ENVIRONMENT/2000: CONNECTICUT'S ENVIRONMENTAL PLAN

SUBMITTED BY

CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION

PURSUANT TO PUBLIC ACT NUMBER 87-142

SEPTEMBER 1, 1987

WILLIAM A. O'NEILL
GOVERNOR

STATE OF CONNECTICUT
EXECUTIVE CHAMBERS
HARTFORD, CONNECTICUT

CLASSIC CONNECTICUT

September 3, 1987

Commissioner Leslie Carothers
Department of Environmental Protection
State Office Building
Hartford, Connecticut 06106

Dear Leslie:

In accordance with Public Act 87-142, I have reviewed the document entitled Environment/2000: Connecticut's Environmental Plan and have determined that it meets the intent of providing this state with a statewide environmental plan for the management and protection of the quality its environment and natural resources in furtherance of legislative policy.

Environment/2000 provides the citizens of Connecticut a means to maintain and enhance the air, land, and water resources that form the environment for all who inhabit this densely populated and richly endowed state. We have become aware that our natural and cultural heritage and our future are all interrelated and require the utmost of sensible and balanced management. We need to acknowledge that we are only temporary residents of this land and need to take responsibility as "stewards" of the environment. Each of us must work hard to preserve, protect and pass on this heritage to present and future generations. Environment/2000 will serve as a guide for the people of this state in achieving a "quality of life" as set out in this document.

In approving this Plan, I call together all branches and levels of government, business and industry, conservation organizations, educators, and the individual citizen to actively participate as trustees of the environment by working towards the achievement of Connecticut's environmental future as pictured in Environment/2000: Connecticut's Environmental Plan.

Sincerely,

WILLIAM A. O'NEILL
Governor

STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION

September 1, 1987

His Excellency
The Governor of Connecticut
State Capitol
210 Capitol Avenue
Hartford, Connecticut 06106

Dear Governor O'Neill,

I am pleased to submit to you **Environment/2000: Connecticut's Environmental Plan** for your review and approval. As you are aware, the 1987 Legislative Session enacted into law Public Act 87-142 which calls for the submission of a state-wide environmental plan to you by September 1, 1987. This document satisfies the requirements of this law by presenting a long range plan which identifies the State's priority environmental issues and sets the agenda for Connecticut's environmental programs.

Environment/2000 will provide the Department of Environmental Protection with a clear definition of its mission and goals, will set a unified and comprehensive agency direction, and will guide policy and program development, legislative and regulatory proposals, and budget requests. It is this Department's responsibility to lead both the public and private sector in the implementation of this Plan. The Department must establish priorities within each of the Plan's forty-two issues, provide needed training and education to local government officials and the public, and provide for better accountability. A key factor in the success of this Plan will be the ability to monitor the implementation and achievements over time. This Department will work closely with and assist the Connecticut Council on Environmental Quality in preparing their annual report which will detail the progress being made.

The Department began preparing this environmental plan in 1985 and one year later released a draft document for public review and comment. The Department conducted an intensive public participatory process: a questionnaire was developed and circulated throughout the state asking citizens to evaluate all topics within **Environment/2000**; regional workshops were held throughout the state in June 1986; a Governor's Conference on **Environment/2000** was held in October 1986; and a public advisory committee was formed and assisted the Department in the review, amendments and revisions to the Plan. This process has resulted in a document that reflects the aspirations of the citizens of the State.

This Department, other State Agencies, and the public and private sectors have worked diligently in developing a comprehensive and dynamic state-wide environmental plan for the protection of the quality of the State's environment and the management of its natural resources. Although I arrived too late to be a participant in the development of the plan, I endorse it without reservation and look forward to working towards its accomplishment. With your adoption of **Environment/2000: Connecticut's Environmental Plan**, the commitment and guidance will be put in place to accomplish this most challenging job.

Sincerely yours,

Leslie Carothers

Leslie Carothers
Commissioner

Phone:
165 Capitol Avenue • Hartford, Connecticut 06106

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ACKNOWLEDGEMENTS

Dear Reader:

It is with great pleasure that we are able to acknowledge the many individuals and organizations who assisted in producing **Environment/2000: Connecticut's Environmental Plan.** It has been only through their contribution and dedication that it has become a reality and is now adopted as the State's environmental plan.

Special thanks are extended to the **Environment/2000** Advisory Committee and the four Chairpersons--James DeWitt, Philip Leavenworth, William Renfro, and Denise Schlener--who worked diligently to revise, debate and reach consensus. Without their skillful leadership and energy, this Plan would not have been transformed into a public document. Further, the following individuals should be recognized and thanked for their many hours of hard work during many evenings and weekends. It is this type of commitment that has fostered a broad based ownership essential to the successful implementation of this Plan.

Diane K. Blackman	Joanne Foster	Nancy Kriz	Denise Schlener
Russell L. Brenneman	Susan Giordano	Philip B. Leavenworth	Gregory A. Sharp
Gerry Capriulo	Jean Good	Chris T. Maier	Louis Shuman
Marshall T. Case	Meg Goodwin	Marion McLaughlin	John Sima, Jr.
John W. Connors	Lucas Held	Susan Merrow	Barbara Surwillo
Joey Corcoran	John Hibbard	Norma O'Leary	Mark R. Sussman
Les Corey	Chris Hofmann	Virginia Paige	Shirley Talcott
Jean P. Curtis	Jay Kaplan	John S. Rankin	Sally L. Taylor
James DeWitt	J. Patrick Kelly	William C. Renfro	William Urban
William A. Ellis	Robert J. Klancko	Donna Richardson	Howard Weiss
Susan Faulkner	Robert Kloepfer	John Reiger	Ronald Whitely
Thomas H. Fitzpatrick	Edward Kluck	Faith St. Claire	Suzi Wilkins

Recognition should also be extended to the many citizens of the State of Connecticut who gave of their time to review and comment on the Plan, attended public meetings, responded to the questionnaire, and provided much valuable public input.

We would also like to extend our appreciation to the Department staff who assisted us in identifying and developing the Plan and who participated in the 1986 Governor's Conference. In addition, our list of acknowledgements would not be complete without mentioning Robert Paier, the Editor of the Department of Environmental Protection's Publication **The Citizens' Bulletin.** The draft **Environment/2000** was first published in the May 1986 edition under his able editorial skills and he has kept readers up to date through articles in subsequent issues.

We look forward to working with these dedicated individuals as the **Environment/2000** process continues and invite others to join us in its success.

The **Environment/2000** Development Committee, CT Department of Environmental Protection:

Robert Moore, Chairman-Assistant Deputy Commissioner
Carmine DiBattista, Director-Local Assistance and Program Coordination Unit
Hugo Thomas, Director-Natural Resources Center
James Murphy, Principal Environmental Analyst-Water Compliance Unit
Glen Gross, Principal Environmental Analyst-Planning and Coordination Unit
Tessa Gutowski, Senior Environmental Analyst-Water Compliance Unit

STATEMENTS OF THE ENVIRONMENT/2000: ADVISORY COMMITTEE CO-CHAIRS

The **Environment/2000** Plan represents a vision of Connecticut's future shaped by the people who live in the state. Led by the Department of Environmental Protection, several hundred people representing industry, environmental organizations, academia, and communities throughout the state, have worked over the last year to identify long-term environmental goals and the strategies needed to achieve them. After a state-wide survey and conference were held, a Citizens Advisory Committee convened in October, 1986 to review and finalize the plan presented herein. Working regularly throughout the winter and early spring, the Committee analyzed, debated, and negotiated to revise and supplement the goals, objectives, and strategies, developed by the Department in the draft plan. What emerged is a document which is as impressive for its content as the process undertaken to develop it. But as hard as the advisory committee worked, members know that the real challenge of *implementing* the Plan lies ahead. This is a job that the Department cannot and should not carry out alone. The key to the Plan's success lies within the process used to develop it – continue to involve *all* those people who have a stake in a clean and healthy Connecticut environment.

Denise Schlener, Connecticut River Watershed Association

As a Connecticut citizen, each of us has a responsibility for stewardship of our state's beautiful but limited and fragile environment. We recycle materials and conserve energy, but how do we, as individuals and groups, effectively contribute to environmental planning and programming on a regular basis? How do we also come to understand our environmental problems and identify effective coordinated interventions and enforcement measures? We have needed a formally recognized, organic mechanism for environmental improvement, not only to allow comprehensive and integrated sectoral planning and implementation but also to create a process for participation and for understanding of common problems and collective resources; this is our **Environment/2000**. Now we have the opportunity and challenge to pull together to achieve our undisputed common goal – the maintenance and improvement of Connecticut's environment.

Philip B. Leavenworth, Environmentalist

This document, **Environment/2000**, is a remarkable plan that identifies a panoply of environmental concern. However, we should be reminded that **Environment/2000** is a *process* as much as it is a *plan*. It is a process that joins potentially incongruous interest (i.e. environmentalists and industrialists) together in the spirit of cooperation and mutual concern. From its inception, **Environment/2000** has intended to be a dynamic, continuous process, constantly being reviewed and reshaped always representing the concerns of a cross section of Connecticut citizenry. Connecticut industry pledges to continue its efforts towards a cleaner, safer, and healthier environment as we move towards the year 2000.

James DeWitt, Connecticut Association of Metal Finishers

Environment/2000 is a plan to commit the citizens and the institutions of the State of Connecticut to the maintenance and enhancement of our air, water, and land resources. It presents goals, objectives, and strategies for preserving natural resources and improving environmental values in 42 specific areas. It provides state agencies, industries, municipalities, environmental groups, and individual citizens a framework for cooperating in the task of leaving future generations a better State than the one this generation inherited. I hope we take this timely opportunity to meet this obligation.

William C. Renfro, Northeast Utilities

INTRODUCTION: THE NEED, THE PROCESS, AND THE ISSUES

THE NEED

Environment/2000: Connecticut's Environmental Plan establishes the environmental agenda for State and local governments, business and industry, and the public. This long-range Plan identifies the State's environmental goals necessary for the achievement of a quality environment for the state, defines measurable near-term objectives and implementation management strategies. Connecticut's citizens have made it clear that pollution is unacceptable, that unique natural resource conditions must be protected, that state-owned lands should be managed for the benefit of the public, and that a quality environment must be passed on to future generations. This commitment has been repeatedly stated as evidenced by legislative mandate, administrative programs, and judicial decisions. **Environment/2000** is the State Environmental Plan which provides Connecticut's citizens with a mechanism to rededicate and define this commitment.

Environment/2000 presents a clear definition of the Department of Environmental Protection's mission and goals and provides a challenge and a direction to all other organizations that have an impact on Connecticut's environment. It will set a unified and comprehensive direction for the Department and its future managers, will assist in identifying legislative and budgetary priorities, and will serve as an environmental rallying point for Connecticut's citizens.

