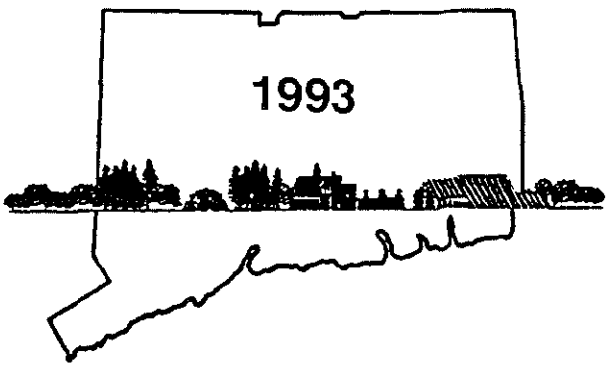
Annual Report of the Council on Environmental Quality



STATE OF CONNECTICUT

COUNCIL ON ENVIRONMENTAL QUALITY

March 17, 1994

The Honorable Lowell P. Weicker, Jr.
Governor of Connecticut
State Capitol
Hartford, CT 06106

Dear Governor Weicker:

I am pleased to submit the annual report of the Council on Environmental Quality for 1993. I believe two items will be of particular interest:

First, the Council is introducing a new way of reporting trends in Connecticut's environment. We selected twenty "environmental indicators" for presentation this year and every year hereafter. These indicators will illustrate the real status of Connecticut's environment. This is not an annual report on budgets, regulations, waste management, or enforcement activity; it is a bottom-line statement on the actual condition of our air, water, land, and wildlife.

Second, the Council has re-examined the long-standing problem of inadequate land-use planning as the common thread that runs through all of the state's problems. It is now evident that the four key land policies -- consistency in government plans and actions; property tax structure; urban property clean-up; and community design more oriented to the needs of people -- must be addressed as pieces of a single puzzle. Better plans will make little difference unless this state alters aspects of the property tax that have long subverted good municipal planning.

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

Best personal regards,

John A. Millington
Chairman

79 ELM STREET HARTFORD, CONNECTICUT 06106

TABLE OF CONTENTS

PART I

IS THIS "PRODUCTIVE HARMONY"?

Connecticut's Environmental Policy Can Not Succeed Until Planning, Development, and Tax Policies are Conjoined

IS THIS "PRODUCTIVE HARMONY"?

Connecticut's Environmental Policy Can Not Succeed Until Planning, Development, and Tax Policies are Conjoined

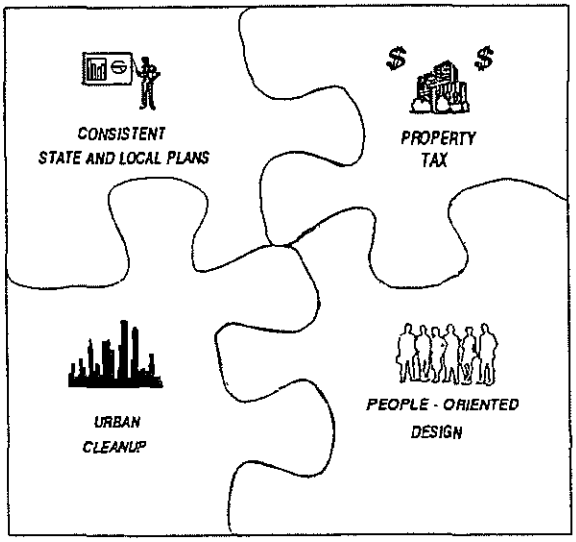
EXECUTIVE SUMMARY

THE PROBLEM: Sprawling patterns of land development continue to stymie progress toward Connecticut's goals for a clean environment and an exceptional quality of life. Despite recent progress, several state and municipal policies still favor public and private investments that work against the environmental and social goals of the state as well as against many taxpayer investments. Except in a handful of communities, Connecticut residents in 2010 will find they have even fewer alternatives to an automobile-based living environment than they have today, even though demographic trends suggest people will want more options. Avoidable and wasteful conflicts arise between development and environmental protection interests because of inadequate planning and the distorting influence of Connecticut's property tax structure. Environmental regulations cannot solve the problem.

THE SOLUTION: Fully integrate economic development and environmental protection: Encourage public and private investments that move Connecticut in partnership toward social, economic, and environmental goals, specifically by directing new investment away from automobile-oriented sprawl and toward people-oriented city, town, and village centers as described in the State Policies Plan for Conservation and Development.

To achieve this solution the General Assembly must address the following areas of state policy as four pieces of a single puzzle:

1. Consistency in Government Plans and Actions.
2. Property Tax Structure.
3. Urban Property Clean-up.
4. People-Oriented Design.



It will be of little or no benefit to address one without the others.

Summary of Recommendations

1. The General Assembly should encourage **consistency in government plans and actions** by:

A. Amending the Connecticut General Statutes to **require state agencies to adhere to the State Conservation and Development Policies Plan** in all of their actions, including regulatory decisions.

B. Establishing a simple, low-cost procedure for the state to **certify municipal plans** of development as being consistent with the state plan, and offering municipalities certain incentives to seek certification voluntarily.

C. Improving state planning capabilities by **eliminating most agency obligations to produce Environmental Impact Evaluations**, and applying the financial savings to improved planning and information systems. Better planning will require enhanced Geographic Information Systems throughout agencies.

2. The General Assembly should adopt a **property tax structure** that reduces the effect of the tax in business location decisions, and possibly even provides incentives for beneficial development patterns.

3. The General Assembly, the Department of Environmental Protection, and the Department of Economic Development should continue and enhance efforts to **accelerate the clean-up and re-development of contaminated urban properties.**

4. The General Assembly should declare that it is the policy of the state to encourage community planning and building design that **emphasizes the needs of people** -- especially children, the elderly, and others who cannot drive -- over the rapid movement of automobiles, and should require state agencies to incorporate that policy in facility siting and design.

