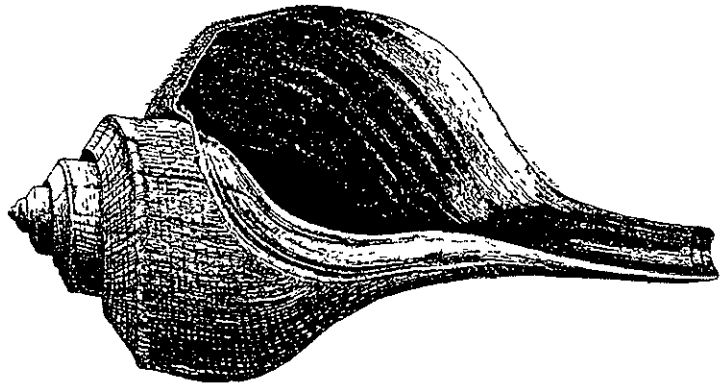
Environmental Quality in Connecticut

Review and Forecast



THE 1994 ANNUAL REPORT OF THE COUNCIL ON ENVIRONMENTAL QUALITY

STATE OF CONNECTICUT

COUNCIL ON ENVIRONMENTAL QUALITY

February 23, 1995

The Honorable John G. Rowland
Governor of Connecticut
State Capitol
Hartford, CT 06106

Dear Governor Rowland:

I am pleased to submit the annual report of the Council on Environmental Quality for 1994. I believe two items will be of particular interest:

First, the Council has identified six environmental initiatives that will fit well into a broader state effort to advance economic development *and* the quality of peoples' lives in Connecticut's cities and town centers. These are described in Part One.

Second, the Council has expanded its successful use of *Environmental Indicators* as the preferred way to report on changes in Connecticut's environment. These indicators are bottom-line statements on the actual condition of our air, water, land, and wildlife. The focus is on results, rather than on government budgets, enforcement activity, or new laws.

As always, the Council stands ready to assist you. If you desire additional information on any topics in this report, please call me or the Council's very capable staff.

Respectfully,

John A. Millington
Chairman

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PART ONE

COMMON GROUND

INTRODUCTION:

Good Land Policies are the Link between Economic Development and Quality of Life

The Council has identified six environmental initiatives that would advance economic development ***and*** *the quality of our lives.*

Many persistent problems that might seem unrelated are in fact tied directly to state land conservation and development policies

air pollution

economic decline of the cities

a limited mass transit system that requires ever-growing taxpayer subsidies

industrial site abandonment

dwindling opportunities to get to our destinations without a car

an unsafe walking and bicycling environment for children

inadequate sewerage infrastructure that chronically pollutes our rivers

declining forest habitat

Public decisions on these issues are often viewed as pitting the interests of cities against suburbs, jobs against the environment, or development against conservation The Council has identified six environmental initiatives that would in fact serve all of these allegedly competing interests by advancing economic development and the quality of our lives All six pertain to the conservation and development of *land,* the common thread running through all of these issues All six would encourage the creation of jobs in the cities while simultaneously favoring a better environment, a stronger economy, a more efficient state government, and a higher quality of life for all Connecticut residents

1 Accelerate private sector clean-up and development of polluted urban properties

2 Eliminate redundant regulations on state investments

3 Improve state agency planning, coordination, and efficiency

4 Reduce the influence of the property tax as a factor in business-location decisions.

5 Remove the barriers facing local " Greenway entrepreneurs "

6 Fix broken parts of the bureaucracy

These initiatives would fit well into a broader effort to stimulate the economy In fact, "Jobs in the cities and town centers" could well be the single goal that summarizes and unifies state economic, social, and environmental policy The economic benefits of job creation are obvious, regardless of location, but new jobs *in the cities and town centers* yield the additional benefits of reinforcing existing public investments in infrastructure and social support programs The *environmental* benefits, while not the most obvious, might be the most significant because urban and town center locations.

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allow access to jobs by means other than single-occupant vehicles,

provide riders for transit systems, reducing need for taxpayer subsidies,

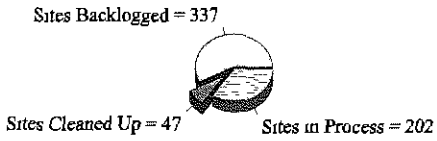
reduce demand for sprawling development into undeveloped lands, and

boost cities' economic health , essential to their ability to maintain and improve their sewage treatment systems, urban parks, greenways, and neighborhood amenities

1. Accelerate private sector clean-up and development of contaminated urban properties

CONTAMINATED PROPERTIES

Status of Sites Filed Since 1985



Issuance of a Clean-up Standard for contaminated properties must be expedited.

PROBLEM: The Property Transfer Act (P.A 85-568) requires companies to assess the extent of contamination before transferring commercial property to a new owner. The buyer or seller must assume responsibility for clean-up, even though the full extent of the liability will not be known until the DEP approves the clean-up plan The DEP's approval may take years. Figure 1 shows that far more cases are backlogged than cleaned up Five to six new sites have been reported monthly since 1985 The law is important, and its implementation can be fixed.

SOLUTION: *Realistic Standards and Staffing* In 1993, the Council recommended strongly that the DEP make development of a realistic "Clean Standard" one of its highest priorities Now four years overdue, this standard would enable a company to evaluate its full liability *before* it closes a deal or assumes responsibility for clean-up Lenders and investors demand such knowledge This standard must be expedited

Also in 1993, the Council recommended in detail a plan for funding and staffing the Property Transfer program adequately without burdening the taxpayer To some extent, P A 94-198 addresses this problem by allowing companies to pay extra fees for DEP review of voluntary clean-ups -- a solution that does not burden taxpayers but also does not project a state policy of wanting to create jobs in the cities

The privatization of the review process is a potential solution that has not been thoroughly evaluated in several years; the ongoing experiment in Massachusetts might be instructive

2. Eliminate redundant regulations on state investments

The Council recommends that the General Assembly *eliminate* state agencies' obligations under the Connecticut Environmental Policy Act (C G.S 22a-1b and 22a-1c) to produce Environmental Impact Evaluations, except for projects proposed in areas designated as conservation, preservation, or rural in the State Conservation and Development Policies Plan This would speed agencies' efforts to site their projects where infrastructure and transit systems already exist Other existing regulations governing air, water, noise, and other potential impacts are in place to protect the people in the area of a proposed project, these and the mandatory provisions of the State Plan make the CEPA regulations redundant

Better planning and coordination at the front end of a project yield far more benefits than an Environmental Impact Evaluation prepared by a consultant later.

The $50,000 to $100,000 saved per project should be applied more meaningfully by helping agencies improve their planning and coordination with other agencies and with municipalities The Council has found that better planning and coordination at the front end of a project yield far more environmental benefits than an Environmental Impact Evaluation prepared by a consultant after an agency has made the key siting decisions

3. Improve state agency planning, coordination, and efficiency

The Council has reported improvements, but still observes state agencies spending money on projects that take jobs *out* of cities and town centers to so-called "greenfield" sites, which is contrary to most goals and policies of the state.

One recent proposal would move 300 state jobs out of Hartford to suburban farmland Such moves place many hidden costs on businesses, consumers, and taxpayers Let's look at two First, the DOT spends more than $53 million annually just on operating subsidies for bus systems This amount far exceeds the national average per-capita Millions more are spent on buses and capital improvements The benefits are improved mobility, relief of congestion, and certain air-quality and energy-efficiency improvements However, the benefits accrue only if people ride the bus, and people will only ride the bus if it goes where they want to go -- to their jobs, homes, doctors, stores, and recreation areas Public investments that move jobs away from bus lines undermine the state's transit systems and waste the taxpayers' dollars spent on the operation of half-empty buses Yet many previous investments have had that effect, so that ridership has decreased in the 1990s as subsidies increased

Public investments that move jobs away from bus lines undermine the state's transit systems and waste taxpayers' dollars on the operation of half-empty buses.