THE PROCESS

In May 1986, the Department of Environmental Protection's publication **Citizens' Bulletin** served as the vehicle by which the Department presented **Environment/2000: Connecticut's Environmental Goals and Management Strategies.** This version of **Environment/2000**, which was sparked by the Commission on Connecticut's Future, was the result of two years of careful study and research from within the Department of Environmental Protection. The document was separated into the four categories of preservation, pollution control, resource management, and services and contained 38 goals and objectives and over 200 management strategies.

The process of bringing the Plan before the people and encouraging their participation began with copies of the Plan being sent throughout the State, to municipal governments, town boards and commissions, business leaders, industry, educators, and environmental groups. Regional workshops were held throughout the State in June 1986. At these workshops, Department of Environmental Protection officials outlined the structure of the plan and explained how the public could participate. A questionnaire was circulated throughout the State asking citizens to evaluate all topics within the **Environment/2000** document in terms of importance and urgency and to make any suggestions, changes, or additions they saw fit.

In October 1986, the Governor sponsored a Conference on **Environment/2000** where attendees representing a wide range of interests in Connecticut made it very clear that the citizens of the State had indeed picked up the challenge to become involved in charting the State's environmental agenda. A public advisory committee was formed in October 1986 to assist the Department in the review, amendments and revisions to the Plan. Numerous subcommittee meetings were held during the following three months chaired by the members of the advisory committee. It was at these meetings that the **Environment/2000** document was reconsidered, discussed, analyzed, and held up to most intense scrutiny. The process had initiated the **Environment/2000** transformation from a Department document to a true expression of the wishes and aspirations of the citizens of the State of Connecticut. Finally, in June 1987, the Connecticut General Assembly amended Connecticut General Statute 22a-8 through Public Act Number 87-142, enabling a process for formally identifying **Environment/2000** as the State's Environmental Plan.

THE ISSUES

Environment/2000 contains forty-two issues which were selected through consensus and identified as the most pressing environmental management problems currently being faced by the State. The participatory process, as described above, created a document that truly reflects a broad consensus of government, business and industry, and public interest organizations. **Environment/2000** identifies what needs to be done and deals with direct environmental issues. The writers of this Plan made no attempt to bring into discussion the many disciplines that interrelate with the environment, such as energy, health, housing, industrial development, and the many other socio-economic fields. Nor does the Plan address such items as funding, legislation, agency responsibility, or time frames. The writers believed the Plan must be free of these *constraints* and determined that these critical factors should be addressed in the implementation of the management strategies.

Thematic throughout the Plan are the three over-riding issues of *land-use, education, and enforcement*. Land-use remains the far-reaching issue confronting all aspects of resource management and is the fulcrum on which the precious beauty and environmental health of the State will balance. Better environmental education and information is needed as environmental protection and natural resource management policies and programs become more complex. Throughout the **Environment/2000** public participatory process, stricter enforcement of pollution control and resource management statutes and regulations was demanded.

ENVIRONMENT/2000: THE ISSUES

ACID PRECIPITATION

GOAL: Protect public health and the environment from adverse effects of acid precipitation.

OBJECTIVE: Reduce human-induced acid precipitation.

STATUS & TRENDS: Precipitation in Connecticut and the northeast is more acidic than can be attributed to normal rainfall conditions. The primary sources of the acidification appear to be from the south and west. Power plants, industries, and automobiles are emitting sulfur dioxide, nitrous oxides, and hydrocarbons in amounts far greater than those permitted in Connecticut. Unless sulfur dioxide reduction strategies are adopted, acid precipitation will continue. Effects of acid precipitation have not been well documented in Connecticut. Effects documented elsewhere, however, have been shown to include the following: increasing acidification of lakes and ponds; increased respiratory health problems; increased deterioration of buildings and metal structures; and the degradation of forests, croplands, and natural habitats. There is currently a lack of detailed studies on the sources, causes, transport, and impacts of acid precipitation, as well as a lack of information on the contribution of sources of acid producing compounds other than sulfur dioxide.

STRATEGIES:

1) Continue to advocate national and regional control and enforcement strategies for the incremental reduction of sulfur and nitrogen oxide induced acid precipitation.

2) Encourage the development and use of regional transport models and monitoring which have a sufficient accuracy to predict movement of air pollutants so that effects of regulatory changes can be determined.

3) Continue to study and monitor the adverse impacts of acid precipitation on Connecticut lakes and forest growth in selected watersheds; expand present pH monitoring programs to include rivers and streams located in sensitive areas.

4) Conduct epidemiological studies necessary to determine the effects of size and acidity of respirable particles.

5) Expand monitoring networks so that a system is in place on the periphery of the state.

AGRICULTURE

GOAL: Conserve Connecticut's farmlands and ensure a viable agriculture.

OBJECTIVE: Develop and maintain increased agricultural production opportunities consistent with sound environmental management.

STATUS & TRENDS: Although Connecticut is a highly industrialized state, its citizens have acknowledged that a viable agriculture is needed in the state not only to ensure a basic level of homegrown food production, but also to provide a significant contribution to the landscape and the total quality of life. However, in recent decades there has been a steady decline in Connecticut agriculture. Prime farmlands have been urbanized, small family farm operations have been lost to changing economic conditions, and the agricultural community has been engulfed in many of the pollution control issues that other Connecticut industries have faced. Modest attempts have been made at agricultural land preservation through development rights purchases and tax incentives, but more important is the recognition that Connecticut agriculture is in transition and in order to survive, a full commitment must be made involving new technologies, markets, incentives, assistance, and public education.

STRATEGIES:

1) Provide additional incentives to preserve and conserve farmland.

2) Increase the methods, techniques and incentives to preserve important farmland through such efforts as expanding the Purchase of Development Rights Program and enhancing tax base stability efforts.

3) Coordinate state policies and programs that deal with and have an impact on the agricultural community.

4) Develop and improve currently required *Best Management Practices* for control of off-site environmental impacts.

5) Encourage new technologies for expanded agricultural products and markets.

6) Provide increased research and improved technical assistance to the agricultural community.

7) Provide assistance to communities in land use planning consistent with agricultural preservation goals.

8) Disseminate information to the public regarding the value of agriculture and its continuation within Connecticut.

9) Discourage through rules and regulations and other disincentives the non-agricultural use of prime agricultural soil.

AIR QUALITY

GOAL: Protect public health and the environment from the adverse effects of air pollutants.

OBJECTIVE: Attain and maintain air quality standards.

STATUS & TRENDS: Although many public health standards are being met for air pollutants now under regulation, some pollutants that are generated by other states and transported into Connecticut are major contributors to the statewide ozone non-attainment problem. Further, a large number of localized areas do not meet public health standards for carbon monoxide. New development which is carried out on a first-come, first-served basis may jeopardize areas where ambient quality standards are being met. In addition, there are areas in the state that do not provide sufficient air quality margins for growth.

STRATEGIES:

1) Develop additional controls and measures that attain and maintain air quality standards and provide for growth.

2) Continue to issue permits which require the best pollution control methods as they become available.

3) Increase the scope and use of the current air quality monitoring network.

4) Develop incentive programs for air pollution sources to reduce emissions.

5) Promote the development and implementation of national, regional and intrastate programs to reduce ozone concentrations.

6) Develop programs to reduce localized carbon monoxide concentrations.

7) Maintain and improve the vehicle inspection/maintenance program.

8) Strengthen and expand the ability to remedy objectionable odors.

BOATING

GOAL: Provide for safe commercial and recreational boating.

OBJECTIVE: Promote knowledgeable and environmentally responsible commercial and recreational boat use.

STATUS & TRENDS: There is an insufficient number of boat launches, moorings, and access points to meet increasing public demand. Therefore, boating opportunities will be more restricted because of decreased accessibility and availability of moorings. While harbor uses are increasing, federal subsidies for maintenance of navigational facilities, including channels, aids to navigation, and search and rescue crews are being severely reduced or eliminated. Navigation aids are inadequate to meet safety requirements and the presence of derelict structures poses a potential danger to boaters. In addition, the control of marine sanitation device discharges is inadequate and there is a general lack of available pump-out facilities for use by boaters.

STRATEGIES:

1) Require a program of training, examining, and licensing of operators of vessels including basic navigation and boating safety.

2) Tie boater registration fees to boating safety and environmental educational programs and to maintenance of navigational aids.

3) Develop a comprehensive program of regulating motor sizes, numbers and types of vessels, speeds and wastes, no-wake areas, and noise pollution consistent with environmental quality maintenance and with the pursuance of other recreational water-based activities including swimming, fishing, sailing and canoeing.

4) Develop a regulatory program for marine sanitation including construction of pump-out stations.

5) Assess all navigable waters as to environmental impacts of boating activities.

6) Inventory derelict structures and vessels and analyze existing laws for provisions for removal and control, including the imposition of fines for derelict structures.

7) Maintain and improve the existing programs of dredging and navigational aids, enhancing where necessary.

8) Initiate a program of monitoring marina fueling facilities, with fines to accompany negligence and known spills.

9) Assess the needs for additional moorings in harbors and examine the possibilities of municipally-owned and maintained moorings for which the municipality may assess appropriate fees and carefully control marina expansion employing strict environmental standards.

10) Develop and improve boat launch access to public water bodies.

COASTAL RESOURCES

GOAL: Conserve and enhance sensitive coastal resources.

OBJECTIVE: Protect the marine ecological system, minimize non-water dependent uses, and increase public access to the shoreline.

STATUS & TRENDS: Increasing population density and development in the coastal area have caused the loss of marine ecological systems and have altered coastline landforms. Further, the Long Island Sound, as well as many estuarine coves and embayments, are degraded as a result of pollution, siltation, eutrophication, and restricted tidal flow. These coastal resource degradation problems, however, are neither addressed on a systematic basis nor coordinated at various levels of government. The waterfront of Connecticut's major urban ports is underutilized and many existing urban waterfront uses are not directly dependent on proximity to coastal waters. Most coastal municipalities have adopted plans for the use of their shoreline and protection of sensitive marine resources, but limited public access and the existence of non-water-dependent land uses continue to create problems.

STRATEGIES:

1) Maintain and enhance existing municipal and state coastal management programs.

2) Complete municipal coastal programs for long-range planning and protection of the coast.

3) Increase assistance to local planning and zoning commissions.

4) Ensure that suitable opportunities for public access to coastal resources are available to all citizens of the state.

5) Develop additional mechanisms to increase protection of existing water-dependent uses of the coast and discourage non-water dependent uses.

6) Implement and refine a long-term, state-wide program to address degraded estuarine coves and embayments.

7) Provide state assistance to municipalities developing Harbor Management Plans.

8) Expand jurisdiction of the state structures program to include beaches, dunes, and wave impact zones.

9) Develop a program which addresses the imbalance between the existing supply and the public demand for boat launches, moorings, and access.

