & Safety Code §§ 25244.12 to .24 (West 1992).

Georgia: Ga. Code Ann §§ 12-8-60 to -83 (1992).

Louisiana: La. Rev. Stat. Ann. §§ 30.2291 to .2295 (West 1989 & Supp. 1992).

Maine: Me. Rev. Stat. Ann. tit. 38, §§ 2301 to 2312 (Supp. 1991).

Massachusetts: Mass. Ann. Laws ch. 211, §§1 to 23 (Law. Co-op. Supp. 1992).

Minnesota: Minn. Stat. Ann. §§115D.01 to .12 (West Supp. 1992).

Mississippi: Miss. Code Ann. §§ 49-31-1 to -27 (1991 & Supp. 1992).

New Jersey: N.J. Rev. Stat. §§ 13:1D-35 to -50 (West 1991).

New York: N.Y. Env'tl. Conserv. Law §§ 27-0900 to -925 (McKinney Supp. 1992).

Oregon: Or. Rev. Stat. §§ 465.003 to .037 (1991).

Tennessee: Tenn. Code Ann. §§ 68-212-301 to -312 (1992).

Texas: Tex. Health & Safety Code Ann. §§ 361.501 to .510 (Vernon 1992).

Vermont: Vt. Stat. Ann. tit. 10, §§6623 to 6632 (Supp. 1992).

Washington: Wash. Rev. Code §§ 70.95C.010 to .240 (Supp. 1992).

STATE – Voluntary

Alaska: Alaska Stat. §§ 46.06.021 to .041 (1991).

Colorado: Colo. Rev. Stat. §§ 25-16.5-101 to -110 (Supp. 1992).

Connecticut: Conn. Gen. Stat. Ann. Appendix Pamphlet, P.A. 91-376 (West 1992).

Delaware: Del. Code Ann. tit. 7, §§ 7801 to 7805 (1991).

Florida: Fla. Stat. §§ 403.072 to .074 (1991).

Illinois: Ill. Ann. Stat. ch. 111 1/2, ¶¶ 7951 to 7957 (Smith-Hurd Supp. 1992).

Indiana: Ind. Code Ann. §§ 13-9-1 to -7 (West Supp. 1992).

Iowa: Iowa Code §§ 455B.516 to .518 (West Supp. 1992).

Kentucky: Ky. Rev. Stat. Ann. §§ 224.46-310 to -325 (Michie/Bobbs-Merrill 1991).

Rhode Island: R.I. Gen. Laws §§ 37-15.1-1 to .11 (1990).

South Carolina: S.C. Code Ann. §§ 68-46-301 to -312 (Law. Co-op Supp. 1990).

Wisconsin: Wis. Stat. Ann. §§ 144.955 (West Supp. 1991).