Second, avoiding car travel is a form of pollution prevention that benefits Connecticut's economy Every ton of air pollution removed from Connecticut's air comes with a price tag Total costs to employers and taxpayers of complying with the federal Clean Air Act will be in the billions of dollars, most of which will flow out of state for things such as pollution controls on cars Consequently, every ton *prevented* has an equivalent value,

estimated to be between $8,000 and $15,000 Every employee who can get to work every day without generating a car trip will save the state's economy between $200 and $500 in avoided pollution control costs A large employer who can install 200 fewer parking spaces by locating on a transit line saves the state up to $100,000, a savings that can help justify extra state costs to help put the jobs in the cities

The Council recommends that all state agencies work harder to implement the State Conservation and Development Policies Plan Improved coordination will improve the environment and save taxpayers' dollars

4. Reduce the influence of the property tax as a factor in business-location decisions

Land planning and zoning is best performed at the local level However, municipal dependence on the property tax is the biggest factor subverting what would otherwise be good land-use planning Many towns are willing, even eager, to accept commercial facilities for which there is no local need just so they can collect the property tax revenue (The 1993 CEQ Annual Report includes case studies and related data.)

The Council recommends a major change to Connecticut's property tax structure to reduce the influence of the tax in business location decisions The options are numerous, and the Council respectfully leaves the details of reform to the Governor and General Assembly

5. Remove the barriers facing local "Greenway entrepreneurs"

Greenways could be the most significant conservation initiative of the next fifty years.

Greenways are corridors of open space that link towns, cities, and rural areas alike to existing parks and other points of interest. They often follow linear landscape features such as rivers or abandoned railroad beds, and sometimes include bikeways and walking trails. For many Connecticut communities, they are a new way of organizing open space and recreational facilities.

More than 100 greenway projects have been started in our state, and many more are possible. Some projects, completed in 1994, already see thousands of visitors every week. Most importantly, these projects have been imagined, designed, and created by people working at the local level. Already 22 million federal dollars have come into this state for local greenways.

The Greenways Committee discovered that local groups are creating partnerships among government, individuals, and large and small businesses to get the job done. In forums and meetings around the state, the Committee heard repeatedly that local project "entrepreneurs" often need assistance but want to retain control locally. In that spirit, the Committee says that new bureaucracies and master plans are *not* the answer.

The Committee is recommending establishment of a volunteer Greenways Council, a greenways help center, and modest forms of financial assistance to help municipalities qualify for and match federal greenway grants, as well as some no-cost and low-cost tools for towns. The Committee studied what people need to turn their own community visions into reality, and now seeks to support their entrepreneurial spirit.

Committee Co-chairman Russell Brenneman, in announcing the recommendations in December, 1994, said that "Greenways can become the organizing principle for land conservation that Connecticut has always lacked As such, it could be the most significant conservation initiative of the next fifty years "

FOR MORE INFORMATION: "Greenways for Connecticut", the December 1994 Report to the Governor, is available from The Greenways Committee, c/o the Council on Environmental Quality, 79 Elm Street, Hartford, CT 06106 Phone (203) 424-4000, Fax (203) 566-6024

6. Fix broken parts of the bureaucracy

Traditional regulatory programs have taken us nearly as far as they ever will. New approaches are needed.

The environmental indicators of the next section illustrate the tremendous progress that has been made in parts of Connecticut's environment Nevertheless, progress has slowed in the 1990s for a number of reasons One reason is that traditional regulatory programs have taken us nearly as far as they ever will New approaches are needed

Before wholly new approaches can be found and applied, some of the broken pieces of regulatory apparatus must be repaired Regardless of a program's actual structure, an efficient Department of Environmental Protection is as essential to a prosperous business community as it is to a healthful environment, and yet businesses are frustrated routinely by delays and inconsistent actions Tangible improvements are being implemented to organize and streamline permit

The dedicated funds supporting the DEP will not last much longer. A realistic plan for funding the DEP must be implemented.

It is clear that creative ideas will be needed from all sectors.

applications and review, but the DEP is not operating on a solid financial foundation. Since 1990 when more emphasis was put on fee revenue, companies have found themselves paying higher fees but receiving the same level of service. Worse, the Council notes with great alarm that the dedicated funds supporting the DEP are all being spent faster than the revenues are coming in. (See the 1992 CEQ Annual Report for more details.) If a realistic plan for funding the DEP is not implemented, the Department's non-appropriated budget will hit the bottom of the well.

The Environmental Conservation Branch of the DEP rests on a financial foundation as shaky as the Environmental Quality Branch's. Fisheries, in particular, is facing large federal grant reductions, and parks, forestry, and wildlife management are drawing down the Environmental Conservation Fund established in 1990. The DEP's Fisheries Task Force, in which the Council participates, was convened to discern public consensus on what the priorities and strategies of that Division should be. The Council is pleased to be working with the Connecticut Environment Roundtable to bring interested parties together for further discussions of the best way to fund the Environmental Conservation Branch. It is clear that creative ideas will be needed from all sectors.

The Department is also years behind drafting and implementing regulations mandated by the General Assembly. Because of this, the Council repeats this recommendation: *The General Assembly should pass no new environmental laws without sufficient appropriations to implement them.*

CONCLUSION

Some Progress; Challenges Remain

The Council on Environmental Quality has investigated these themes repeatedly in recent years, after concluding in 1991 that land, among all the state's resources, plays the most critical role in our daily lives and presents the most difficult policy challenges. Recent Council reports have focused on the need to coordinate transportation and land-use planning; "greenways" as a solution to our chronic open space shortages; and the complex relationship among state activities, municipal land-use policies, and property taxes. [Readers are encouraged to request back issues of CEQ reports.]

The Council is pleased to note several tangible improvements over the past five years:

Transportation and land-use planning ... Prompted by new federal rules, the DOT and regional agencies have begun to integrate these two government functions, which previously were entirely separate. The Council noted in 1994 the progressive regional transportation plan developed by the Capitol Region Council of Governments.

Greenways ... Dozens of communities have created *greenways* to link neighborhoods with each other and with natural and commercial areas. More than 100 greenway projects are in the works, most of which will provide convenient access to the outdoors for families, children, disabled persons, retired persons, and commuters alike.

The Council is pleased to note several improvements over the past five years.

State agency coordination ...The General Assembly, through P.A. 91-395, took an important step in helping state agencies invest their capital budgets in ways that reinforce, rather than undermine, the investments of other agencies and the orderly development of the state. This law requires state capital investments over $100,000 to be consistent with the state's own Conservation and Development Policies Plan.

Jobs in the cities ... The majority of regional economic development grants awarded by the Department of Economic Development in 1994 went to projects that would put

jobs in urban areas.

Permit streamlining ... The Department of Environmental Protection has designed an integrated, computerized permit application management system that will go a long way toward easing the many frustrations of applicants -- *if* it is implemented fully. The DEP was even able, with the improved flow of information, to enhance the public's ability to participate. Already the backlog has been reduced, though other functions, including enforcement, have declined as a consequence of reassigning resources to permit review.

Obvious challenges remain. Many of the recommended solutions will require cooperation among state agencies, municipalities, and the private sector. The Council has concludes that land-use planning is best performed at the municipal level, where citizen-officials know their own communities. Nonetheless, the influence of the state is huge, regardless of whether that influence is exercised strategically or haphazardly. The State of Connecticut *should* exercise that influence efficiently and wisely to enhance the quality of citizens' lives.

PART TWO

INDICATORS OF ENVIRONMENTAL TRENDS

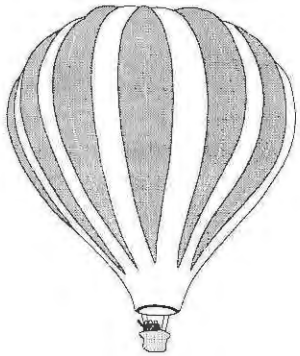
A Status Report and Forecast

These indicators are bottom-line statements of the actual condition of our air, water, land, and wildlife.

These indicators are bottom-line statements of the actual condition of our air, water, land, and wildlife. The focus is on results, rather than on government programs, budgets, enforcement action, or new laws. Each indicator includes a graph, a description of the indicator (the actual thing being measured or counted), some background and a discussion of recent trends.

Where possible, each graph illustrates progress (or lack of it) toward a specific goal or objective of the Environment 2000 Plan. Where that plan is not relevant, the Council uses goals from other state planning documents.