COMBINED SEWER OVERFLOWS

GOAL: Protect public health and the environment from the impacts of combined sewer overflows.

OBJECTIVE: Eliminate combined sewer overflows.

STATUS & TRENDS: Periodic raw sewage overflows have occurred during heavy rainfalls in some Connecticut municipalities which have combined sanitary and storm water sewers. This has restricted full recreational uses and has presented a public health hazard. While Connecticut's Clean Water Fund provides a long term financing mechanism to correct combined sewer overflow problems, it will take several more years before projects to eliminate these overflows will be able to receive financing.

STRATEGIES:

1) Complete engineering and environmental assessments for all municipal combined sewer overflow systems for the purpose of identifying the specific correction strategies, construction priorities, and construction phases.

2) Eliminate minor system overflows within the near future.

3) Continue to finance and implement the state's Clean Water Fund and Grants to allow timely corrections of the state's sewerage infrastructure problems.

4) Develop an interstate compact concerning the correction of combined sewer overflows into waters entering Connecticut.

CULTURAL HERITAGE

GOAL: Preserve Connecticut's cultural heritage.

OBJECTIVE: Adopt cultural heritage preservation as an element in state and local planning and development processes.

STATUS & TRENDS: In the absence of a more comprehensive state cultural heritage preservation program, development pressures will continue to threaten and destroy archaeological and historic evidence of the state's exploration and settlement by both Native Americans and European colonists. Examples of Connecticut's historic farming, commerce, and manufacturing facilities are unique and are disappearing as a result of neglect, vandalism, conversion, and removal.

STRATEGIES:

1) Implement the 1982 Governor's Task Force recommendations for the preservation of Connecticut's heritage, including the enactment of comprehensive cultural heritage protection legislation.

2) Develop a historic industrial/manufacturing, archaeological, and architectural history trail system within the state's park system.

3) Encourage private restoration and program development reflecting the state's cultural heritage.

4) Increase participation of advocational and professional societies in implementation of a cultural heritage management program.

5) Promote and encourage the preservation of Connecticut's agricultural heritage.

DAM SAFETY

GOAL: Protect life and property from the hazards of dam failure.

OBJECTIVE: Attain adopted safety standards for all dams.

STATUS & TRENDS: There are over 4,000 public and privately-owned dams which require continued maintenance, and many of them do not meet required safety standards. Many private dam owners are unwilling or financially unable to upgrade and maintain their dams to required standards and are attempting to place them in state ownership. As a result, the potential for dam failure caused by improper maintenance or inadequate spillway capacity will continue.

STRATEGIES:

1) Enhance the dam safety inspection and maintenance program.

2) Continue a program for the ongoing maintenance of state-owned dams to assure their safety and long-term performance.

3) Continue state assistance programs for repair of privately-owned dams.

4) Develop criteria for the acquisition of dams in the public interest.

DRINKING WATER SUPPLY

GOAL: Provide adequate quantities of high quality drinking water.

OBJECTIVE: Conserve and protect existing and potential sources of drinking water supply, and enhance its proper delivery and use.

STATUS & TRENDS: The natural distribution of potable water supply often does not match demand areas, and the ability to deliver water during drought or other water emergencies is not well established. Development of additional surface supplies for drinking water will increasingly conflict with other competing land uses, while the inability to develop these new surface water reservoirs will require an increased dependence on ground water sources. In some parts of the state, however, contamination of ground water supplies exists which can pose health risks, economic hardships, and may force the use of waste-receiving surface waters for drinking water supply. On the state's public water supply systems side, there is an overabundance of small water companies, many of which have inadequate capacities and antiquated water supply treatment, storage, and distribution systems. In addition, some water supply distribution systems are not adequately interconnected or consistently managed from one water company to another. The newly mandated Connecticut water supply planning process, established by state statute, will address many of these issues.

STRATEGIES:

1) Improve the management of potable water supplies through the implementation of the Connecticut water supply planning process.

2) Provide acquisition and greater protection to identified high yield aquifers.

3) Expand the content and utilization of the statewide shared water use data base.

4) Analyze the water diversion registrations and permits to provide a suitable information base for the appropriate allocation of future water supplies.

5) Establish a statewide water conservation ethic educational process.

6) Amend and enforce state building codes to require water conservation.

7) Examine and develop needed alternatives for future water supply.

8) Conserve and maintain inactive or reserve status reservoirs determined important for future regional use, and the watershed lands which protect them and which are presently owned by water supply utilities.

ENFORCEMENT

GOAL: Protect public health and the environment through the enforcement of environmental statutes.

OBJECTIVE: Provide for the strict enforcement of comprehensive pollution control and resource management statutes and regulations.

STATUS AND TRENDS: Numerous federal, state and local laws have been promulgated over the years pertaining to pollution control and resource management without the resources to fully enforce them and related rules and regulations. Administrative and legal procedures to carry out enforcement actions are often complex, cumbersome and time consuming. State penalty policies are presently based on achieving compliance rather than taking strong punitive actions. The administrative civil penalties program has not been updated to be consistent with new legislative actions.

STRATEGIES:

1) Provide adequate levels of state resources for enforcement activities and improve the enforcement capability.

2) Define the role of federal, state and local enforcement and private citizen suit authority.

3) Review existing environmental rules and regulations for consolidation, modification, deletion and addition as necessary and clarify the state's enforcement policy.

4) Improve coordinated efforts and reporting among the attorney general, state's attorney and enforcement agencies and improve inter/intra-departmental efforts.

5) Provide continuous and updated law enforcement training.

6) Improve the existing environmental civil penalties system.

7) Dedicate fines to a fund for support of enforcement agencies.

8) Develop significant punitive fines and civil penalties for violations of environmental rules and regulations.

9) Establish a hot-line for the reporting of violations of environmental rules and regulations.

10) Improve awareness and understanding in the regulated community concerning environmental rules and regulations.

ENVIRONMENTAL EDUCATION

GOAL: Promote an environmentally knowledgeable and concerned public.

OBJECTIVE: Expand environmental education and information and encourage active public participation.

STATUS & TRENDS: Environmental protection and natural resource management programs and policies are becoming more complex in order to meet the increasingly sophisticated demands for a better quality of life. Municipalities, environmental organizations, business and industry, and the public must be provided information which will give them the ability and knowledge to participate in the environmental decision-making process. In addition, expanded information and education programs are needed to develop a better appreciation and greater enjoyment of natural and cultural surroundings.

STRATEGIES:

1) Require the integration of formal environmental education programs into the state's primary and secondary school curricula.

2) Promote adult environmental education programs.

3) Assure the public's involvement in environmental issues early in the decision-making process.

4) Coordinate and expand training for the diverse environmental decision-making and regulated communities.

5) Encourage the support and use of natural history museums and nature centers.

FISHERIES AND FISHERIES HABITATS

GOAL: Conserve Connecticut's finfish and crustacea and ensure their diversity.

OBJECTIVE: Foster natural propagation of fisheries and provide for sustained yield management of selected species and protect, maintain, and restore fisheries habitats.

STATUS & TRENDS: There is an increasing demand for fishery resources. Competing and conflicting uses of land and water have caused reductions in some fish populations, suitable fish habitat, and adequate access for individuals who fish. Habitat information is absent, outdated, or incomplete on certain streams, rivers, lakes and ponds, and on the Long Island Sound. In certain areas, poor water quality, degraded habitat, low flow conditions, over-fishing, and artificial barriers are causing adverse impacts on fish populations, physiological conditions, harvest, and recreation.

STRATEGIES:

1) Conduct statewide stream, lake, and pond fishery surveys in order to identify fish habitat conditions and management needs.

2) Develop and implement a waterfront access program, including more handicapped fishing access points.

3) Procure lands to protect water sources for existing or potential hatcheries.

4) Develop an angler and harvest information program, including a survey of angler preferences, attitudes, species sought, species harvested, and areas fished.

5) Evaluate and improve fish stocking programs, including feasibility, areas stocked, numbers and species stocked, catch rates, and survival.

6) Remove existing impediments to the free movement of fish, or provide fish ladders and require that the construction of new dams not impede fish mobility.

7) Prepare a fisheries management plan for Long Island Sound in concert with New York and Rhode Island.

8) Create conservation setback or buffer zones for the protection of fisheries and their habitats.

FLOOD CONTROL

GOAL: Protect life and property from the hazards of flooding.

OBJECTIVE: Prevent inappropriate development in flood prone areas and reduce existing flood hazards.

STATUS & TRENDS: Natural storm events can potentially impact the 40,000 to 50,000 structures in Connecticut's flood zones, and coastal processes cause recurring damage to shoreline structures and alter coastal conditions. Although major structural control measures have been taken, should a major state-wide storm similar to the 1955 hurricane occur, the state could still suffer significant life-threatening events and economic losses. Less than 50 percent of the flood prone structures have flood insurance and many are underinsured. Reduction of federal expenditures for construction of prevention structures and for planning and regulatory programs will require state and local governments to increase expenditures for adequate flood management efforts.

STRATEGIES:

1) Enhance development of inter-municipal cooperative flood mitigation, erosion control, and emergency preparedness plans with emphasis on non-structural methods.

2) Enhance development of drainage basin based flood management programs, standards and practices.

3) Enhance development of increased cooperation, coordination, and funding for technical assistance to municipalities.

4) Direct new development, redevelopment and infrastructure away from areas subject to flooding and natural erosion.

5) Enhance development of a predictive model for flood levels under various storm conditions.

6) Enhance development of state-wide priority areas for flood protection activities.

7) Establish an automated coastal flood warning system based on natural drainage basins.

FORESTS

GOAL: Conserve Connecticut's forests for multiple uses.

OBJECTIVE: Foster renewable and diverse natural resource management of public and privately-owned forests.

STATUS & TRENDS: Connecticut's predominantly oak- hickory forest type is a much desired resource of the state forest products industry. Failure to practice a multiple use management system, however, limits the use of this valuable renewable natural resource. Although Connecticut is presently two-thirds forested, most ownership is in small holdings, making management difficult and lessening potential value. Unless forest land owners identify management goals for their forest acreage or prepare management plans, the greater part of Connecticut's forest land will continue to remain unmanaged. In addition, the demand for wood fuel will continue to contribute to the loss of higher valued forest products.

STRATEGIES:

1) Expand state forest ownership based on a plan for multiple uses and the acquisition of private in-holdings in state parks and forests.

2) Prepare comprehensive, long-term management plans for all state-owned forests and parks recognizing the distinct differences in uses between state forests and parks.

3) Develop new incentives for the conservation of forestry lands and expand state resources to meet conservation planting needs.

4) Promote public awareness of opportunities for and benefits of forest multiple usage, including the retention of old forest stands.

5) Expansion of forest education programs for the general public at state conservation centers and regional facilities.