In 1991, the Council recommended strongly that certain measures be taken to link transportation and land-use planning. The Council is pleased to report herein several examples of progress made since then. The linking of transportation and land-use planning is still a critical element of creating and maintaining a human environment that is economically efficient, sustainable, oriented to the needs of people, and environmentally sound. This year's recommendations are intended to supplement, not replace, the Council's 1991 recommendations.

Introduction

The title of this report -- Is This "Productive Harmony"? -- is from the Connecticut Environmental Policy Act:

> *"It is the continuing policy of the state government...to **create and maintain conditions under which man and nature can exist in productive harmony**, and fulfill the social, economic, and other requirements of present and future generations of Connecticut residents."*
>
> Connecticut Environmental Policy Act (C.G.S. Section 22a-1a)

The Council suggests that productive harmony with the environment will not be achieved until important state policies are themselves working in harmony toward our common vision.

The two factors that will most influence Connecticut's environment in the next century will be

1) the level of **public investment** in such basics as sewage collection and treatment; protection of important parcels of land (including greenways); clean-up of contaminated urban properties; and improved transportation systems; and

2) the level of success in **planning and coordinating** public investment and private development.

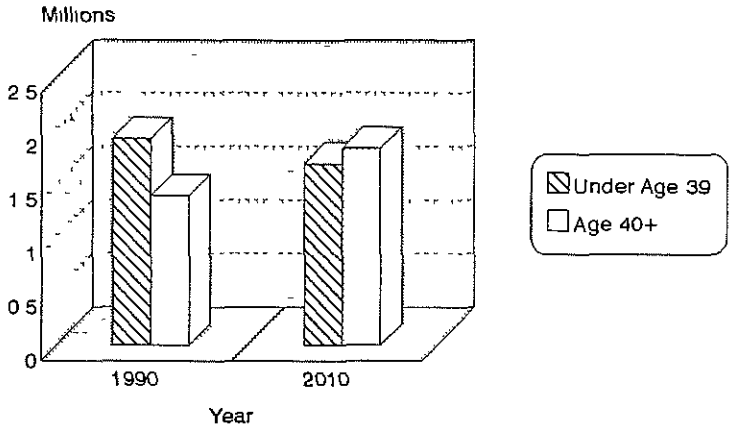
The environmental regulations that led to dramatic improvements in air and water quality and in waste-handling since 1972 will have limited potential to produce dramatic results in the future. One reason is that few such improvements remain to be made in the air and water. A second reason is that *inefficient land use* is the common thread that runs through all of our serious remaining environmental problems -- including the priority threats to forests, wildlife, air, Long Island Sound, landscape as an economic resource, and our quality of life -- but state policies are not aligned to address land use problems.

As regulation nears the peak of its potential, it can be seen that *case-by-case, resource-by-resource protection efforts have never been a desirable substitute for comprehensive, environmentally-sound planning*. The fact that a facility is built outside of wetlands and receives its necessary discharge permits does not mean that it has been planned and built "in a manner calculated to promote the general welfare [and] to create and maintain conditions under which man and nature can exist in productive harmony." (Connecticut Environmental Policy Act, C.G.S Section 22a-1a). A tendency to rely on regulations alone to protect the environment has produced a situation where some people feel over-regulated and yet there persist fundamental impediments to a better quality of life. Many of these impediments fall well outside the authority of the Connecticut DEP to even consider. (See "Focus: Five Telling Trends ...", page 5.)

The Council finds that insufficient attention has been paid to those elements of planning and development that most affect peoples' daily lives and their ability to enjoy the environmental improvements that we have already made. Yet such attention is critical to Connecticut's future economy. An important example is automobile–dependency: young, aging, and many other people who cannot own or drive cars find their mobility diminished as access to all facets of modern life –– employment, shopping, health care, recreation –– becomes more automobile–dependent. As the population ages (Figure 1), access to destinations by means other than cars will influence how many people choose to retire here and the kind of life they will enjoy.

Figure 1

CONNECTICUT'S AGING POPULATION



New development *can* work to improve the environment and the quality of peoples' lives. Connecticut *could* be a state of communities where people can walk, bicycle, use wheelchairs, and take mass transit with ease. But state policies must support such a vision. Connecticut is in a good position to embark on a project to improve land use. Unlike some states that have had to start from scratch in recent years, Connecticut has 1) a good state Conservation and Development Policies Plan that has been reviewed by all levels and branches of the public sector, 2) dedicated volunteers serving on planning, zoning, and conservation commissions in virtually every town, 3) professional planning staff in many towns, and 4) professionally–staffed regional planning organizations. Unfortunately, some of these elements are weak. But it is fortunate to be able to build on a foundation rather than start from scratch.

What would be the ultimate goal of improved planning and coordination? It would be the integration of economic development and environmental protection, where needless conflict between the two is avoided and yet both people and the environment are better off than they are now.

Recent Progress in Connecticut

The last three years have seen a surge of interest in better planning. With Public Act 91–395, the General Assembly required state agency capital projects (over $100,000) to be consistent with the State Plan. At the same time, the legislature established a Task Force which has been laboring to the present time to design a system for obtaining consistency among levels of government. A number of organizations ranging from conservationists to housing advocates have been establishing their common ground in order to advocate in partnership for planning policies that will improve Connecticut for everyone. (The non–profit, business–supported Regional Plan Association, with an office in Stamford, is the catalyst behind that coalition.) The Departments of Transportation and Economic Development have strengthened their ties to regional planning organizations.