AIR

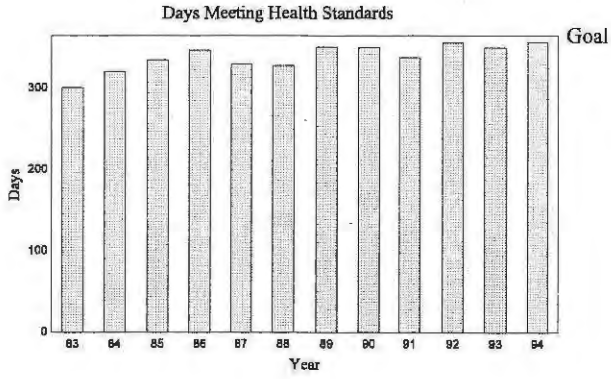


INDICATOR: Number of days each year that every monitoring station in the state recorded satisfactory air quality.

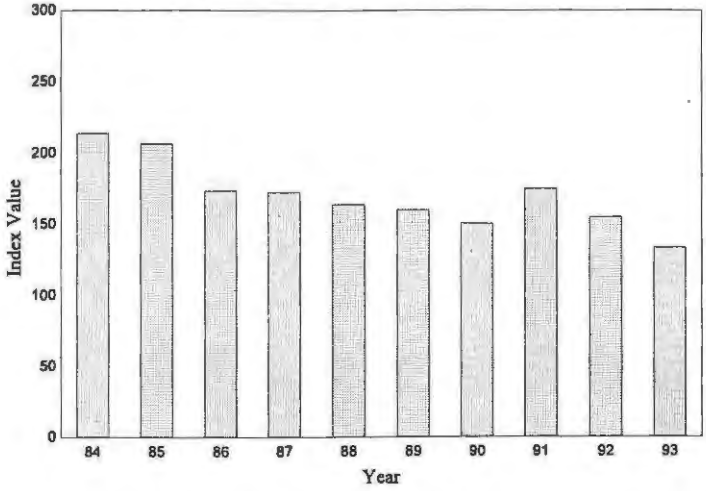
BACKGROUND: "Satisfactory air quality" is defined here as air that meets or is better than the health-based ambient air quality standards for all of the following five pollutants: sulfur dioxide, lead, carbon monoxide, nitrogen oxides, and ground-level ozone. Connecticut's goal is to have air that meets health-based standards 365 days a year by the year 1999 (or, in Fairfield County, by 2007).

RECENT TRENDS: Connecticut's air has shown continuous improvement. Violations of the health-based ambient air quality standards have been virtually eliminated for all pollutants except ground-level ozone. Ground-level ozone is created when nitrogen oxides and volatile organic compounds react in the presence of sunlight. While Connecticut's air fails to meet the standard on only a few summer days, this state is considered by the federal government to be a "serious" non-attainment area (and "severe" in Fairfield County). Automobiles remain a major source of ozone-forming emissions despite great improvements in tail-pipe standards, and Connecticut is taking many steps to reduce emissions from the transportation sector to comply with the 1990 Federal Clean Air Act.

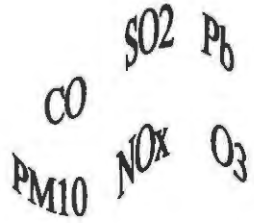
GOOD AIR DAYS

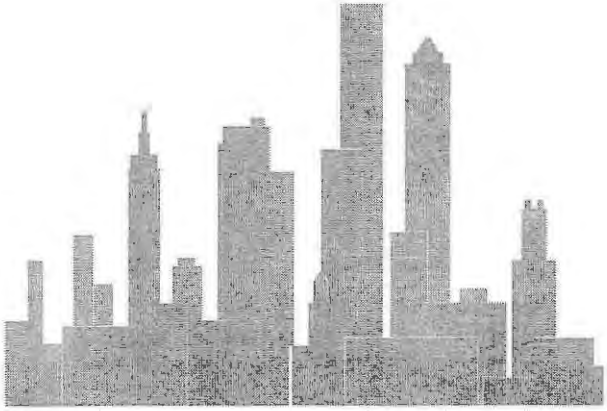


AVERAGE AIR POLLUTION LEVELS



INDICATOR: Average level of air pollution (six major pollutants combined).





BACKGROUND: Six air pollutants -- carbon monoxide, ground-level ozone, lead, particulates, nitrogen oxides, and sulfur dioxide -- are measured daily by the DEP. The level of each pollutant is expressed on a numerical scale (Pollutant Standards Index or PSI) that takes into account the levels at which each pollutant, by itself, is considered unhealthful. In this somewhat complicated indicator, the average levels of all six pollutants are added together.

RECENT TRENDS: Progress continues. Much of the drop in total pollutants since 1984 is due to reductions in lead emissions.

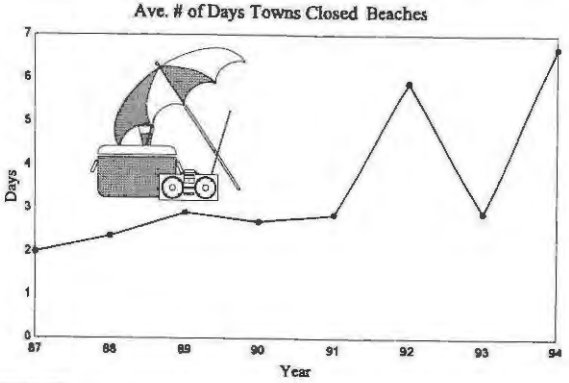
SOUND AND SHORE

INDICATOR: Average number of days coastal municipalities closed one or more of their beaches.

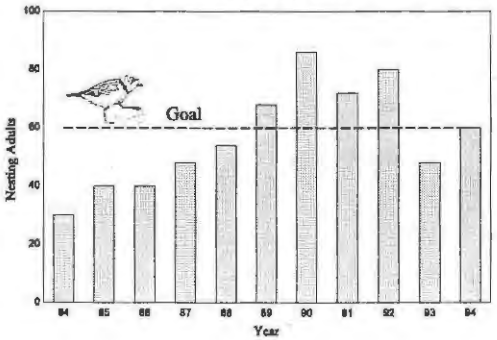
BACKGROUND: Connecticut's goal is to eliminate beach closings caused by discharges of untreated or poorly treated sewage, the most common cause of elevated bacteria levels. After rain storms, overflows from combined sanitary and storm sewers are *presumed* to contaminate the water, and some towns close beaches automatically before the water can be tested for bacteria.

RECENT TRENDS: Yearly variations are a product of rainfall patterns and incidents such as sewer-line ruptures. In 1994, some towns had to close beaches as many as 71 days, while several towns had no closings.

BEACH CLOSINGS



PIPING PLOVER



INDICATOR: Number of piping plovers nesting in Connecticut.

BACKGROUND: Piping plovers are thrush-sized shorebirds that nest on beaches, often with least terns. Nests are frequently destroyed by human intrusion, storm tides, and predators. Nesting adults are counted (and in some cases, protected) every spring by the DEP and volunteers working with The Nature Conservancy. The piping plover's status is "threatened".

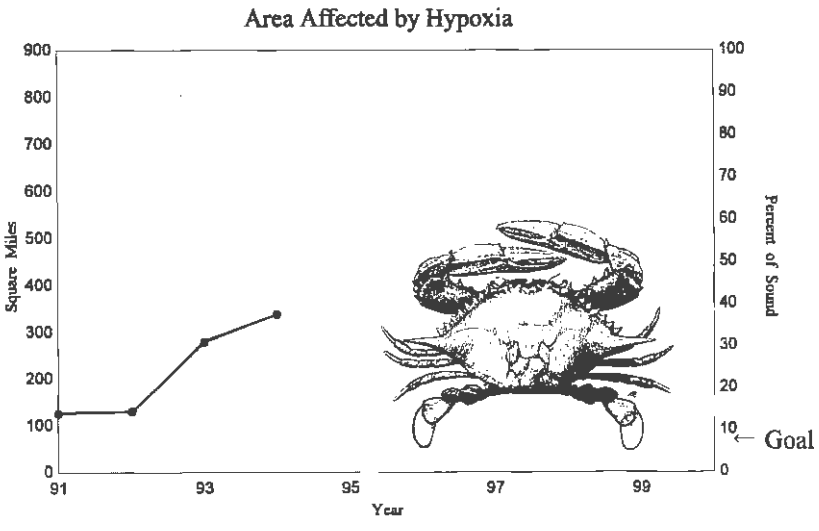
RECENT TRENDS: Since protection and monitoring efforts began in 1984, nesting success has improved, resulting in more returning adults in subsequent years. Yearly variations can occur when adult birds move from one state to another. Predators took a heavy toll in 1993.