6) Improve and expand forest management technical assistance programs to private landowners.

7) Develop and require adherence to guidelines for proper management of those forests receiving tax advantages, and reduce the minimum qualifying acreage certification.

8) Encourage new markets for forest products where harvesting is desired by the private owners after being advised of their options for conserving those forests, and require utilization of "Best Management Practices" for forest harvesting.

9) Manage state park woodlands for other than commercial wood harvest.

HAZARDOUS AIR POLLUTANTS

GOAL: Protect public health and the environment from the adverse effects of hazardous air pollutants.

OBJECTIVE: Implement and refine the hazardous air pollution control program.

STATUS & TRENDS: In 1986, the state developed and established its first comprehensive hazardous air pollution control program. This program sets forth provisions for emission and ambient air concentration limitations, monitoring and testing of hazardous air pollutants, defining the effects of hazardous air pollutants and an up-to-date inventory of sources of these pollutants. Without such a program, the risk to public health and the environment may increase. However, as the knowledge of impacts is better understood, the implementation will require refinements and improvements.

STRATEGIES:

1) Implement and refine a comprehensive program that regulates hazardous air pollutants through emission and ambient air quality impact limitations.

2) Improve hazardous air pollutant monitoring capabilities enabling toxicity evaluations in the permit review and issuance process.

3) Develop an inventory of hazardous air pollutant source emissions.

4) Develop ambient air and source sampling procedures for each regulated hazardous air pollutant.

5) Provide incentives to design and install innovative technologies for hazardous air pollution control.

HAZARDOUS WASTE

GOAL: Protect public health and the environment from the adverse effects of hazardous waste.

OBJECTIVE: Minimize the generation of hazardous waste, recycle wherever possible, and provide for proper management.

STATUS & TRENDS: Connecticut is a significant generator of hazardous waste produced by industry, business, agriculture, municipalities, institutions and homeowners. Currently, there are in-state commercial treatment facilities for aqueous and other wastes. There is no commercial incinerator or hazardous waste landfill. Incentives for recycling are not adequate. Regulatory changes have produced greater oversight of small quantity generators. There exists a large number of historic disposal sites in the state, causing contamination that will require future remedial action. Many of the responsible parties are insolvent, unknown, or unable to provide remedy.

STRATEGIES:

1) Improve capabilities to administer a comprehensive program to regulate the treatment, storage, disposal, and transportation of hazardous waste.

2) Establish a priority list for clean-up of existing hazardous waste disposal sites and identify funding sources to finance and manage those contaminated sites where no financially solvent responsible party can be identified.

3) Provide incentives for recycling and source reduction of hazardous waste.

4) Provide incentives to business and industry to reduce generation of hazardous waste through use of substitute materials and changed manufacturing processes.

5) Improve the education of the general public, industries and businesses, and institutions concerning the constituents of the hazardous wastes they generate, as well as the proper handling and disposal of these wastes.

6) Provide for the delegation of state authority to local agencies for the inspection of small quantity hazardous waste generators.

7) Develop adequate safeguards prior to the development of facilities for the proper management of all unrecyclable hazardous wastes.

8) Continue the development of a household hazardous waste management program; educate the public as to use reduction and alternatives to household hazardous material products; educate the public regarding proper handling and disposal of these wastes and encourage the recycling of these wastes on a regional basis within the state.

9) Update and improve the data base on the types and amounts of hazardous waste generated in Connecticut and the methods used to manage the wastes generated.

10) Assure the availability of hazardous waste treatment or disposal facilities for Connecticut generated wastes.

HIGH-LEVEL RADIOACTIVE MATERIAL

GOAL: Protect public health and the environment from the improper handling and disposal of high-level radioactive materials.

OBJECTIVE: Establish high-level radioactive material handling procedures and cooperate in a national disposal program.

STATUS & TRENDS: The United States Congress has determined management activities are the responsibility of the federal government. Encapsulation methods, site characterization, site selection, site management, security, and providing for permanent records and markers for future generations are among the management activities. If nothing is done to provide a safe method of disposal, high-level waste material will continue to be stored at commercial and government operating facilities which are located throughout the country and which will eventually reach capacity. Although disposal is the responsibility of the federal government, Connecticut is concerned that high-level radioactive material is transported within and through the state and all high-level radioactive waste in the state is being stored at the industries and nuclear power facilities where it is produced. A further concern is that all existing nuclear power plants will need to be decommissioned when their life spans are completed and the sites will have to be properly safeguarded.

STRATEGIES:

1) Initiate development of a state plan for the eventual decommissioning and use of Connecticut's existing nuclear facility sites.

2) Encourage Congress to create a program which provides greater federal support in research and development of the use, handling, and disposal of high-level radioactive material.

3) Encourage research into the productive and peaceful use of high level radioactive wastes.

4) Encourage conservation of energy and the development of alternative energy sources in preparation for the decommissioning of nuclear facilities.

INDOOR AIR POLLUTION

GOAL: Protect public health from the adverse effects of indoor air pollution

OBJECTIVE: Reduce artificially and naturally induced indoor air pollution.

STATUS & TRENDS: There is very limited scientific knowledge, public awareness, and control of the wide range of conditions affecting the quality of the indoor environment. This inefficiency coupled with the need and desire to conserve energy may be creating indoor conditions that place public health at risk. Much attention has been given to the effects of cigarette smoke, paraformaldehyde insulation and asbestos. This narrowly focused attention indicates that present knowledge and control is incomplete given the probable adverse effects on indoor air quality by factors such as building materials, naturally occurring radon, pollen, dust, heating by-products, cleaning agents, and furniture fabrication and preservative materials.

STRATEGIES:

1) Identify, study and monitor sources of indoor air pollution and develop criteria and standards that protect public health.

2) Develop, improve and implement a comprehensive program that prevents indoor air pollution and mitigates source effects.

3) Develop and implement a strong public awareness program on the sources and control of indoor air pollution.

4) Develop a radon detection and mitigation program.

5) Expand and improve programs which reduce public exposure to asbestos.

INLAND WETLANDS

GOAL: Conserve and protect Connecticut's inland wetlands.

OBJECTIVE: Protect the natural values and functional roles of inland wetlands.

STATUS & TRENDS: Even though wetlands have been mapped by soil and vegetation type and public awareness of some wetland values has increased, their in situ value and role have not been fully understood nor used in the inland wetland evaluation process. Consistent local wetland management throughout the state is severely hindered by a lack of this knowledge and state intervention may be necessary at times.

STRATEGIES:

1) Facilitate the delegation of inland wetland regulatory authority to those remaining municipalities regulated by the state.

2) Initiate a comprehensive educational program for local inland wetlands commissioners providing training on a regular basis.

3) Increase technical assistance and provide legal consultation to local inland wetlands commissions.

4) Identify by drainage basins the value and functional role of individual wetlands and encourage the use of this information in the evaluation process.

5) Identify wetlands of *critical statewide significance*, require local agencies to consult with the Department of Environmental Protection prior to acting on applications for activities in these areas, and designate significant wetlands as priority candidates for preservation.

6) Initiate a program of monitoring activities in inland wetlands by providing local agencies with standardized mandatory reporting forms, tabulating the information provided, establishing a retrievable data base, and assessing annual wetlands loss.

7) Clarify the relationship of the Commissioner of Environmental Protection's oversight powers to the municipalities' permitting and enforcement authority, and review and refine statutory requirements.

8) Develop policies and standards governing the use of mitigation measures such as wetlands creation, wetlands restoration, wetlands landbanking, and construction of storm water management structures.

9) Require that state and local highway, road and public works projects consider wetlands issues at the earliest stages of project planning.

LAKES AND PONDS

GOAL: Protect the ecological integrity of lakes and ponds.

OBJECTIVE: Achieve and maintain high water quality and natural habitat conditions in lakes and ponds.

STATUS & TRENDS: Waterfowl and human-induced sources of nutrients cause accelerated eutrophication and will continue to degrade the ecological, aesthetic, and recreational value of Connecticut's lakes and ponds. Most municipalities have not implemented *Best Management Practices* for non-point sources of pollution, which are the prime causes of lake and pond degradation.

STRATEGIES:

1) Develop and implement a statewide multiple use lakes and ponds management program.

2) Prevent excessive nutrient enrichment of Connecticut's lakes and ponds through the prudent management of the lake watershed.

3) Minimize the extent and use of chemicals in Connecticut's lakes and ponds and explore alternative control methods.

4) Conduct research on the control of septic system effluent and the management of the large waterfowl populations on lakes and ponds.

5) Conduct research on the natural processes of lake and pond systems for use in management programs.

6) Ensure suitable public access to lakes and ponds, consistent with sound environmental management.

LAND USE

GOAL: Conserve natural and land resources and maintain natural diversity.

OBJECTIVE: Develop and implement a comprehensive and integrated program of land use regulation and land rights acquisition so that land use planning is in concert with the carrying capacity and uniqueness of the natural landscape.

STATUS & TRENDS: Currently, land use planning and management, which is the key to the maintenance of a healthy environment, is being addressed by state, local, federal, and private entities in an inconsistent and relatively uncoordinated fashion. Often, land use controls which are vested with individual municipalities do not usually address statewide or regional land and water resource needs. If current trends continue, these unique land resources which support reservoirs, aquifers, agriculture, recreation, wetlands, natural landscapes, riverine and coastal shorelines, and special economic development needs will not be available or will not be protected for future use. In some cases, private land trusts and other conservation groups are providing for the protection of select areas of their choosing. Land use, its' conservation and preservation, remains the far-reaching issue confronting all aspects of resources management and is the fulcrum on which the natural beauty and environmental health of the state will balance.

STRATEGIES:

1) Promote stewardship of the natural land resources by government, corporate, municipal, and private interests and coordinate the land conservation/preservation activities of these entities.

2) Provide technical assistance and training to local and other land use decision makers in the use of performance standards which conserve natural values and diversity and encourage the preservation of natural open space within development.

3) Set aside those unique land resources that are necessary to meet statewide and regional resource needs.

4) Develop a state-wide set of criteria for open space and natural land allocation at the municipal level.

5) Promote development such that an aesthetic and functional harmony with the surrounding natural environment is attained and develop disincentives for inappropriate land use.

6) Promote implementation of the scenic roads, river protection, and other unique natural land resource conservation statutes.

7) Educate and poll the public regarding the value of natural land resources.

8) Develop consistency among state, regional, and local plans of development.

9) Establish a statewide program for monitoring activities in land use.

10) Promote with incentives suburban and urban areas, to develop natural land set-aside and reclamation programs.

LONG ISLAND SOUND

GOAL: Conserve and protect the natural resources of Long Island Sound.

OBJECTIVE: Develop and implement an interstate Long Island Sound management plan.