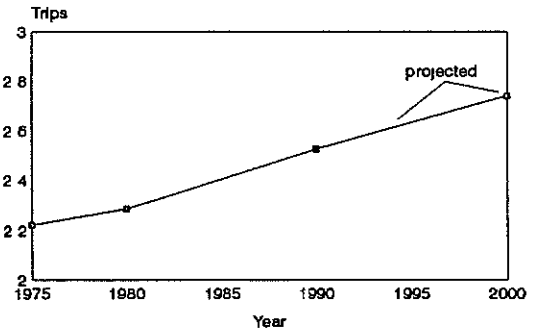
FOCUS: FIVE TELLING TRENDS IN CONNECTICUT'S LANDSCAPE AND TRANSPORTATION SYSTEM

Trend #1: Land development is spreading considerably faster than the population is growing, indicating a tendency toward more sprawling, less efficient use of land. From 1970 to 1990, Connecticut's population increased by about eight percent, but the area of land paved and developed is estimated to have expanded by fourteen percent.

Trend #2: Automobile traffic has grown much faster than population (Figure 2). Each person makes more automobile trips each year, presumably because more of his or her destinations are accessible only by car. He or she also drives more miles each year. Not surprisingly, gas and diesel demand grew by nearly twenty percent from 1981 to 1991, despite huge improvements in the fuel efficiency of the average car.

Figure 2

NUMBER OF DAILY VEHICLE TRIPS PER CT RESIDENT

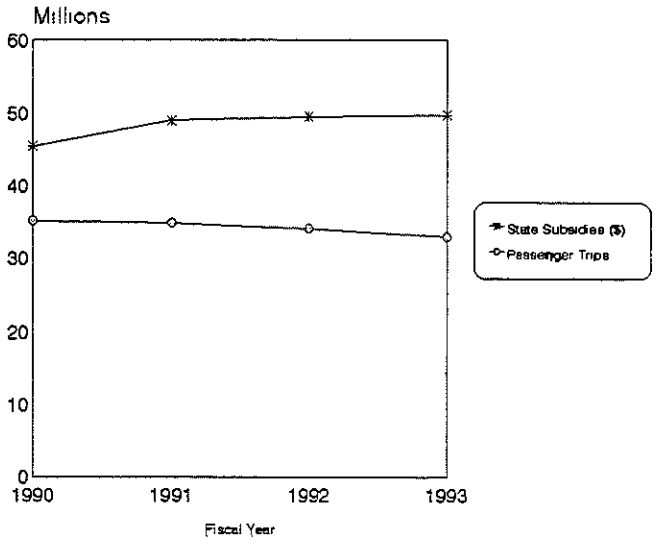


Trend #3: Urban industrial properties are abandoned at a faster rate than they are cleaned up. Too many factors hinder re-development of urban properties, despite overwhelming social and environmental benefits of doing so. Of the 590 contaminated properties discovered under the Property Transfer Act since 1985, only 26 have been completely cleaned up.

Trend #4: Retail space is expanding in suburban, automobile-oriented locations while it contracts in transit- and pedestrian-accessible cities and towns. As just one example, the retail floor space developed *in the vicinity of* the Pavilions at Buckland Hills mall in Manchester (that is, not counting the mall itself) totals more than 2.5 million square feet, dwarfing the half million square feet of retail space in downtown Hartford.

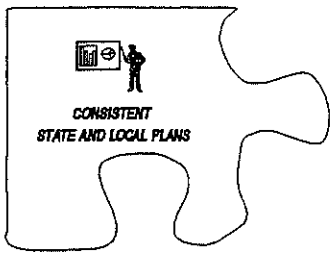
Figure 3

STATE SUBSIDIES AND PASSENGER TRIPS
Urban Bus Systems



Trend #5: Mass transit ridership is decreasing even as more money is spent to operate the system (Figure 3), one result of policies which place destinations outside of transit service areas.

The First Piece of the Puzzle: Consistency in Plans and Actions

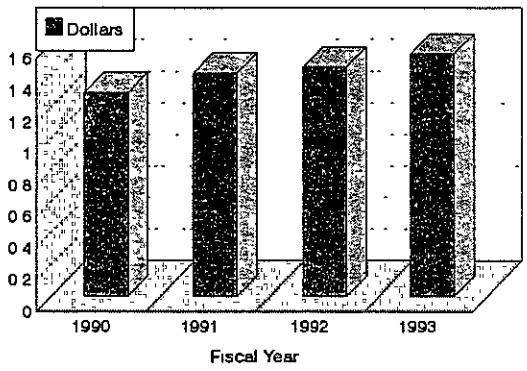


State agencies spend considerable sums of taxpayers' dollars on infrastructure and related services to advance specific agency goals. When one agency spends money on a project that undermines another's efforts, taxpayers' dollars are wasted and neither agencies' goals are likely to be met in full. Historical examples are abundant; one case alone is illustrative:

The DOT spends more than $53 million annually just on operating subsidies for bus systems, and $30 million on commuter train subsidies. This amount far exceeds the national average per-capita. Millions more are spent on new buses and other capital improvements. The benefits of these subsidies 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, their homes, their doctors, retail centers, and recreation sites.

Investments that encourage the movement of jobs, shopping opportunities, or other destinations away from bus lines undermine the state's transit systems and waste the taxpayers' dollars spent on the operation of half-empty buses. Yet numerous economic development and related infrastructure investments have, in fact, had that effect. Major employment centers have been built with state assistance and/or approval that are so far from bus lines they will never be served by transit. Overall ridership is going down, and the state's cost of subsidizing the remaining passengers is going up. (Figure 4).

Figure 4
SUBSIDY PER PASSENGER ON URBAN BUS SYSTEMS



The General Assembly recognized the inefficiencies inherent in agency-by-agency planning in 1991, and with P.A. 91-395 required state agency capital projects of more than $100,000 to be consistent with the State Plan. Connecticut is fortunate to have an excellent Plan, one which provides a blueprint for efficient planning and development. The executive and legislative branches, having revised, reviewed, and approved the Plan, really should work hard to implement it. However, an agency which might reject a site for one of its own projects can find itself issuing permits for a privately-funded facility on the same site. For state plans and actions to be efficient and in furtherance of a common vision, agencies must be authorized to consider a proposed project's consistency with the State Plan.