INDICATOR: Square miles (and percent) of the Sound that hypoxia affects each year.

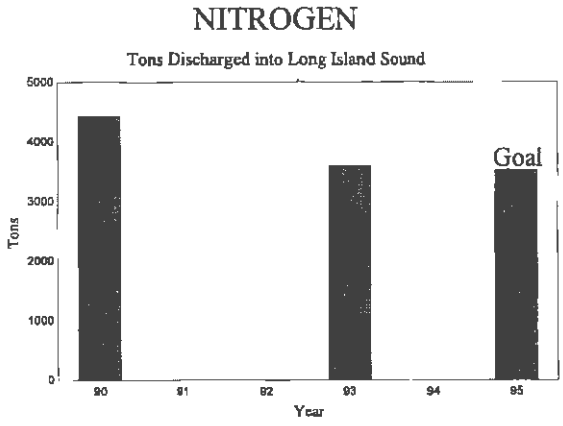
BACKGROUND: Hypoxia is the condition in the water when oxygen levels are too low to support desirable forms of life. (For this indicator, hypoxia is defined as less than or equal to 3 mg/l of dissolved oxygen.) Hypoxia occurs when nitrogen stimulates excessive growth of aquatic plants, which die and are consumed by oxygen-using bacteria. Weather greatly influences hypoxia, making year-to-year changes less important than long-term trends. Connecticut's goal is to eliminate the effects of hypoxia.

RECENT TRENDS: More years of data are required to assess true trends. Year-to-year fluctuations mainly reflect weather patterns. All of the hypoxia has occurred in the western two-thirds of the Sound. Connecticut and New York adopted a comprehensive management plan in 1994.

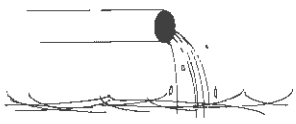
THE SOUND IN SUMMER



INDICATOR: Tons of nitrogen discharged into Long Island Sound from Connecticut's coastal sewage treatment plants and large industrial facilities.



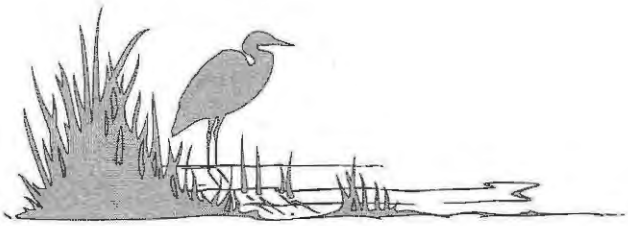
BACKGROUND: Connecticut's 18 coastal sewage treatment plants from Branford to Greenwich, along with the three largest industrial nitrogen dischargers, contribute 10% of the nitrogen enrichment going to Long Island Sound (see description of hypoxia on previous page). Connecticut had an initial goal in 1990 of "no net increase", or keeping nitrogen discharges at or below 1990 levels. The mid-term goal is to reduce nitrogen discharges from these sources by 20% by 1995. A long-term goal will be based on the scientific modeling now underway.



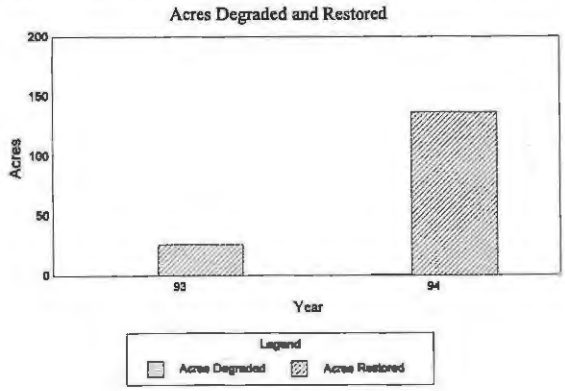
RECENT TRENDS: Connecticut's "no net increase" policy and investments in nitrogen-removal technology have put the state on track toward its goals.

INDICATOR: Acres of tidal wetlands degraded and acres restored.

BACKGROUND: Degraded acreage is the area permitted for development activity by the DEP. Restoration includes activity by the state, as well as by landowners required by the DEP to restore wetlands as conditions of their permits. Improvements might or might not add to the state's total wetlands acreage, depending on the land's classification as wetlands or non-wetlands prior to restoration. Tidal wetlands are estimated to cover 17,500 acres of Connecticut, though no precise inventory has been completed. Connecticut's goal is to produce net increases in tidal wetlands acreage and function.

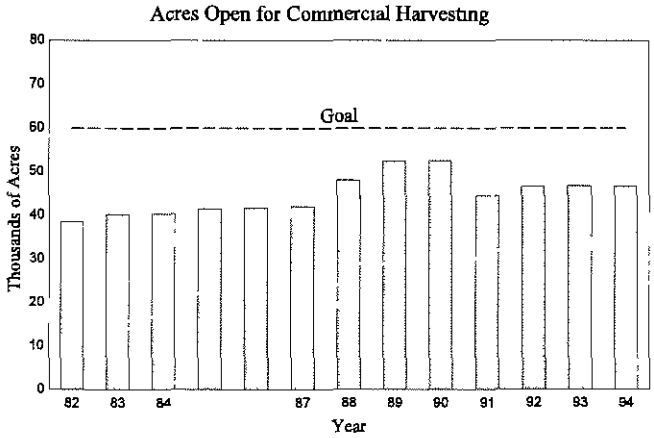


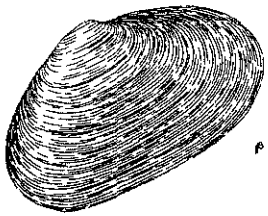
TIDAL WETLANDS CONSERVATION

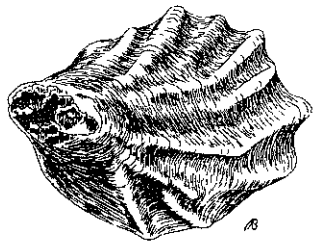


RECENT TRENDS: Data are available from only the two most recent years. In 1993 and 1994, less than *one acre* of tidal wetlands was lost to permitted development, and many degraded acres were restored.

SHELLFISH BEDS







INDICATOR Acres of commercial shellfish beds that are clean enough and monitored sufficiently to allow them to be open for harvesting

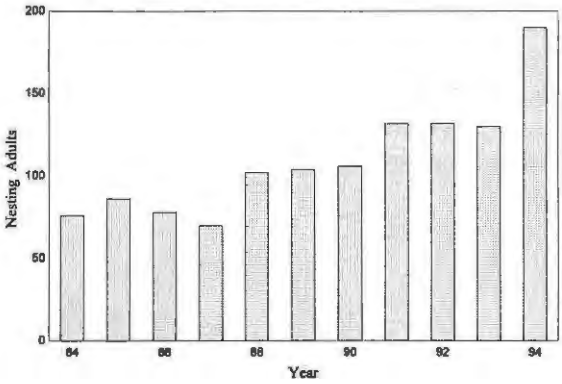
BACKGROUND Connecticut's goal is to have 60,000 acres open by the year 2000, which is far fewer acres than were open a hundred years ago The primary impediments to opening more acres are the presence of sewage discharges and the need to conduct frequent monitoring to satisfy federal health-assurance requirements

RECENT TRENDS Although the commercial value of Connecticut's harvest has risen substantially over the past decade, opening additional beds has been difficult because of long-term sewage discharge problems. The Department of Agriculture's Aquaculture Division plans to work with coastal towns to better assess some beds that are now closed, more monitoring might show that some beds are clean enough to allow harvesting during periods of low precipitation

INDICATOR: Number of adult osprey that nest each year in Connecticut.