STATUS & TRENDS: Present knowledge is incomplete on Long Island Sound's natural resource system and pollution impacts. Diverse use demands on Long Island Sound and its environs are often in conflict, leading to fish and shellfish being threatened or rendered unusable, water-based recreational opportunities becoming more limited, and major harbors exhibiting poor water quality characteristics. In addition, Long Island Sound and its shoreline will continue to be under stress as a result of pollution, development, dredging, open water disposal of dredged materials, and exploitation of marine resources unless a comprehensive management program is established.

STRATEGIES:

1) Establish a comprehensive inventory of Long Island Sound's physical, chemical, and biological characteristics.

2) Implement a comprehensive resource monitoring and water assessment program that will provide an understanding of Long Island Sound dynamics.

3) Intensify efforts to eliminate pollution sources and minimize land use conflicts in Long Island Sound coastal areas.

4) Continue to support and actively participate in the state/federal Long Island Sound study.

5) Improve coordination among all existing federal, state, local, and interstate Long Island Sound programs.

6) Develop a comprehensive management program for the conservation of marine resources.

7) Implement a long-range interstate dredged material management program for Long Island Sound.

LOW-LEVEL RADIOACTIVE MATERIAL

GOAL: Protect public health and the environment from the improper handling and disposal of low-level radioactive material.

OBJECTIVE: Establish low-level radioactive material handling procedures and provide for proper disposal.

STATUS & TRENDS: The use of low-level radioactive material by hospitals, colleges and universities, and industrial facilities is expected to increase. Low-level radioactive waste is being disposed of at three shallow land disposal facilities outside of Connecticut. The three states in which these facilities are situated have indicated that they are no longer willing to accept the low-level nuclear waste of the entire country. Siting a disposal facility is extremely difficult because of natural resource site constraints and the public's apprehension about disposal facility safety. Without proper handling and disposal, the risk of exposure to low-level radiation will increase. In addition, the United States Congress has mandated that each state provide for it's own disposal or join a regional compact.

STRATEGIES:

1) Pursue the interstate compact to manage low-level radioactive material.

2) Encourage the reuse, recycling, and proper handling of low-level radioactive material.

3) Encourage research into substitutions for use of low-level radioactive materials.

MINERAL AND SOIL RESOURCES

GOAL: Assure the conservation and wise use of available mineral and soil resources.

OBJECTIVE: Develop and implement a comprehensive management program for Connecticut's mineral and soil resources.

STATUS & TRENDS: There is no statewide mineral and soil resource assessment and management program and these resources are consequently subject to diverse local regulation. Uncontrolled development of these resources and the absence of land reclamation in certain areas continue to cause severe environmental damage. The extraction of Connecticut's major non-renewable resources—soil, sand, gravel and traprock—requires appropriate long-term management planning and conservation practices. Erosion and sedimentation continue to be a problem in Connecticut because of human induced and uncontrolled natural processes. Information on Connecticut's mineral resources such as large scale mapping and inventory of bedrock geology, surficial geology and soils is nearly complete. However, some of this information is out of date and little of it has been computerized.

STRATEGIES:

1) Determine the availability and use of non-renewable natural resources in the state.

2) Improve information on mineral and soil resources and facilitate its use.

3) Develop a uniform system of land development and extraction regulations to protect the environment, control erosion and sedimentation, assure proper reclamation of extraction sites, ensure the future availability of these resources and prevent their untimely exploitation.

4) Ensure compliance with land development and extraction regulations at all levels of government.

5) Expand soil conservation assistance to the public and private sectors.

6) Acquire or set aside areas found to contain critical mineral or soil conditions needed in the public interest.

NATURAL HERITAGE

GOAL: Preserve Connecticut's natural heritage.

OBJECTIVE: Achieve protection of significant natural areas.

STATUS & TRENDS: Development has put severe pressure on certain types of natural areas, such as tidal wetlands, barrier beaches, bogs, sand plains, cedar swamps, and traprock ridges. Further, everyday use of sensitive resources is harming rare species and can also disrupt controlled scientific studies. Without a strong state commitment to set aside and protect from intrusion these special natural areas, there is a serious likelihood that the state will soon lose representative examples of its natural heritage, suffer the loss of natural diversity and species habitats, and miss opportunities for study and scientific research.

STRATEGIES:

1) Establish an acquisition and a management structure to ensure that designated natural areas are protected, and that study and scientific research projects are carefully conducted.

2) Identify and assess the relative value of the state's remaining natural areas and create a formal process to designate, prioritize, and protect significant natural areas.

3) Remove the statutory limitation on the amount of land that can be designated within the Connecticut Natural Area Preserves Program.

4) Promote communication, informational exchange, and cooperative efforts between government and private land acquisition groups such as land trusts.

5) Encourage the development of other land preservation programs such as municipal land banks.

NATURAL RESOURCES DATA BASE

GOAL: Provide natural resources data and support services to all levels of government and the private sector.

OBJECTIVE: Maintain, expand and distribute uniform statewide natural resources data base through a geographic information system.

STATUS & TRENDS: Sound environmental and land-use decisions require the use of large amounts of credible natural resource information which is not always available nor in a form that is easily utilized. Over the past half century, the state and federal governments have made substantially large investments in natural resource mapping, monitoring, and research. Much of this existing information, however, is in an incomplete and/or non-standardized format. Fortunately, computer technology can now provide better and more rapid storage, integration, analysis, retrieval, and conversion of basic data into useful information for decision-makers.

STRATEGIES:

1) Complete and maintain basic resource and resource-related use inventories in a hard graphic and digital form.

2) Monitor natural resource processes for long term trends and changes.

3) Conduct research on natural resource processes and properties still not understood.

4) Evaluate user needs for natural resource data bases in order to form an effective linkage between the user community and the capability of the information system.

5) Maintain, expand, and improve a geographic information system and ensure statewide access.

NOISE

GOAL: Protect public health from the adverse effects of noise.

OBJECTIVE: Improve and implement the noise control efforts.

STATUS & TRENDS: There is an increasing public awareness that noise is detrimental. At certain levels, noise creates health, psychological, and sociological problems within the community and work-place. The state has adopted comprehensive noise control regulations, but implementation is inadequate and local land use planning does not adequately consider noise impacts.

STRATEGIES:

1) Increase the state's ability to provide for more enforcement of state noise regulations and attenuation of motor vehicle induced noise.

2) Provide for the delegation of some noise monitoring inspection and enforcement authority to municipalities.

3) Encourage the adoption of municipal noise control ordinances and proper land use planning to prevent noise pollution.

NON-POINT SOURCE WATER POLLUTION

GOAL: Protect public health and the environment from the impacts of non-point sources of pollution.

OBJECTIVE: Adopt controls that will reduce non-point sources of pollution.

STATUS & TRENDS: *Best Management Practices* have been developed and are being implemented for some non-point pollution sources. Pollutant runoff from urban and rural areas, including oil, gas, and vehicle exhaust deposits, animal wastes, fertilizers, herbicides, pesticides, and soil, continue as localized problems. Further, ground water pollutants related to pesticides, chemical and petroleum storage, leakage, and spills are widespread and not well controlled or monitored. Also, soil erosion and stream sedimentation continue to irreparably damage several streams. Unless further non-point source controls are developed, the number of wells contaminated will increase and surface water quality goals will not be attained for several streams.

STRATEGIES:

1) Implement and improve *Best Management Practices* for the control of all non-point source water pollution.

2) Accelerate the drafting, adoption and implementation of the Basin Planning Documents (303e).

3) Involve all levels of government in the implementation of non-point source pollution regulatory programs through delegation of certain state authority.

4) Improve education and increase the incentive to control non-point source pollution at the municipal level.

5) Develop and implement a stormwater discharge permit program.

OIL, PETROLEUM, AND CHEMICALS

GOAL: Protect public health and the environment from improper handling of oil, petroleum, and chemicals.

OBJECTIVE: Develop and implement a comprehensive regulatory program for the handling of oil, petroleum, and chemicals.

STATUS & TRENDS: The state is experiencing an increase in the number of leaks, spills, and discharges of oil, petroleum, and chemicals into ground and surface waters. Although some storage and handling are regulated, present mechanisms do not adequately manage above and below ground storage and handling of oil, petroleum, and chemicals. Further, it is difficult to secure disposal facilities for contaminated soils.

STRATEGIES:

1) Develop, implement, and improve a program for the construction, design, installation, removal, monitoring, and maintenance of all above ground and underground oil, petroleum, and chemical liquid storage systems.

2) Ensure that all existing underground oil, petroleum, and chemical storage systems including residential systems have corrosion resistant components and/or protection devices.

3) Implement spill containment procedures for all above ground storage systems.

4) Establish a statewide comprehensive waste oil management program which includes non-residential burning to utilize the energy value in waste oils.

5) Develop plans and coordination of responsibility for the accidental release of oil, petroleum, and chemicals.

PARKS

GOAL: Provide a system of parks which are characteristic of Connecticut and address the leisure and recreational needs of its citizens.

OBJECTIVES: Enhance and expand public access and use of the state's historical, cultural, and natural resources consistent with the long term integrity of the resource.

STATUS & TRENDS: The pressure of land development coupled with a population density of over 600 people per square mile is creating a deficiency in the proportion of lands dedicated to the retention of the natural landscape and available for recreational opportunities. The land acquisition efforts of both the state and municipalities have not been able to keep pace with private sector residential and commercial development interests. Use levels at the more popular recreational sites have created overcrowded conditions, deterioration of the resource base and temporary closures of facilities because of capacity limitations. The deficiency is particularly acute at water-based sites. There are significant undeveloped lands that are representative of the natural character of this state; however, availability and accessibility are restricted to the time frame remaining before private development precludes public acquisition and protection. Historic properties currently in public ownership have traditionally received marginal recognition and protection.

STRATEGIES:

1) Establish an expanded state program to acquire and develop areas with recreational potential of statewide and regional significance.

2) Identify and prioritize areas with significant outdoor recreation potential with particular emphasis on areas with the capability to support major water-based recreation facilities.

3) Encourage involvement with private sector organizations and interests for access and use of additional property dedicated to open-space/recreation purposes and multiple use concepts.

4) Provide for effective development and use of public lands with particular emphasis on protection of the uniqueness of the resource base.

5) Review, improve, and implement management plans for individual state parks which provide diverse recreational opportunities consistent with maintaining the environmental integrity of the resource.

6) Expand public relation efforts and citizen involvement in park land use decisions.

7) Encourage through grants-in-aid an expanded municipal program to acquire and develop areas with recreation potential of local significance.

PESTICIDES

GOAL: Protect public health and the environment from any adverse effects associated with the storage, use, and disposal of pesticides.

OBJECTIVE: Minimize the amount of pesticides used and decrease public and non-target species exposure to them.