RECOMMENDATION 1A: The General Assembly should amend the Connecticut General Statutes to require state agencies to adhere to the State Conservation and Development Policies Plan in all of their actions that have land-use implications. Consistency with the State Plan should be made a criterion for agencies' evaluations of permit applications for traffic, sewer extensions, water discharges, water diversions, certain air pollution sources, and (though not a permit) water supply plans. To the extent possible, a project's consistency with the State Plan should result in expedited issuance of state permits, and inconsistency should disqualify it for expedited treatment under general permits.

If the Plan is truly the vision of Connecticut that people want to see implemented, then municipal planning and zoning activities will need to be consistent. The substantial corps of municipal and regional planning officials (both volunteers and paid staff) can be trusted to plan their communities in an environmentally–acceptable manner if the distorting influence of the property tax is removed (see page 9). However, because of the substantial state investments that have been and will be made in transportation, economic development, and land conservation, municipalities should be rewarded for developing and implementing Plans of Development that advance the goals of the State Plan. The failure to coordinate state transportation planning with local land–use planning has imposed great costs on Connecticut and its municipalities.

RECOMMENDATION 1B: The General Assembly should require the Office of Policy and Management (OPM) to establish a simple, low–cost procedure for the state to certify a municipal plan of development as being consistent with the State Plan. To be eligible, the municipality must demonstrate that zoning follows the municipal plan. The General Assembly should offer municipalities certain incentives to seek certification. Establish a goal of certifying 80% of municipal plans by 1999.

The Council envisions certification as a simple procedure. Upon submittal of a Municipal Plan to OPM, agency staff would review the Plan for consistency. Upon finding it to be consistent, the Secretary would issue a certifying letter to the municipality. Given the experience of OPM staff in preparing the plan and evaluating projects and plans for consistency, it should cost little to certify 20 to 30 plans per year.

Those which seek certification but cannot reach agreement with OPM would enter into a negotiation process conducted in public; both the State and the municipality would, through their legislative bodies, amend their respective plans to the agreed solution. If no agreement can be reached, and the municipality still considers its Plan to be consistent, it should be permitted to petition the General Assembly's Continuing Legislative Committee on State Planning and Development –– which currently rules on amendments to the Plan –– for a declaration as to the Plan's consistency.

Many municipalities would not need to alter their current plans to obtain certification, thanks to OPM's past efforts to involve municipalities in the preparation of the State Plan.

INCENTIVES the state could offer municipalities could include:

♦ amending Section 16a–31 of the Connecticut General Statutes to require state agency actions undertaken in municipalities with certified master plans to be consistent with those local plans. (A very limited number of facility types, such as prisons and waste management facilities, would have to be exempted from this requirement.)

♦ allowing meaningful municipal planning and design regulation of state projects in their borders (short of absolute veto authority),

♦ free technical planning assistance from an enhanced state planning office,

♦ assistance from the Attorney General in defending against lawsuits when the town or city is upholding the state and local plans,

♦ preference in certain state grants (especially those administered by the DEP, DOT, and DED).

Regional Planning Organizations could have an important role in this process. The Council recommends a voluntary arrangement, where the municipalities in a region could work through the RPO to develop a Regional Plan that is consistent with the State Plan. Once OPM is confident that the municipalities' plans (and their zoning) have been brought into alignment with the Regional Plan, approval of a Regional Plan would qualify all of the participating towns in the region for the incentives above. Differences would be resolved as for differences with municipalities, described above.

Connecticut can fund some of the planning tasks outlined above by eliminating certain outdated regulations and applying the financial savings more usefully.

RECOMMENDATION 1C: There are four elements to this recommendation for funding improved planning and information systems:

(1) Eliminate agencies' obligations under the Connecticut Environmental Policy Act (CEPA, C.G.S. Sec. 22a-1b and 22a-1c) to produce Environmental Impact Evaluations (EIEs), except for projects in areas designated as conservation, preservation, or rural in the State Plan. Most capital projects will thus be exempted from EIE requirements. In addition to saving valuable time, agencies would generally save between $50,000 and $100,000 per project -- the amount of a typical consultant contract for an EIE (or its abbreviated counterpart, the Finding of No Significant Impact (FNSI)). In a typical year, 25 EIEs and FNSIs are completed at costs that vary greatly according to the projects' scale and nature.

The EIE requirement of CEPA was intended to require state agencies to evaluate alternatives before selecting a site for a project, or even before deciding to proceed. However, budgetary realities require agencies to fund EIEs out of bond authorizations, almost always after making the critical decisions of location and go/no go. EIEs are thus of minimal value -- certainly not as valuable as good planning decisions at earlier stages of the project.

Very large projects, such as highway expansions, would still be subject to the environmental assessment requirements of the National Environmental Policy Act and all of its public participation opportunities. But for other projects, the Council concludes that CEPA requirements are simply redundant of permit requirements and P.A. 91-395 (requiring projects to be consistent with the State Plan). The Council would also encourage all agencies to continue their good efforts at early contact with the public and regulatory agencies, commonly called scoping.

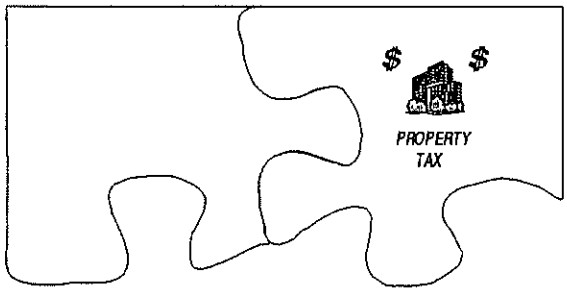
(2) Create a coordinated Planning and Review Fund, and require agencies to deposit into it a small percentage of the bond authorization for every capital project with a geographic or land-use component. As little as 0.5% of every such project would create a fund sufficient to cover the two to three million dollars needed for everything in Recommendations 1A, 1B, and 1C.