BACKGROUND: Ospreys are fish-eating birds of prey that nest mostly along the shoreline of eastern Connecticut, with potential to nest inland along rivers and large lakes. They require ample food supply, secure nesting sites, and an environment low in certain pesticides. The osprey's status in Connecticut is "special concern". Nesting adults are counted each year by the DEP.

OSPREY



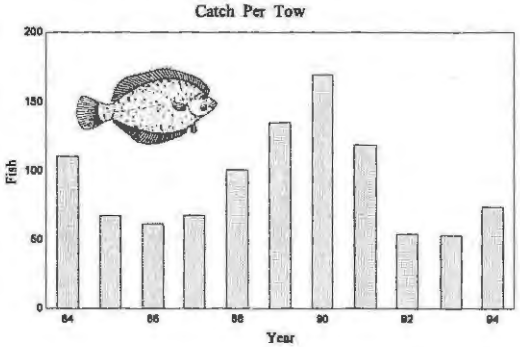
RECENT TRENDS: The osprey continues to rebound from its low point in the 1960s. Now, with less DDT in the food chain, and after years of cooperative ventures to erect nesting platforms along the coast, nesting success continues at a rate that will sustain positive growth

INDICATOR: Average number (geometric mean) of winter flounder caught per tow.

BACKGROUND: The DEP samples marine fish populations every April, May, and June by towing nets from a research vessel. Winter flounder was selected as an indicator species because it is commercially important, is counted regularly, and does not migrate far beyond Connecticut's shores.

RECENT TRENDS: The downturn in winter flounder populations is attributed by the DEP to increases in harvest. Some year-to-year variation can be caused by variations in the weather. The modest 1994 increase was caused by a surge of two-year-old fish; adult flounder were at their lowest levels ever.

WINTER FLOUNDER

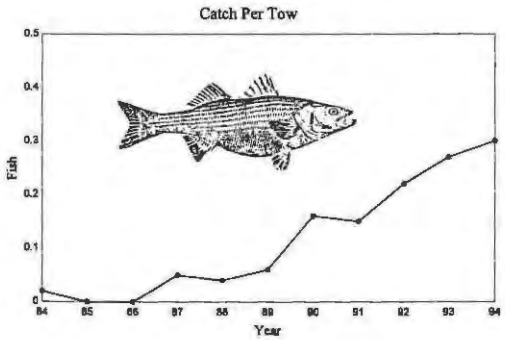


INDICATOR: Average number (geometric mean) of striped bass caught per tow.

BACKGROUND: The striped bass is a predatory fish that migrates along the eastern shore of North America and enters major rivers to spawn. It is an important game fish. Much of what happens to the striped bass population is beyond Connecticut's control, but this state cooperates in regulating harvest. The DEP samples fish populations every April, May, and June by towing nets from a research vessel.

RECENT TRENDS: Low population levels in the early 1980's spurred cooperation among coastal states to impose conservative restrictions on fishing. Current regulations allow an angler to keep only one striped bass of legal size (34 inches) per day. These regulations appear to have been successful in restricting the harvest of striped bass and allowing its recovery.

STRIPED BASS



RIVERS

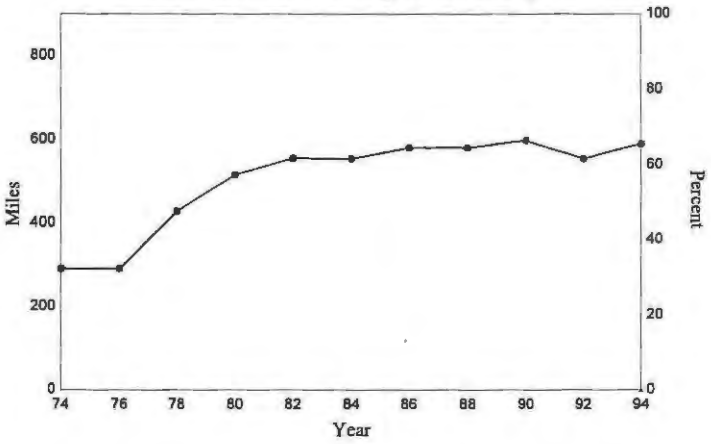
INDICATOR: Miles of major Connecticut rivers and streams classified as suitable for both fishing and swimming.

BACKGROUND: Of the state's 5800 miles of river and stream, about 900 miles are defined as "major" and are considered in this indicator. The definition of "major" and the water quality data are from the DEP's biennial Water Quality Report to Congress. This indicator is a good, but not perfect, measure of water quality. Some miles are clean enough for swimming and to support fish but cannot be classified as "fishable" because the fish

contain chemicals from industrial discharges that have long ceased. Also, some "fishable" miles are not considered "swimmable" because of intermittent sewage overflows. The state goal is to have all major miles fishable *and* swimmable by 2005.

CLEAN RIVERS

Miles Suitable for Fishing and Swimming



RECENT TRENDS: Progress was rapid in the 1970s, when federal grants for sewage treatment plants were available. Connecticut established its own Clean Water Fund in 1986, which has enabled some treatment plants to be upgraded and some combined sewer systems to be separated (see next indicator). The 1992 downturn was a change in definitions, not actual water quality. Recent improvements occurred on the French, Shetucket, Farmington, and Willimantic Rivers.

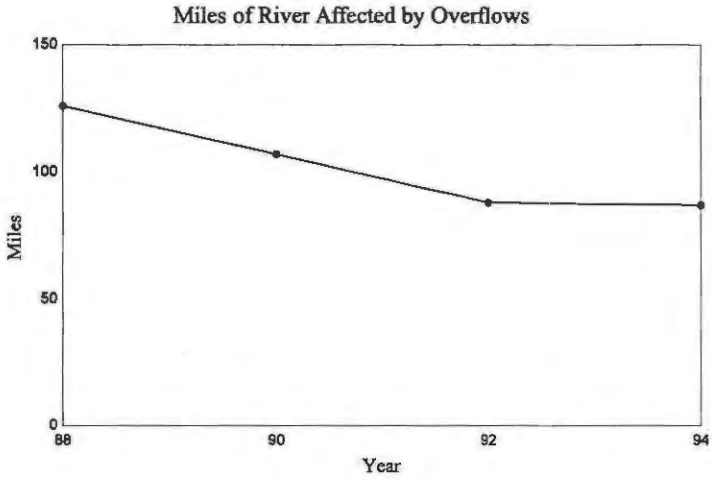
INDICATOR: Miles of river affected by "combined sewer overflows."

DESCRIPTION:

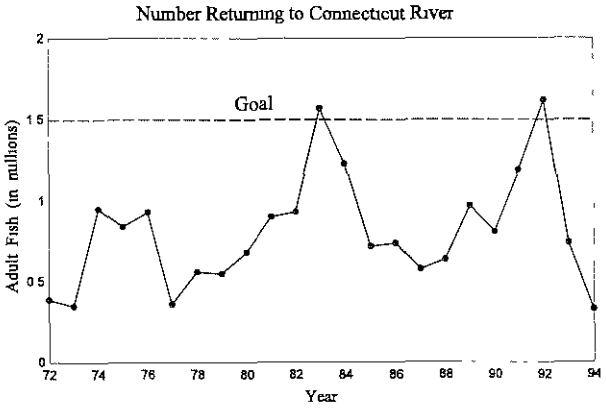
Sewer systems in fourteen Connecticut cities and towns were built with sanitary and storm sewers combined. During storms, these systems carry more water than their treatment facilities can handle, and a combination of storm water and untreated sewage overflows directly to the rivers. The number of days when raw sewage actually is in the rivers varies with the weather and can be quite low in some years. Several systems have been separated, and Connecticut's goal is to eliminate combined sewer systems.

RECENT TRENDS: Several of the combined sewer systems have been wholly or partly separated, reducing the impact of untreated sewage on rivers.