STATUS & TRENDS: Excessive and increasing use of pesticides for dwellings, lawns, ornamental plantings, and farming is creating an unknown potential for human exposure for which uncertain toxicological consequences will occur. Further, there are large quantities of pesticides being improperly stored throughout the state, and some ground water contamination has already resulted from the agricultural use of pesticides. There is an inadequate data base to evaluate the presence and health effects of many pesticides and, in addition, there is a lack of routine monitoring for pesticide contamination in ground or surface water, soil, and ambient air. The state has only a very limited capability in regard to pesticide toxicology and is dependent on the slow registration process of the federal government to provide necessary criteria for action.

STRATEGIES:

1) Expand and improve a comprehensive program and provide technical assistance aimed at commercial applicators and homeowners for alternative methods of pest control including integrated pest management, biological controls, and biodegradable pesticides.

2) Provide technical assistance and support to food producers on the proper use of pesticides and alternative methods of pest control.

3) In coordination with the federal government, determine the toxicological properties and long term effects of pesticides, including not only the *active* ingredients in the formulation, but also the so-called *inactive* ingredients that are used as carriers or dispersants.

4) Improve the certification process of pesticide applicators.

5) Expand product registration to include the review of old as well as new pesticides and increase the applicator, dealer, and producer inspection capability of the state.

6) Increase contact with commercial applicators and the agricultural community to ensure the proper disposal of banned and unwanted pesticides.

7) Develop and enforce a regulatory program that strictly controls larger users of pesticides.

RECREATION

GOAL: Provide for environmentally sound recreational opportunities.

OBJECTIVE: Enhance and expand opportunities for recreational use of Connecticut's historical, cultural, and natural resources consistent with sound environmental management.

STATUS & TRENDS: There is an increasing strain on the quality of recreation in Connecticut as a result of overcrowding and overuse of existing facilities, with limited resources for the expansion and development of new facilities. For example, in contrast to the huge investments made in the cleanup of the state's waters, relatively little effort has been made to utilize these resources for new recreational opportunities. In addition, public swimming opportunities on Long Island Sound are still limited. The current land acquisition program is inadequate to address these and other public recreational demands and/or to acquire properties of historic, cultural, or unique natural resource value. This also indicates that the state park system will play a reduced role in tourism with a corresponding decrease in direct and indirect revenues to the state and private sector.

STRATEGIES:

1) Assess the carrying capacity of recreational areas in order to determine their proper environmental management.

2) Improve and develop recreational facilities and programs throughout the state.

3) Assess and acquire additional land and water resources to support existing and anticipated demand for various recreational activities.

4) Expand the recreational use of waterways that have, and are anticipated to have, improved water quality.

5) Increase the availability of areas suitable for swimming and other coastal related recreation in Long Island Sound.

RIVERS

GOAL: Conserve Connecticut's rivers and streams.

OBJECTIVE: Develop and implement a statewide rivers management program.

STATUS & TRENDS: There are over 2,500 rivers and streams in Connecticut providing some 6,000 billion gallons of water a year to Long Island Sound. The current demands on Connecticut's rivers and streams and adjacent lands are increasingly competitive and often conflicting. Although many state and local programs exist that address various aspects of river and stream related land and water use, no single comprehensive statewide policy nor use strategy exists to ensure proper management and conservation of these valuable resources. Basic inventories needed to assess both the existing hydrologic conditions and water allocations are either incomplete or have not been integrated on a drainage basin basis for each river system. Major differences exist on the definition of river management and beneficial uses ranging from just the aquatic system of the river itself to the land and water uses of the entire drainage basin encompassing the river. There is a need to develop a statewide river management program that minimizes conflicts while providing diverse public opportunities consistent with maintaining the environmental integrity of the resource.

STRATEGIES:

1) Undertake an assessment of Connecticut's rivers and streams and their associated values in order to determine beneficial uses and appropriate management.

2) Develop and implement a comprehensive rivers program.

3) Provide technical and financial assistance to municipalities undertaking the development of river corridor management plans, which include local stream preservation and policies and programs.

4) Establish a state rivers clearinghouse to coordinate and share information.

5) Oppose the diversion of interstate watercourses that impact the availability of water in Connecticut for public and environmental needs.

SHELLFISH

GOAL: Conserve Connecticut's shellfish and enhance the commercial and recreational harvest.

OBJECTIVE: Protect, improve and increase habitats for a sustained yield of shellfish.

STATUS & TRENDS: Many of the state's once-thriving shellfish beds have been closed because of various sources of pollution along the coastal areas. In addition, shellfish habitat is also being lost as a result of coastal dredging and siltation from activities in upland development areas. As a result of this degradation of shellfish habitat and resources, there is an increasing risk to human health, a loss of recreational shellfishing, and diminished commercial harvesting. Other problems include the absence of shellfish base and spawning stock for the state's valuable oyster beds, absence of a program to enable closed shellfish areas to be reopened, a lack of uniformity in jurisdiction and regulatory authority by local enforcement, and limited enforcement efforts which allow overharvesting and taking of shellfish from polluted waters.

STRATEGIES:

1) Develop and implement a program to reclaim, maintain, and improve shellfish beds and habitats.

2) Implement pollution abatement which will allow reopening of those shellfishing areas presently closed.

3) Increase shellfish enforcement capabilities, in part by increasing fines and strengthening related environmental laws.

4) Evaluate and improve the procedure used to open and close shellfish beds.

5) Increase state and local revenue derived from shellfish and aquaculture harvesting and allocate such funds for improved management methods.

6) Resolve state and municipal conflicts over management methods.

7) Develop a comprehensive marketing study to analyze the present size of the shellfish and aquaculture industry and its growth potential.

SOLID WASTE

GOAL: Protect public health and the environment from the adverse effects of improper solid waste management.

OBJECTIVE: Provide for the safe and adequate disposal of solid waste by minimizing solid waste generation and land disposal, and by developing resource recovery and recycling.

STATUS & TRENDS: Since many landfills were sited prior to current ground and surface water quality goals and standards, associated ground and surface water contamination problems significantly limit and/or prevent expansion of active landfills. In addition, there are few, if any, socially, politically, or environmentally suitable areas for solid waste disposal sites. This lack of resource development ability is placed under further stress by the facts that most existing permitted landfills will reach their capacity by the end of the decade, and that long-term economically feasible disposal capacity will be needed to support resource (energy) recovery systems. This situation is further exacerbated since many Connecticut municipalities have not developed long-term management plans for all non-hazardous solid waste. In addition, adequate resource recovery systems, including both recycling and energy reclamation, are not becoming available when needed.

STRATEGIES:

1) Adopt and implement a statewide solid waste management plan for municipal mixed waste, bulky wastes and special wastes (non-hazardous industrial wastes and water treatment sludges) including specific actions to meet the immediate and long-term needs of each municipality.

2) Close and secure those landfills which are either filled to capacity or have experienced uncontrolled discharges of contaminants to the state's ground and surface waters in violation of water quality standards.

3) Provide incentives for source separation and recycling and require Connecticut municipalities to participate in volume reduction of solid waste by means of resource (energy) recovery and recycling.

4) Develop incentives for strengthening markets for recycling and investigate means and feasibility of source reduction, including minimizing packaging.

5) Ensure the proper siting of resource recovery, recycling, and land disposal facilities.

6) Develop safe and acceptable sites for the disposal of bulky wastes.

7) Educate the public on the importance of waste reduction and recycling.

STATE AND LOCAL GOVERNMENT COORDINATION

GOAL: Promote state and local government coordination to achieve statewide environmental goals.

OBJECTIVE: Develop shared management responsibilities between state and local governments in implementing environmental protection programs.

STATUS & TRENDS: Without a cooperative effort between State and local agencies, environmental needs will not be satisfied. Local officials are assuming increased responsibilities for the implementation of environmental programs without adequate resource support, and there is an increasing awareness of the need for broad participation in addressing environmental issues. Further, management of natural resource activities at state and local levels is inconsistent and assistance and guidance to local governments and agencies are inadequate.

STRATEGIES:

1) Improve, coordinate and expand state support to local governments, including technical assistance, financial support, regulatory and educational programs.

2) Coordinate federal, state and local environmental protection implementation strategies.

3) Implement the delegation of state authority as provided by the Connecticut state statutes.

4) Ensure non-duplication of environmental responsibility within state government.

SURFACE AND GROUND WATER QUALITY

GOAL: Protect public health and the environment from the adverse effects of water pollutants.

OBJECTIVES: Attain and maintain Connecticut's surface and ground water quality standards.

STATUS & TRENDS: Since the enactment of Connecticut's 1967 Clean Water Act, significant improvements have been made in the state's surface water quality, although some surface waters have not yet attained designated goals. In 1980, the program was expanded and Connecticut was the first state to adopt a comprehensive ground water quality program. In spite of these efforts, existing high quality waters are in jeopardy and may become permanently contaminated and unfit for use. Among the major problems left to be dealt with are inadvertent or accidental discharges and land use development impacts. As more incidents of contamination are identified, there will be increased difficulty in risk assessment, establishment of health effects, and designation of tolerance limits.

STRATEGIES:

1) Develop additional controls and measures that maintain water quality standards and provide for growth.

2) Continue to issue permits which require the best pollution control methods as they become available.

3) Require municipalities and utilities to identify and protect water supply sources in their planning, zoning, wetlands, and land acquisition programs.

4) Develop and encourage *Best Management Practices* for non-point source pollution control.

5) Identify and protect high yield aquifers through a joint state/municipal cooperative program.

6) Provide incentives for municipal wastewater collection and treatment systems.

7) Maintain and improve the Connecticut *Water Quality Standards and Classification System* and the *Basin Planning Strategies.*

8) Continue to identify and eliminate untreated sources of pollutants, including spills and failing septic systems.

THREATENED AND ENDANGERED SPECIES

GOAL: Preserve threatened and endangered plant and animal species.

OBJECTIVE: Establish a comprehensive threatened and endangered species program.

STATUS & TRENDS: Destruction and degradation of habitats are causing the populations of certain plant and animal species to drop below a number suitable for maintenance. The greatest cause of habitat destruction is rapid land development, which has brought about a continuing decline in many species, including those which are already threatened or endangered. The actual impact on species has been difficult to assess, as existing inventories are not current, and none covers both plant and animal species.

STRATEGIES:

1) Develop appropriate legislation to protect threatened and endangered species and to protect declining species before they reach a threatened or endangered level.

2) Expand a multi-level, interdisciplinary threatened and endangered species program which includes inventory, identification, research, regulations, and education with public and private sector organizations.

3) Protect significant habitats necessary to the continuance of threatened and endangered plant and animal species.

4) Augment the Natural Diversity Data Base inventory with additional programs to identify threatened and endangered species; continue to research and monitor populations, and to maintain and update the computerized data bank.

5) Create an advisory committee to assist in directing a comprehensive threatened and endangered species program.

TIDAL WETLANDS

GOAL: Preserve Connecticut's tidal wetlands.