(3) Fund a useful Geographic Information System to which all agencies can gain access, and integrate the system with other governmental functions that have a geographic dimension (permitting, siting, etc.).

(4) Establish a small staff in the Office of Policy and Management to assist agencies and municipalities in developing plans which implement the State Plan. These staff positions can be the result of re-directing staff and resources from CEPA, and adding three to four new positions.

The Second Piece of the Puzzle:

Property Tax Structure



The property tax is Connecticut's largest state or local tax; its revenue exceeds the state income and sales taxes combined. Connecticut's reliance on the property tax exceeds that of all other states but two. It is also the biggest factor perverting what would otherwise be good land-use planning by municipalities.

"The dependence of communities on the local property tax frequently causes environmental problems. Local planning and zoning commissions are often forced to make decisions based on economics without considering the environment, and communities compete for tax-producing industry whether or not they have suitable areas for its development. Large lot zoning is often used to keep out low-income families. Land is wasted in the suburbs and services which would abate pollution are difficult to provide. The Committee recommends...that the tax system be revised to reduce dependence on the local property tax."

Report of the Governor's Committee on Environmental Policy, June 1970.

Governor Dempsey's 1970 Committee on Environmental Policy understated the problem but was on the right track. Municipalities are so dependent on the property tax that they routinely reject good community-planning principles in order to expand their commercial tax bases. (Most knowledgeable municipal leaders are not so anxious to expand their residential tax base, as residential properties rarely contribute as much revenue as they consume in services.) Many towns are willing, even eager, to accept commercial facilities for which they have no local need just so they can collect the revenue.

Businesses in high property-tax municipalities -- the cities -- often seek locations where the tax will be significantly lower, usually the suburbs. Jobs and commercial life have been drained from Connecticut's cities for decades, leaving behind businesses and residents who must pay even higher taxes until they, too, leave in search of cheaper rents.

Possible Solutions to the Property Tax Problem

RECOMMENDATION 2: The Council on Environmental Quality recommends a major change to Connecticut's property tax structure to reduce the tax as a factor in business-location decisions. Once the property tax is no longer an important factor, businesses can locate according to other criteria, presumably in accordance with sound state, local, and private planning principles. The ideal tax structure would reward municipalities for successfully encouraging development that fulfills the social and environmental goals of the Municipal and State Plans. The Council respectfully leaves the details of reform to the General Assembly. Below are some possible changes to the tax structure, with brief notes on their relation to land use:

♦ State collection of a statewide uniform (average) mill rate on new business properties. Removes the tax as a locating factor. Revenue would be shared statewide or regionally. Could be modified to make it favor beneficial development, by allowing towns to keep all or part of the revenue if the business is a local one; if it is a regional facility over a certain size and sited to take advantage of state roads, the state would take the revenue. With this modification, towns would have an incentive to encourage smaller-scale development which the town could plan in order to meet the needs of the people in the community. The upper limit for designation as a "local business" would increase with the size of the community, with perhaps no upper limit in urban centers (so these would keep all revenue from all properties).

♦ Voluntary joint economic development districts formed by two or more towns to site industry appropriately and share revenue. This has no strong down side, but no strong upside either; Case Study #1 (see page 11) followed this model but did not advance state planning goals.

♦ Statewide property tax (or no property tax) on automobiles. State collection would be more efficient administratively than the current administration by municipalities. Part of the reform could include bonus funds to towns that work together with other towns in a region, but the overall impact on land use is likely to be slight.

♦ Voluntary regional mill rates for business properties. Would encourage development in municipalities that are currently higher-tax (cities) and discourage it in the towns that are currently lower-tax (mostly undeveloped towns that do not want the commercial growth). A variation, not much talked about, would *require* regions to adopt this structure. A voluntary approach would be unlikely to find many participants among low-tax communities, unless regional collection and sharing is involved.

♦ Regional collection based on a regional mill rate. Minneapolis and 187 surrounding communities have had a structure like this for 22 years, but the impact on land-use is not large because the host town keeps a large portion of the revenue.

♦ Statewide assessment, with local collection and retention of revenue. The Council cannot find significant land-use impacts in this proposal.

♦ Circuit breaker for homeowners. If a family's property tax exceeded a certain percentage of its income, it would get a credit on its state income tax. Good for the cities, but the impacts on land use and land development would be indirect at best.

Whatever the solution, the Council strongly cautions against any scheme that leaves a municipality with a just a fraction of the revenue from any class of development (i.e., it should probably be all or nothing). Analyses in California, where a municipality keeps as little as ten percent of the revenue from a new commercial development, found that communities still seek developments they do not need because they are addicted to fresh shots of new property tax revenue, no matter how small. In fact, the desire for such development becomes even more excessive as the municipalities' share of the revenue shrinks, because all developments become losers in the long run (as service demands exceeds revenue) but *any* new revenue is welcome in the short run (even if it worsens the communities' long-term position.) This potential problem is one reason the Council suggests full statewide collection from large new commercial development might be best, allowing municipalities to keep all revenue from development on a scale appropriate to the community.

FOCUS: THE DESTRUCTIVE ALLURE OF COMMERCIAL DEVELOPMENT

Case #1: In 1993, two towns in Eastern Connecticut petitioned the state to amend the State Conservation and Development Policies Plan, asking for re-classification of certain rural and conservation areas to urban growth designation. Without such re-classification, a proposed economic development project would not be eligible to receive state grants for roads, sewers, or utilities, according to the restrictions of P.A. 91-395. The project in question was a proposed development of an industrial park on the towns' joint border. Self-imposed environmental restrictions led the towns to conclude that perhaps half of the 700+ acres could be developed. With easy access to a state highway, the project had one of the benefits most admired by municipalities: considerable property tax revenue with very little traffic or other impacts affecting the hearts of the towns.