SEWAGE OVERFLOWS

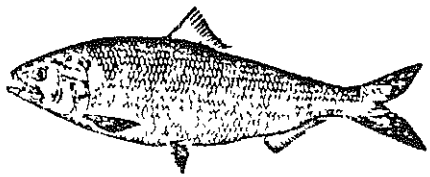


SHAD

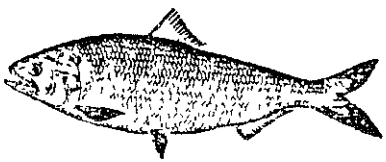


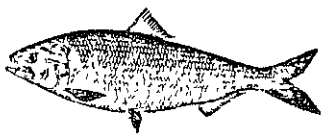
INDICATOR Estimated number of American shad that return each year to the Connecticut River

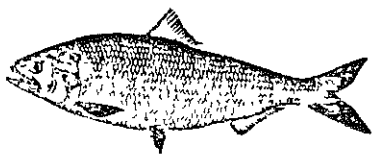
BACKGROUND The shad is an anadromous fish born in fresh water, it lives in the ocean and returns to fresh water to spawn Shad numbers used to be limited by dams that blocked access to spawning areas, but most major potential spawning areas in the Connecticut River and its tributaries have been made accessible with fish ladders and other improvements



RECENT TRENDS The decline of shad in 1993 was observed over most of its range (East Coast rivers) Scientists are uncertain of the cause

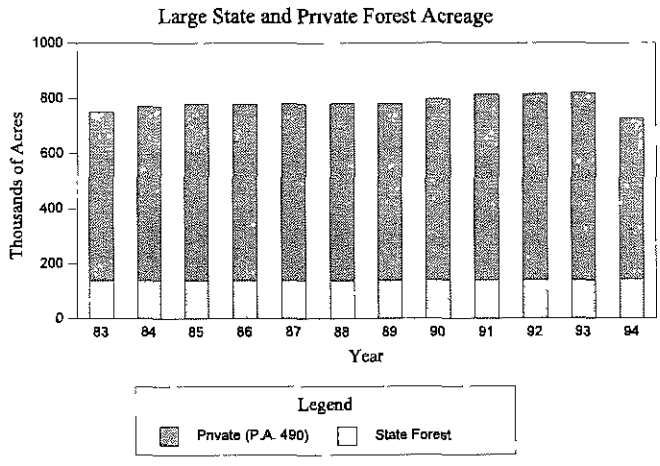






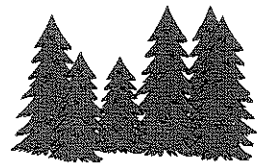
LANDSCAPE

FOREST



INDICATOR Combined acreage of 1) state forest and 2) privately-owned forest that is enrolled in Connecticut's preferential property tax-rate program (P A 490)

BACKGROUND Connecticut's goal is to conserve forests for multiple use, which can only be accomplished on parcels of sufficient size Much forest is owned in small parcels which often are of limited value for wildlife, wood production, and other uses To be eligible for P.A 490, a landowner must own 25 or more acres of forest Landowners enroll for ten years Though imperfect, this indicator can show trends in the state's most healthy and beneficial forests, which are those in large tracts

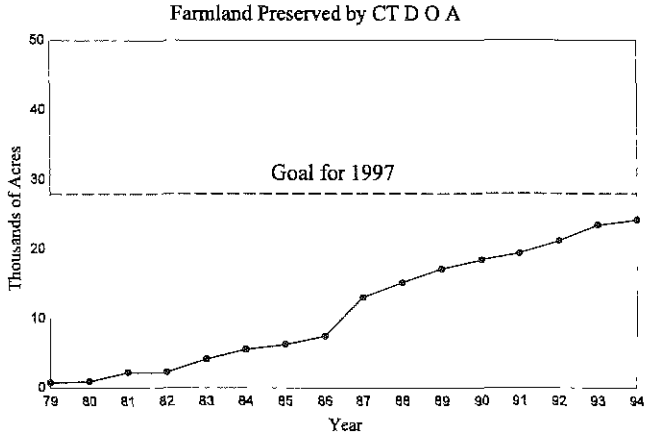


RECENT TRENDS The apparent upward trend in forest acreage during the 1980s is believed to be a product of property revaluations, which prompted many landowners to enroll their land in P A 490 for the first time Surveys of forest landowners show an average age of more than sixty years, the realities of inheritance will probably result in significant break-ups of large land holdings, which might be an important cause of this indicator's recent negative turn

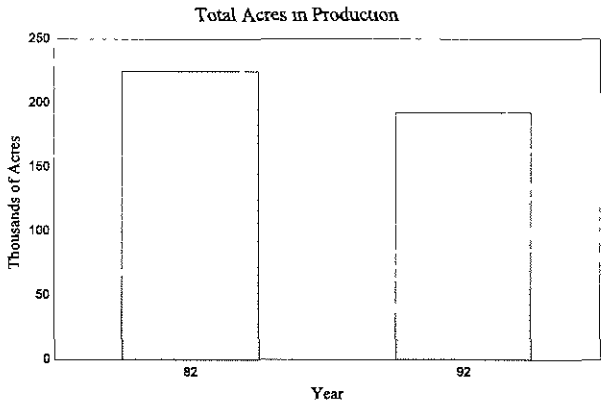
INDICATOR Acreage of agricultural land preserved by the Department of Agriculture

BACKGROUND The graph at right illustrates cumulative totals Land is preserved when the Department purchases the development rights to farmland (from volunteer sellers only), which keeps the land in private ownership with strict restrictions on future development

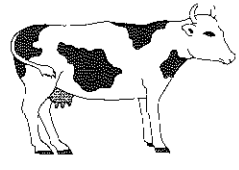
FARMLAND



CROPLAND



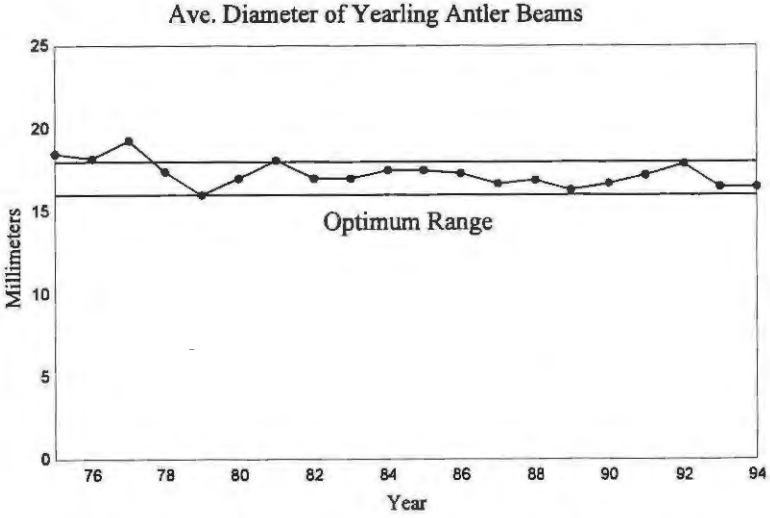
RECENT TRENDS The State of Connecticut has continued to provide funds for purchasing development rights during the recent recession, which itself lowered property values and gave the state more acres for its dollars However, as the graph at right reflects, economic pressures continue to drive more acreage out of production than is preserved



WHITE-TAILED DEER

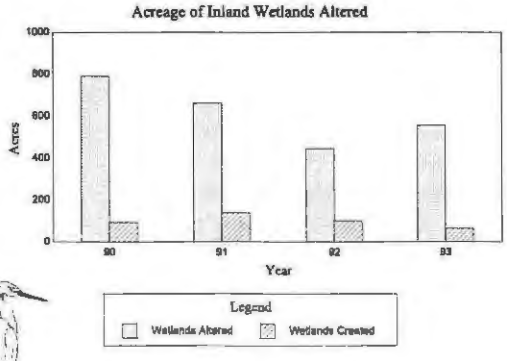
INDICATOR: Average diameter of antlers on yearling deer (i.e. deer one to two years old.)

BACKGROUND: Healthy, robust young deer have thicker antlers than those which receive less nourishment. Antler beam data reflect the relative health of the deer herd as well as the condition of their habitat. Since deer share woodland and edge habitats with many wildlife species, this indicator is doubly useful. Connecticut's goal is to maintain a statewide average of at least 16-18 millimeters, and to let the average in no region of the state fall below 16 mm.



RECENT TRENDS: Connecticut's deer population appears to stay within the targeted range. Data are also tabulated regionally, and a few areas show herd health to be below the ideal range.