OBJECTIVE: Prevent the loss and degradation of existing tidal wetlands and foster restoration of previously degraded ones.

STATUS & TRENDS: By 1969, approximately one-half of the state's 30,000 acres of tidal wetlands had been destroyed, causing significant damage to marine ecological systems. Since that time, with the passing of tidal wetland legislation, loss of tidal wetlands as a result of development has almost ceased. Mapping, however, has not been complete, and many tidal wetlands have been further degraded. It is felt that even with the strict regulation of activities proposed for tidal wetland areas, more degradation of wetlands can be expected as a result of adjacent upland development and existing restriction of tidal flows.

STRATEGIES:

1) Identify and map undesignated tidal wetlands and critical supporting upland areas.

2) Assess the impacts of mosquito control activities, tidal restrictions, upland area development, marina operations and expansion, dredging, water diversion, erosion caused by recreational and commercial boating, and discharges from recreational vessels, and develop appropriate land use regulations.

3) Develop a wetland compensation strategy based on wetland restoration for certain permitted activities in tidal wetlands.

4) Develop a strict regulatory strategy and standards and criteria for wetland creation projects.

TOXIC WATER POLLUTANTS

GOAL: Protect public health and the environment from the adverse effects of toxic water pollutants.

OBJECTIVES: Develop and implement a toxic water pollution control program.

STATUS & TRENDS: Currently, waste treatment which can completely remove all traces of toxic substances either does not exist or is not economically feasible. Further, technology-based treatment requirements are not stringent enough to protect against toxic impact. In addition, the means of reducing the loading of household and commercial toxic wastes to municipal wastewater facilities, which are not designed to treat toxic waste, have not been examined. Along with the technological constraints, the long-term public health effects and risks of many toxic substances caused by the consumption of contaminated fish and shellfish are poorly understood and the contribution of non-point sources of toxic substances to Connecticut streams is unknown.

STRATEGIES:

1) Implement a comprehensive program that regulates point source discharges of toxic substances through the issuance of discharge permits and enforcement of permit conditions.

2) Establish toxic criteria for surface water and wasteload allocations for specifically-affected stream segments.

3) Improve toxic monitoring capabilities, enabling increased use of toxicity evaluations in the permit review and issuance process.

4) Develop methods to assess combined impacts of toxic discharges to aquatic habitat.

5) Establish a data base of test results on indigenous finfish, shellfish and benthic organisms which will help ascertain the extent of the impact of toxic discharges.

6) Provide incentives to design and install innovative technologies for toxic water pollution control.

WATER RESOURCE MANAGEMENT

GOAL: Conserve and provide water resources for beneficial uses.

OBJECTIVE: Develop and implement multi-use management for surface and ground water.

STATUS & TRENDS: Surface and ground waters are finite in quantity, unequally distributed throughout the state, and subject to increasing multiple use and jurisdictional demands. The many competing and conflicting demands for the allocation of Connecticut's water resources include water supply, ecological habitat support, waste assimilation, navigation, water-based recreation, flood control, energy production, and natural aesthetics. Water allocation decisions will continue to be hampered without a comprehensive, centralized data base on resource availability and water use needs. In addition, water use rights and statutory controls are often in conflict or confusing, and impede prudent management of the resource.

STRATEGIES:

1) Establish natural hydrologic system characteristics, including critical low flow conditions for all drainage basins and develop a data base which includes both abiotic and biotic information to facilitate management decisions related to water quantity issues.

2) Determine the amount of water needed to maintain and enhance ecological water resources systems.

3) Develop a system to assess water usage, evaluate competing and conflicting demands, and establish allocation priorities.

4) Clarify water law and administrative responsibility to resolve competing and conflicting water uses.

WILDLIFE AND WILDLIFE HABITATS

GOAL: Conserve Connecticut's wildlife species and ensure their diversity.

OBJECTIVE: Foster natural propagation and provide for sustained yield management of selected species and protect, maintain, and restore wildlife habitat.

STATUS & TRENDS: Development is causing wildlife displacement and loss of valuable habitat. As a result, public and private lands available for wildlife management will decrease and become overused. The stress on these habitats will cause many species to forage at farms and gardens leading to nuisances and potentially to indiscriminate destruction of various wildlife species. In addition to habitat loss, some wildlife species will diminish because of the lack of management knowledge of their status, habitat needs, and natural controls. At this time, there is little incentive for landowners to maintain or improve their land to benefit wildlife.

STRATEGIES:

1) Conduct research and maintain an inventory on the status of wildlife species.

2) Increase the state acquisition and/or management of areas for wildlife.

3) Provide technical assistance to landowners, municipalities, land trusts, and water utility companies for the protection and enhancement of wildlife habitat.

4) Expand wildlife conservation education programs and facilities and increase opportunities for related wildlife recreational activities.

5) Establish a wildlife mitigation and replacement fee program for activities that destroy wildlife illegally; funds from this program to be used for enforcement, replacement and wildlife education.

6) Implement a state incentive program for wildlife habitat improvement on agricultural lands.

CONTINUUM OF STEWARDSHIP

Environment/2000: Connecticut's Environmental Plan presents a great challenge to all the citizens of this State in achieving a quality environment and a unique opportunity in participating in the stewardship of our precious natural resources. Achievement of the Plan's goals and objectives and implementation of the strategies requires the commitment of government, local boards and commissions, business and industry, and ultimately, the commitment of each individual.

While the Department of Environmental Protection is required to prepare this state-wide Environmental Plan and administer many of the programs necessary to achieve its goals and objectives, it cannot be held responsible for all of its implementation. The Department will, however, be accountable for much of the implementation through annual reporting and required revisions of the Plan.

IMPLEMENTATION STRATEGY

Public Act 87-142 establishes the framework for the adoption of **Environment/2000** as the State environmental plan and requires annual program progress reports and revisions to be considered for adoption every five years. This Act creates mechanisms to assure implementation of management strategies, that changes are accommodated, that the public is involved and environmental progress is being achieved. Most important, the Act establishes a permanent advisory board to assist in the review of the Department's progress towards meeting the goals and objectives, the adoption of measurement indicators and the redirection of goals and objectives which are found with time to need change. One of the most important roles of the advisory board will be to bring the citizens' perspective to the establishment of priorities. Priorities for achievement of goals and objectives, use of Department resources and the expenditure of funds have not been set. The advisory board and this state's citizens must guide these choices. The advisory board must also consider the balance needed between this Plan and other state plans, such as transportation, energy, housing, and economic development.

Accountability will be brought to the Plan through the expanded role of the Council on Environmental Quality. The Act requires the Council to report annually to the Governor on the progress towards achieving the goals and objectives. In addition, an annual conference is required to report to the public the status of the achievement of the goals and objectives. This conference will provide the opportunity to introduce changes and discuss emerging issues. Most importantly, the conference assures the public a role in setting and advising on environmental goals and objectives.

STATE RESPONSIBILITY

Several tools are available within the Department of Environmental Protection and the rest of state government to implement the strategies and accomplish the goals and objectives. However, major efforts must be focused to local government boards and commissions to implement needed strategies. Further, education and outreach are needed to assure implementation at the individual citizen level.

At the Department level, the measurement, review, and continued development of the Plan will be a permanent function with assigned staff. The Advisory Board's and ad hoc's committees inputs will be sought and used to address emerging issues and modify existing elements of the Plan. Department program directors will focus their program objectives to be consistent with the Plan and performance evaluation will be weighed accordingly to their success. The annual budgetary and legislative processes will reflect implementation and/or maintenance of the adopted management strategies. Budget requests will be based on the implementation of the environmental goals and objectives being achieved by the request. Department legislative requests will also focus on the need to enhance or protect the natural resources consistent with the adopted Plan and it will review other legislation in the same manner.

The Department, within its authority, will also review applications for use of the State's resources and rule on them relative to their consistency with this Plan, thus providing a new means of overview. The Department has never before been able to evaluate actions within the total framework of meeting a Plan. Adoption of this Plan makes this possible.

LOCAL GOVERNMENT AND CITIZEN RESPONSIBILITY

Actions of local government to achieve the goals and objectives of this Plan will be supported by delegation of state authority, increased financial assistance, and technical information and training. Programs like ground water management, inland wetlands and wastewater treatment are examples of where local programs are being enhanced today.

The continuing stewardship of Connecticut's natural heritage and resources demands the commitment of all our citizens to preserve, protect, and enhance our environment. Each person must participate, if only at the level of recycling their bottles and cans, planting wildlife buffer bunches, or checking their automobile for acceptable air emissions.

Throughout the development of **Environment/2000**, the need consistently emerged for enhanced education programs to reach the school children through their basic training, to reach homeowners on proper environmental practices, such as water conservation, the use of pesticides or disposal of wastes, and to reach local decision makers serving on inland wetland and/or conservation commissions or zoning commissions on the effects their actions have on the resources they are managing. A commitment to environmental education must be made through governmental and educational institutions so as to ensure that the people have the tools to make proper decisions in their own life and those they affect.

The role as a citizen of this State in continuing **Environment/2000** is one of a broad participatory practice. Each citizen must become a *trustee* of Connecticut's environment and take responsibility in properly managing our resources. A commitment in maintaining and achieving our agreed upon *quality of life* must be made. Opinions as to how we preserve and conserve our resources must be strongly voiced at both the local and state governmental levels. Many citizens need to become involved and must share in the responsibility in seeing to the achievement of our goals and objectives.

FINAL WORDS

Environmental goals and management strategies do not implement themselves. The goals and strategies outlined in this document include tasks for each segment of society. If we are to be successful in meeting the challenge set before us, it will require new legislation, additional government spending, and perhaps significant changes in the way all of us live today. No one denies that there will be burdens and trade-offs involved in implementing this Plan.

Nevertheless, it is axiomatic that the cost of prevention is always cheaper than the cost of repair. In the long run, the expenses assumed, the burdens taken on, the sacrifices that are made, will be far outweighed by the benefits to be derived.

Having worked closely with the citizens of Connecticut, the collective writers of these goals and strategies are optimistic about what can be done. The key is that we must make a commitment to do it together. A great challenge is before us. It is hoped we can meet that challenge with unselfishness and responsibility, before any more irreversible harm is done to our environment. We must be willing to accomplish this most pressing and difficult task.

PUBLIC ACT NO. 87-142: THE STATE-WIDE ENVIRONMENTAL PLAN

Be it enacted by the Senate and House of Representatives in General Assembly convened:

Section 1. Section 22a-8 of the general statutes is repealed and following is substituted in lieu thereof:

(a) The commissioner shall formulate and from time to time revise a state-wide environmental plan for the management and protection of the quality of the environment and the natural resources of the state in furtherance of [the] legislative policy. The plan shall establish environmental goals and objectives and describe strategies for their achievement. In developing the plan the commissioner shall consider any other state-wide policies and plans he deems appropriate. The first of such plans shall be submitted to the governor for his approval on or before September 1, 1987, and revisions, at intervals of five years thereafter, shall be made thereto. Upon its approval by the governor, such plan shall serve as a guide for the people of the state and for the state and its political subdivisions for the preservation of the environment.