Even if direct environmental impacts to the forests, wetlands, streams, and park lands at the project site could be kept to a minimum, one would have to question how the project would harmonize with other state investments and goals. As one example, the state subsidizes commuter bus service from the same area to Hartford, and is spending millions to encourage more ridership. If development is subsidized in locations where the buses do not go, then even fewer people will be on the buses.

The development sought by the towns was not intended to meet local needs, strictly speaking. The object was not more food stores or doctors' offices. Some of the jobs might have gone to local residents, but one of the towns had an unemployment rate below the statewide average, while the other town had vacant industrial land elsewhere in town.

Driving the towns' desire for the project was a perceived need for property tax revenue. Increases in residential development had spawned the need for new schools and other services, and since residential development rarely pays its own way the towns saw a need for more commercial development. Large parcels, suitable for large developments, were believed to not be available in the centers of the towns.

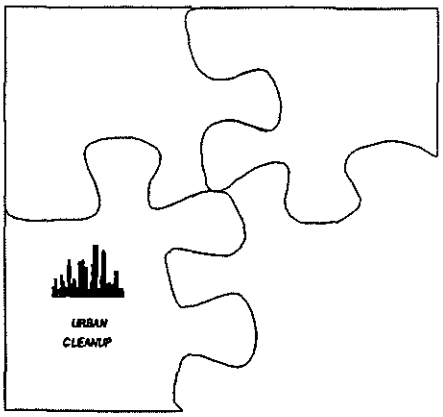
The General Assembly did not grant the amendment, but the case illustrates the degree to which communities' desire for property tax revenue exceeds their actual need for development.

Case #2: In late 1993, another town asked the Department of Economic Development for financial assistance to extend a sewer line into land zoned for industrial use. In the State Conservation and Development Policies Plan, the land was designated rural and conservation. Similar to Case 1, the town was hoping to capture development on land very near a highway interchange, so that property tax revenue could be collected without suffering the bulk of the traffic or other impacts. Again, the commercial development was not intended to serve the community directly. The State Plan repeatedly urges development to be subsidized in city, town, and village centers, where it is accessible to transit and where single-occupant-vehicle use is not required for every trip in and out. At press time, the application was still pending.

The Third Piece of the Puzzle:

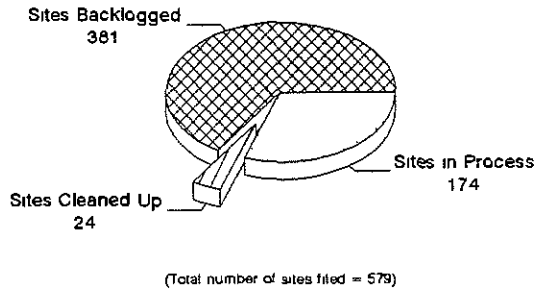
Accelerated Urban Site

Remediation



When a firm is discouraged from re-developing an urban property, and elects to build a new facility on a previously-undeveloped parcel (a "greenfield" site), at least two undesirable environmental consequences may result. The contamination at the urban property is not cleaned up, and "new" land is paved and built upon unnecessarily. In most cases, the greenfield development is beyond the service of transit, and generates more automobile traffic.

Figure 5
STATUS OF CONTAMINATED PROPERTY DISCLOSURES
FILED SINCE 1985



(Total number of sites filed = 579)

State activity should have the effect of paving the way for private investment in urban properties (assuming that local urban residents will be afforded the same level of protection from pollution as other state residents). Speedier urban clean-ups would aid urban economies and will indirectly reduce demand to pave and build upon "greenfield" sites. The Council's 1992 annual report noted the tremendous backlog in approval of private-sector clean-up plans for contaminated properties. As Figure 5 illustrates, only five percent of the sites discovered since 1985 through the Property Transfer Act have been cleaned up; much remains to be done.

RECOMMENDATION 3A: The state should continue its investments in direct clean-up of important properties, especially those in distressed municipalities,

RECOMMENDATION 3B: The Department of Environmental Protection should continue to give priority attention to development of a rational and predictable "Clean Standard" by the end of 1994, and

RECOMMENDATION 3C: The DEP's ability to review and approve private-sector clean-up plans should be improved substantially by hiring appropriate staff to review the plans and collect uncollected fees. The DEP's *inability* to approve voluntary clean-up plans, caused by staff shortages, should be rectified immediately by a system of fees for services.

Details of these recommendations can be found in the 1992 Annual Report of the Council on Environmental Quality.

FOCUS: THE REFORMATION OF TRANSPORTATION PLANNING

"In 1991, the traditional approach to transportation ended. With the new Intermodal Surface Transportation Efficiency Act [ISTEA], Congress provided citizens and local governments with new powers to shape their communities. The vision of the future is ours to make real...Instead of focusing on costly, large capital projects designed solely to move cars and trucks from one place to another, our transportation future must reflect a renewed commitment to being there, not just getting there."

from "State Expenditures of Federal Surface Transportation Funds:
Do They Reflect the New Directions?" December 1993

If true, the statement above could herald a better quality of life in Connecticut and its municipalities. For decades, federal transportation policy strapped Connecticut to the same unending "sprawl, congestion, highway, more sprawl, more congestion, more highway¤" treadmill that exhausted the nation's land planning capabilities. "ISTEA" provides a way off the treadmill.