INLAND WETLANDS LOSS



INDICATOR: Acres of inland wetlands altered by development activity permitted by the DEP and 169 municipal wetlands agencies.

BACKGROUND: The graph shows the acres altered and the number of those acres replaced by human-made wetlands. No attempt is made here to evaluate the success of the created wetlands or their value relative to the natural wetlands altered. There is no goal for wetland loss; inland wetlands are estimated to cover about 450,000 acres, or about 15% of Connecticut's surface.

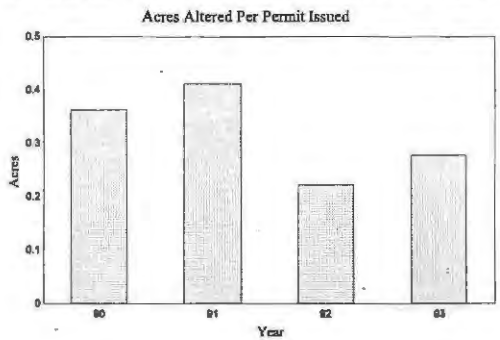
RECENT TRENDS: Some of the decrease in wetlands loss since 1990 is related to the decline in applications received (which is why the following indicator is also included).

INDICATOR: *Average* area of inland wetlands affected by each permit issued by the DEP and the 169 municipal inland wetlands agencies.

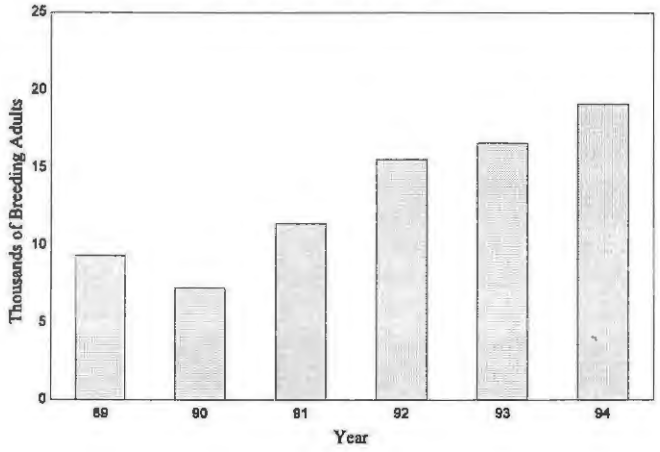
BACKGROUND: This data gives some indication of the relative strictness or permissiveness of these agencies from year to year, regardless of the number of permits sought.

RECENT TRENDS: Averaging less than one-quarter of an acre lost with each permit issued, the DEP and municipalities have apparently become more protective of wetlands since 1990.

INLAND WETLANDS CONSERVATION



WOOD DUCK



INDICATOR: Estimated number of adult wood ducks that nest each year in Connecticut.

BACKGROUND: Wood ducks are medium-sized fowl that nest in hollow trees and human-made boxes near fresh water throughout inland Connecticut. They require relative seclusion, unpolluted inland wetland habitat, and protection from over-hunting (which almost caused the bird's extinction earlier this century). This is a good indicator because many other species share similar habitat requirements. Population estimates are made annually by the DEP.

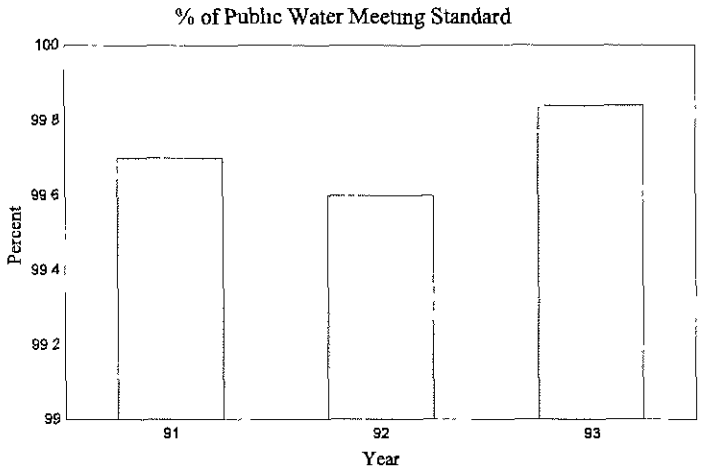
RECENT TRENDS: Recent increases in wood duck numbers are due to favorable weather conditions and to the placement of artificial nesting boxes near ponds and wetlands. Many citizens have assisted in this effort.

DRINKING WATER

INDICATOR Percentage of public water being delivered that meets the standards

BACKGROUND Each public water utility reports water quality monthly This indicator shows the percentage of monthly reports that show full compliance, after weighting reports to account for the number of people each company serves

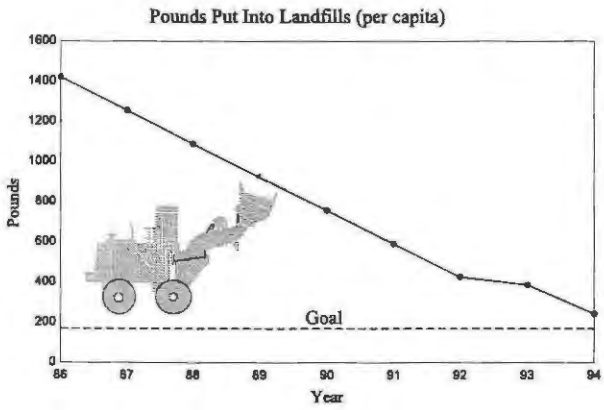
RECENT TRENDS Though problems persist, they tend to occur more frequently with small systems Such problems do not greatly affect this indicator, which is intended to take into account the number of people each system serves



DAILY LIFE

These last four indicators do not show trends in the condition of Connecticut's environment. Rather, they report trends in activities of Connecticut residents which can be expected to affect the environment.

GARBAGE BURIAL



INDICATOR: Average resident's share of municipal solid waste that gets buried in landfills within Connecticut.

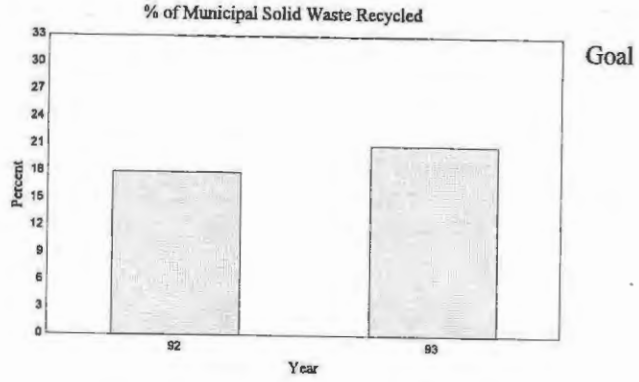
BACKGROUND: Disposal of municipal solid waste by burial in landfills is the least desirable management option; it ranks behind recycling, source reduction, and resource recovery (i.e., incineration for energy recovery). This indicator charts progress toward the goal of reducing reliance on landfills, which has been the goal of state solid waste policy since the 1970s. Connecticut's plan calls for reducing the average resident's landfill contribution to about 170 pounds per year.

RECENT TRENDS: Since 1986, five resource recovery plants have begun operation, collection of recyclables has zoomed to 21% of municipal waste, and some consumers have altered buying habits. These factors allowed dozens of landfills to close as they became full or as federal regulations prohibited their continued operation. The two remaining commercial landfills are expected to be open for years.

INDICATOR: Percentage of municipal solid waste collected for recycling.

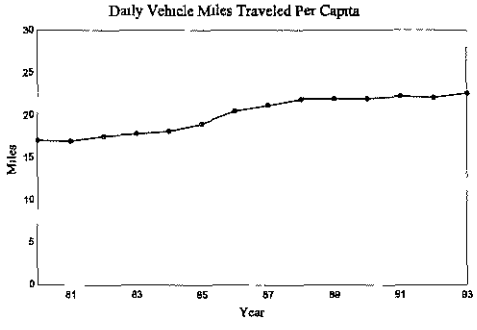
BACKGROUND: The General Assembly established a goal of reducing and recycling 40% of Connecticut's municipal solid waste stream by the year 2000; the DEP has calculated that this would require 33% of the waste to be recycled.