(b) The commissioner shall establish an advisory board to assist him in preparing the plan and any revisions thereto. The board shall reflect the state's geographical diversity and include members representing municipalities, environmental groups, business and industries, education and the public and any other persons the commissioner deems appropriate.

(c) The commissioner shall annually conduct a conference to report achievement of the goals and objectives established in the plan and to encourage public discussion of environmental concerns.

Sec. 2. Section 22a-12 of the general statutes is repealed and the following is substituted in lieu thereof:

(a) The council shall submit annually to the governor an environmental quality report, which shall set forth: (1) The status of the major environmental categories including, but not limited to, the air, the water and the land environment; (2) current and foreseeable trends in the quality management and utilization of the environment and the effect of such trends on the social, economic and health requirements of the state: (3) the adequacy of available natural resources for fulfilling human and economic requirements of the state in the light of projected population pressures; (4) a review of the programs and activities of the state and local governments and private organizations with particular reference to their effect on the environment and on the conservation, development and utilization of natural resources; (5) a program for remedying the deficiencies of existing programs and activities, together with recommendations for legislation, and (6) the progress towards achievement of the goals and objectives established in the state-wide environmental plan.

(b) The council shall have the authority to require submission by all state agencies, at all stages of development, of construction plans for review and comment by the council which shall include, but not be limited to, all plans of the department of transportation which anticipate the paving or building upon land not previously paved or built upon, and location or expansion of noise-producing facilities such as airports; and all plans of the department of administrative services which anticipate the paving or building upon land not previously paved or built upon, the construction of structures occupying a substantially greater air space than predecessor structures in the same location, and the location or expansion of noise or pollution-producing facilities such as heating plants; provided the function of the council with respect to such plans shall be advisory and consultative only.

Sec. 3. This act shall take effect July 1, 1987.

LIST OF ENDORSEMENTS

The following organizations and individuals have endorsed in full or part, **Environment/2000: Connecticut's Environmental Plan** and/or process.

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GLOSSARY

ACIDIFICATION - The process of becoming an acid; the compound which yields hydrogen ions when dissolved in water, whose hydrogen can be replaced by metals or basic radicals; or which reacts with bases to form salts and water (neutralization).

AMBIENT - The surrounding or normally occurring conditions in the environment.

AQUIFER - A geologic formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield significant quantities of water to wells and springs.

ASBESTOS - The generic term describing a variety of naturally formed hydrated silicates that, upon mechanical processing, separate into mineral fibers.

BENTHIC - Refers to organisms or material associated with the bottom of watercourses.

BEST MANAGEMENT PRACTICES (BMP's) - Denotes practical and effective measures which, when applied at potential sources of contamination, will prevent or minimize the potential release of pollutants.

BIODEGRADABLE - Denotes a substance that can be broken down into simpler substances by the action of living organisms, especially bacteria and fungi.

BUFFER ZONE - Zone surrounding a specific ecological area and having such composition that it protects that ecological area from encroachment and disturbance.

CONSERVATION - Denotes the management of the environment in such a way as to ensure adequate supplies of natural resources for future generations.

DIVERSITY - A term which refers, collectively, to all species, subspecies, distinctive populations, and genetic varients of plants and animals, within their natural habitats, and to the communities and ecosystems into which they are organized.

DRAINAGE BASIN - The part of the surface of earth that is occupied by a drainage system, which consists of a surface stream or a body of impounded surface water together with all tributary surface streams and bodies of impounded water.

EMISSION - The total amount of a solid, liquid or gaseous pollutant emitted into the atmosphere from a given source in a given time.

ENDANGERED SPECIES - A species in danger of extinction throughout all or a significant portion of its range.

ENVIRONMENT - The forces and conditions that surround and influence living and non-living things.

EUTROPHICATION - The process occurring in lakes where an increase in available plant nutrients is accompanied by an increase in the growth of aquatic plants.

FINFISH - True fish, as opposed to shellfish; member of the Class Pisces which includes true fishes (elasmibranchs excluded) having bony exoskeleton, paired fins and operculum covering the gills.

FLOOD PRONE Those areas of land adjacent to surface water bodies which are subject to flooding, generally during periods of heavy rains.

HABITAT - The physical area where an organism lives.

HIGH-LEVEL RADIOACTIVE MATERIAL - Denotes the highly radioactive material resulting from the reprocessing of spent nuclear fuel, including liquid waste produced directly in reprocessing and any solid material derived from such liquid waste that contains fission products in sufficient concentration; and any other highly radioactive material determined by the federal government as requiring permanent isolation.

INDIGENOUS - Native and original to the region.

INFRASTRUCTURE - The public service system upon which most economic activity depends in a highly industrialized economy.

INTEGRATED PEST MANAGEMENT - Denotes the process which involves the utilization of the proper control procedures to fit a particular situation, requiring a knowledge of the biotic and abiotic factors affecting the dynamics of populations and reasonably accurate methods of predicting population trends.

LOW FLOW The lower part of the cumulative frequency curves showing the average period of time specific daily flows are equaled or exceeded.

LOW-LEVEL RADIOACTIVE MATERIAL - Denotes radioactive waste that is neither high-level waste nor transuranic waste, nor spent nuclear fuel, nor by-product material, as defined by the Atomic Energy Act of 1954 as amended; and is classified by the federal government as low level waste, consistent with existing law, but does not include waste generated as a result of atomic energy defense activities of the federal government, as defined in Public Law 96-573, or federal research and development activities.

MULTIPLE USE MANAGEMENT SYSTEM - The application of scientific methods and techniques to decision-making concerning the harmoneous use of land for more than one purpose, i.e. grazing of livestock, wildlife protection, recreation, watershed, and timber production, not necessarily the combination of uses that will yield the highest economic return or greatest unit output.

NON-ATTAINMENT - The failure to reach, achieve, accomplish a specific goal, objective or desired state.

NON-POINT SOURCE POLLUTION - Those sources of pollution that are diffuse in both origin and in time and points of discharge, and depend heavily on weather conditions such as rainstorms or snowmelt.

OLD FOREST STANDS - Denotes a small subset of all timber older than the culmultive of mean annual increment.

OPEN SPACE - Denotes use of land for agriculture, parks, natural areas, forests, camping, fishing, wetland preservation, wildlife habitat, reservoirs, hunting, golfing, boating, swimming, snowmobiling, sanitary landfill, historic and scenic preservation and other uses.

OZONE - A modification of oxygen gas produced usually by a silent electric discharge in air or oxygen.

POLLUTE - To make make unclean or impure.

POTABLE WATER SUPPLY - Water free from impurities in amounts sufficient to cause disease or other harmful physiological effects, with the minimum or maximum bacteriological, physical, and chemical composition as defined by the applicable laws and regulations of the Connecticut Department of Health Services.

PRESERVATION - Denotes the protection of nature from commercial exploitation to prolong its use for recreation, watershed protection and scientific study.

RECLAMATION - The processes by which seriously disturbed land surfaces are stabilized against the hazards of water and wind erosion.

RECYCLING - Denotes the reuse or recovered resources in manufacturing, agriculture, power production or other processes.

RENEWABLE - Denotes resources that involve organic growth and reproduction or because they are relatively quickly recycled in nature, as in the case of water in the hydrologic cycle.

RESOURCE RECOVERY - Denotes the processing of solid wastes in such a way as to produce materials or energy which may be used in manufacturing, agriculture, or other processes.

RIVERINE - Of, resembling, produced by, or relating to a river; situated on or near a riverbank.

SCENIC ROADS - A highway or portion of a highway which is free of intensive commercial traffic and meets certain aesthetic criteria as determined by Connecticut State Statutes.

SPECIES - A group of similar organisms whose members can breed with one another to produce fertile offspring.

STEWARDSHIP - The administration of the goods or duties entrusted to one's care.

SUSTAINED YIELD MANAGEMENT - Denotes the forestry practice where the annual cut volume is close to the annual growth of the forests as a whole.

THREATENED SPECIES - Any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

TOXIC - Of or relating to a poisonous substance which by chemical action and at low dosage can kill or injure living organisms.

WASTELOAD ALLOCATION - The water quality analyses performed to establish maximum daily pollutant limits for a wastewater discharge or a group of discharges entering a water quality limited segment.

WETLANDS - Denotes land, including submerged land, which consists of any of the soil types designated as poorly drained, very poorly drained, alluvial, and flood plain by the National Cooperative Soils Survey, as may be amended from time to time, of the Conservation Service of the United States Department of Agriculture.

ABBREVIATED LISTING OF ENVIRONMENTAL PLANS AND POLICIES

A Marine Resources Management Plan for the State of Connecticut, State of Connecticut, Department of Environmental Protection. 1984.

A Policies Plan for the Conservation and Development of Connecticut, Revision of 1987-1992, State of Connecticut, Office of Planning and Management. 1987.

Automated Flood Warning in Connecticut: A Master Plan, State of Connecticut, Department of Environmental Protection. 1985.

Connecticut Hazardous Waste Management Plan 1985-2005, Connecticut Hazardous Waste Management Service. 1986.

Interim Plan for the Disposal of Dredge Material from Long Island Sound, State of Connecticut, Department of Environmental Protection. 1980.

Model Municipal Harbor Management Plan, State of Connecticut, Department of Environmental Protection. 1986.

Oil Spill Contingency Guide, State of Connecticut, Department of Environmental Protection. 1984.

Plan for Managing Connecticut's Forest Resources, State of Connecticut, Department of Environmental Protection. 1986.

Salmon Restoration Plan, State of Connecticut, Department of Environmental Protection. 1985.

Section 406 Hazard Mitigation Implementation Measures, State of Connecticut, Department of Environmental Protection. 1983; updated 1985.

Solid Waste Management Plan: Municipal Solid Waste-Volume I, State of Connecticut, Department of Environmental Protection. 1983; revised 1985.

Solid Waste Management Plan: Regional Solid Waste Recycling Plan-Volume II, State of Connecticut, Department of Environmental Protection. 1987.

State Impementation Plan: Air Quality, State of Connecticut, Department of Environmental Protection. 1972; major amendments 1979, 1981 and 1982.

State-wide Comprehensive Outdoor Recreation Plan, State of Connecticut, Department of Environmental Protection. 1979; updated 1983 and 1987.

State-wide Long Range Plan for the Management of Water Resources of the State, State of Connecticut, Department of Environmental Protection. Draft 1987.

The Connecticut Coastal Management Program, State of Connecticut, Department of Environmental Protection. 1980.

Water Quality Management Plan, State of Connecticut, Department of Environmental Protection. 1986.