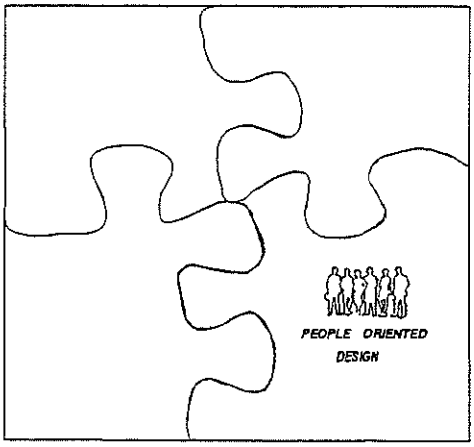
Unlike previous federal transportation acts, ISTEA does three things that can help the natural and human environments: 1) ISTEA gives states flexibility to shift their federal allocations in relation to local needs, say from highways to transit, 2) ISTEA requires states to spend money on transportation enhancements, which include bikeways and pedestrian paths, and 3) ISTEA requires states to consider land use in their transportation plans.

The national report quoted above shows that Connecticut is responding much better than the average state. In FY 93, our DOT transferred more than 14 million dollars into transit programs from other funding categories. It committed nearly all of its enhancement allocations, whereas the average state committed only 22 percent of its available dollars. The Connecticut DOT has worked with the Greenways Committee and has funded several bikeways and pedestrian improvements. For the first time, many Connecticut residents will soon have a multi-use bikeway within minutes of their doors.

Even more meaningful to the lives of Connecticut residents is the legal acknowledgment of transportation's direct link to land use. By October 1994, states must submit transportation plans that account for their impacts to land use. The Connecticut DOT is building a plan around those developed in 1993 by the 14 regional planning organizations. At least one region developed an outstanding plan that could catapult it and the rest of Connecticut to the fore of progressive planning: The **Capitol Region Council of Governments** (CRCOG) developed a Regional Transportation Plan that includes a policy paper called "Coordinating Transportation and Land Use." The paper accurately states the problems of uncoordinated land use and transportation planning --- sprawl, strip development, congestion, pollution, and waste --- and identifies the key variables for reducing automobile dependency: density, mixed-use development, and pedestrian-friendly design. The paper also sets out cogent strategies to encourage transit, walking, and bicycling trips. Will individual towns have the ability and resolve to implement the recommended strategies? Perhaps yes, if the state follows suit in its own plan and if the perverting effect of the property tax is removed.

The Fourth Piece of the Puzzle:

Design for the Needs of People



As our built environment becomes more automobile–centered, people (especially children, the elderly, and poor) have fewer choices as to how they will live their lives. People have less opportunity to enjoy the benefits of the air and water quality improvements we have made over the last twenty years. The cities, towns, and villages from which Connecticut gains considerable identity -- from Danbury and Norwich to Essex and Mystic -- represent less of the built environment than ever before, and in most towns their dense, pleasant, mixed–use characteristics have been made illegal through zoning. The effort to develop greenways -- and the notable effort of the DOT to finance bicycle and pedestrian ways with transportation "enhancement" grants -- is an important step in bringing transportation and conservation planning together on a scale appropriate to human communities.

Researchers have been able to classify communities as "pedestrian friendly" or "pedestrian–hostile" and to measure the effect of pedestrian–friendliness on automobile use. In communities that were built to be pedestrian–friendly, household automobile trips and vehicle–miles traveled are significantly lower than in pedestrian–hostile neighborhoods. Even the latter neighborhoods (typified by most new Connecticut subdivisions and commercial zones) could be modified retroactively to reduce household vehicle use by ten percent. (Source: LUTRAQ Update, Making the Land Use, Transportation, Air Quality Connection, 1000 Friends of Oregon, January 1994.)

RECOMMENDATION 4A: The General Assembly should declare that it is the policy of the state to encourage community planning that emphasizes the needs of people -- especially children, the elderly, and people who do not drive -- over the rapid movement of automobiles, and should require state agencies to incorporate that policy in facility siting and design. State assistance to municipalities should be geared to enhancing a planning culture that advances the same.

RECOMMENDATION 4B: In planning and environmental–protection generally: overall planning, not resource–by–resource regulations, should drive planning and development decisions. State agencies should seek collaborative solutions to difficult planning issues, since such solutions save time and money in the long run.

RECOMMENDATION 4C: The efforts of the Greenways Committee, the Department of Transportation, and numerous regions and towns to provide alternatives to automobile travel must be continued and enhanced.

A Note on Economics

There are important environmental and social reasons to improve the way in which Connecticut is built, and there are serious *economic* consequences of our past failures to do so. As one example, as much as two hundred million dollars have been flowing out of Connecticut's economy every year because of past failures to link transportation to land use. (This amount is an estimate based on the growth in gasoline consumption that is not accounted for by simple population growth.) Modest coordination could have helped to minimize gasoline consumption, and money spent needlessly on gasoline is a drain on Connecticut's economy. Now Connecticut is in the position of having to somehow reduce automobile emissions to meet the federal Clean Air Act; the cost will be in the billions of dollars, most of which will flow out of the state for such things as more costly pollution controls on automobiles.

It is useful to view planning and consistency as an efficient form of pollution prevention. Every ton of automobile-generated air pollution (volatile organic compounds and nitrogen oxides, the precursors of ground-level ozone) that is removed from Connecticut's air will come at a price. Consequently, every ton prevented has an equivalent value, estimated to be between $8,000 and $15,000. A traditional approach to the two state goals of economic development and air pollution control might be to aid the establishment of an employment center along some convenient highway, and then work with the employer to encourage ridesharing. A more cost-effective approach might be to entice the employer to locate along a rail or other transit line by offering *more* economic development aid to do so; the value of the air pollution prevented will justify the extra economic development costs. Every employee that can get to work every day without generating a car trip will save the state between $200 and $500 in avoided pollution control costs. A large employer that can install 200 fewer parking spaces by locating on a transit line saves the state up to $100,000, a savings which would help to justify an extra state investment to help put the employer there.