RECYCLING

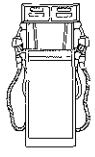


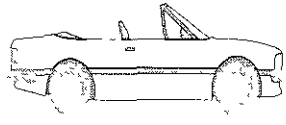
RECENT TRENDS: The statewide average continues to increase. Some municipalities exceed 25%. Market demand for some recyclables increased drastically in 1994, and should help support further progress.

DRIVING OUR CARS



INDICATOR: Number of miles the average Connecticut resident drives a vehicle every day





BACKGROUND Driving a car is probably the most environmentally damaging activity a Connecticut resident will engage in Impacts are direct (air pollution, oil leakage, etc) and indirect (stimulating demand for new roads) DOT estimates total miles driven each year in Connecticut

RECENT TRENDS Each year, the average Connecticut resident drives more miles than he or she did the previous year The reasons are complex, and include the fact that most new development is accessible only by car

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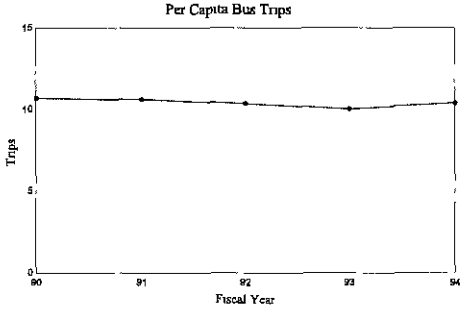
INDICATOR Number of local bus trips taken by the average Connecticut resident during a year

BACKGROUND Riding a bus is just one alternative to driving a car

RECENT TRENDS The most recent year saw the first increase in bus ridership in several years Perhaps it is the product of employers' efforts to reduce driving by employees The general trend still appears to be a slow descent, as new destinations continue to be developed in places that are accessible only by automobiles, away from transit lines

TAKING THE BUS



FORECAST

CONNECTICUT'S EMERGING ISSUES WILL DEMAND CREATIVE SOLUTIONS

Creativity must become the tool for improving our environment where traditional regulation can no longer move us forward:

Green Fiscal Policy ... From reform of estate taxes (see information on forest landowners, p. 25) to curbing destructive pork-barrel projects, the Governor and General Assembly have many opportunities to shape the environment without proliferating regulation or bureaucracy.

Focus on Common Ground ... The so-called "Property Rights" movement that has been active in other states has not yet been a divisive force in Connecticut, and need not become one. Owners of forest land, farmland, and other natural resources have a long history as conservationists that needs to be respected through fair approaches to land conservation. Generally, Connecticut 's local land-use commissions have shown a record of fairness. Also, for a decade this state has been a national leader in compensating farmers for the voluntary sale of their development rights (see page 26). This is part of a good foundation on which to build.

Environmental Technology ... The worldwide market for environmental products and services is projected to be enormous. Connecticut's new Environmental Entrepreneurial Center is a visible acknowledgment of the potential growth of this industry in Connecticut. Many states will be competing to become the industry leader; a genuine commitment will be necessary for Connecticut to be it. If environmental products are encouraged to be made *and applied* here, Connecticut will be a double winner.

Partnerships for Open Space ... Another creative solution already in place that often goes unheralded is the Recreation and Natural Heritage Trust Fund. It is the state's principle land acquisition program, and is a true partnership. By bringing in municipal and private partners, the state acquires land at (on average) well below market value.

Partnerships for New Solutions The Connecticut Environment Roundtable was founded to encourage dialogue among traditional adversaries in the pursuit of new solutions to persistent problems This type of collaborative approach has great potential for the betterment of Connecticut

Looking for Solutions in Southeast Connecticut Phenomenal growth in casino and related entertainment business is expanding the regional economy but threatens southeastern towns with traffic, congestion, air pollution, aesthetic blight, and other impacts. Yet the towns affected receive no property tax benefits from the development, and must seek otherwise-unwanted commercial development to grow the grand list to pay for the new demands on municipal services All levels of government, including the state, must share in the responsibility of making sure growth does not bring irreparable harm The task is not easy, and new approaches are needed The Town of North Stonington, for example, is exploring a form of Transfer of Development Rights, where important roadside property would remain undeveloped for traffic and aesthetic reasons, and the landowners would be compensated for not developing The compensation would come from developers' payments for increased density at more appropriate locations This is exactly the type of creative thought that is needed to keep this beautiful corner of the state from suffering the fate of other hurriedly-developed regions

C.E.Q. MEMBERS

John A. Millington, Chairman. Resident of Washington Depot. Vice-president for Planning and Development, Council on Foreign Relations. Board of Directors, The Nature Conservancy. Former member, Board of Directors, Ruffed Grouse Society. Former President and Publisher, Ball Publications and Atlas World Press Review. Former Publisher, Time-Life Books Int'l.

David A. Baram. Resident of Bloomfield. Partner in the law firm of Clayman, Markowitz, Pinney & Baram. Former Mayor of Bloomfield (1982-1989). Former Chairman, Capitol Region Council of Governments. President, Beth Hillel Synagogue. President, Federation Homes, Inc. Board of Directors, Bloomfield Chamber of Commerce, Jewish Federations Community Relations Council, Schechter Day School, Hillel House of UConn. Member, Connecticut-Israel Exchange Commission.

Stephen H. Broderick. Resident of Eastford. Extension Forester, UConn Cooperative Extension System. Chairman, CT Forestry Legacy Program Committee. Co-founder and director, Eastern CT Forest Landowners' Association. Director, Southern New England Forest Consortium, Inc. Member, CT Urban Forest Council, CT Forest Stewardship Committee. Past Chair, CT Tree Farm Program, Northeast Forest Resources Extension Council, Brooklyn Conservation Commission.

Marian R. Chertow. Resident of New Haven. Director, Partnership for Environmental Management, Yale School of Forestry and Environmental Studies consisting of two areas: the Industrial Environmental Management Program and the Program on Solid Waste Policy. Editorial Board, *BioCycle* Magazine and *Compost Science and Utilization.* Advisory Committee, Connecticut Environmental Industry Initiative. Board of Directors, Technology for Connecticut, Inc., Tax-Exempt Proceeds Fund, Shubert Theater, National Urban Fellows, Inc.

Shawn R. Fisher. Resident of Hartford. Regional Specialist in Acquisition and Sales for Aetna Realty Investors, Inc. Master's degree in economics from the University of Connecticut.

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Donal C. O'Brien, Jr. Resident of New Canaan Partner in the law firm of Milbank,Tweed, Hadley & McCloy Former member, Connecticut Council on Environmental Quality (1971-1976) Former member, Connecticut Fish and Game Commission (1971-1972) Chairman, Board of Directors, National Audubon Society Former Vice-chairman, Board of Governors, The Nature Conservancy. Board of Directors, North American Wildlife Foundation, National Audubon Society, and Waterfowl Research Foundation Chairman, Atlantic Salmon Federation. Chairman, Bird Conservation Alliance

Gregory A. Sharp Resident of Northford Partner in the law firm of Murtha, Cullina, Richter, and Pinney Adjunct lecturer in environmental law, University of Connecticut School of Law Member of Executive Committee and former chairman, Environmental Law Section of the Connecticut Bar Association Member, Hazardous Waste Clean-up Standards Advisory Committee, Department of Health Services' Scientific Advisory Panel, Long Island Sound Fund Advisory Committee, Fisheries Task Force Secretary, Injured and Orphaned Wildlife, Inc Former member, Steering Committee, Earth Day 20, DEP Environment 2000 Advisory Committee Former member, Boards of Directors, Connecticut Audubon Society and Connecticut Fund for the Environment Former member, Governor's Pesticides Task Force, and Solid Waste Management Advisory Council Former Director, Information and Education, Connecticut Department of Environmental Protection

Richard A. Sherman. Resident of Mansfield Center Architectural designer and construction manager President, Mansfield Commonground. Charter Member, Transit Alliance of Eastern Connecticut. Chairman, Mansfield Transportation Advisory Commission Member, Mansfield Planning and Zoning Commission Design Review Panel, Kirby Mill Advisory Commission Host, "A Distant Shore", WHUS Radio

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