FOCUS: THE GRIFFIN LINE -- BRINGING THE FUTURE TO CONNECTICUT

For several years, the Greater Hartford Transit District has been working with Hartford, Bloomfield, and Windsor to organize appropriate land use patterns around an abandoned rail corridor on which new transit service could be established. Proposed before the Clean Air Act amendments of 1990, the project has only gained in importance as a potential demonstration of how land use and transportation can be planned together.

As cities have learned all across the country, construction of a new light rail or other transit line is a deadly loser unless there are sufficient destinations near the stations. Bloomfield, in particular, has been progressive in developing plans for appropriately dense development near the planned stations, including homes and small businesses within walking distance.

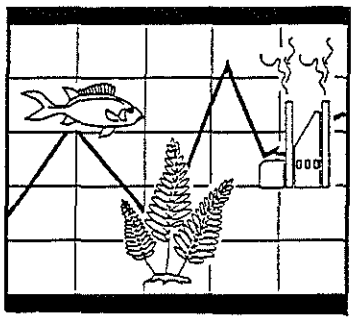
As the project advances to its next stages (including environmental impact evaluation), Connecticut should take pride in knowing that one of the most forward-thinking proposals in the nation is not in California or Oregon, but in Hartford and its northern suburbs.

Conclusion

Improved planning will mean little if the distorting influence of the property tax is not removed. Conversely, alteration of the property tax by itself will not guarantee better land–use patterns. Similarly, planning, as it affects siting decisions, is only part of the solution for a better quality of life; even if a building is built on a transit line, people will not use the transit service unless the building and surrounding facilities are designed for people on foot.

Only a comprehensive approach to planning –– one that integrates economic development, environmental protection, transportation, and daily life –– can get everyone going where we want to go: to strong economic centers set in a clean, accessible environment.

PART II



INDICATORS OF ENVIRONMENTAL TRENDS

INDICATORS OF ENVIRONMENTAL TRENDS

A New Approach: "Environmental Indicators"

With this edition, the Council introduces a new way of reporting Connecticut's environmental trends. We have selected twenty "indicators" of environmental quality to display this year and every year hereafter. With reasonably little effort, the reader can assess the real status of Connecticut's environment. This is not a report on budgets, government programs, waste management techniques, enforcement actions, or new laws -- it's a bottom-line statement on the actual condition of our air, water, land, and wildlife.

Each page exhibits one indicator and follows a simple format: A graph showing trends in the indicator, a description of the indicator (which is intended to be a standard description that will change little from year to year), and a discussion of the trend illustrated by the graph. The discussion, unlike the description, is expected to change each year in order to explain the most recent developments.

Where possible, each graph illustrates progress (or lack of it) toward a specific state goal or objective. The Council used goals and objectives from the Environment 2000 Plan where relevant; in other cases, the Council took or inferred goals from other official planning documents.

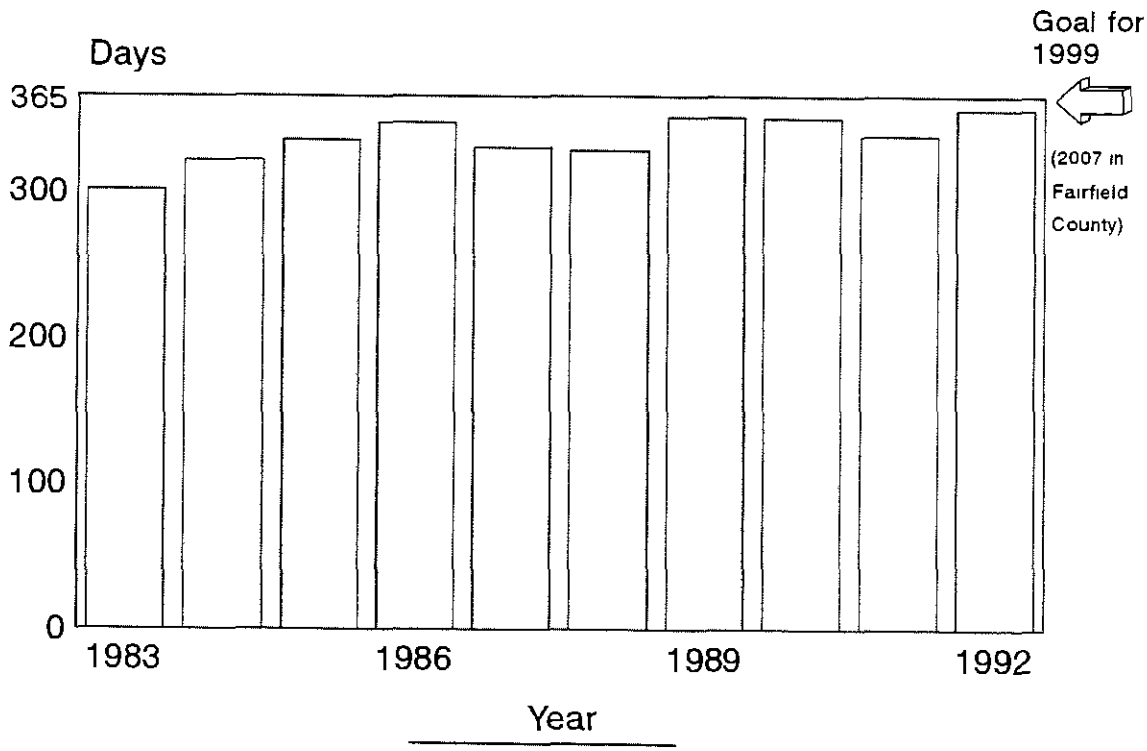
The Council is indebted to the many DEP staffers who supplied data and suggestions for indicators. One unfortunate consequence of recent reductions in the DEP's budget is a scaling back of environmental monitoring programs. The future of many of these indicators depends on continuous collection of data by the DEP.

If data are available, the Council will add more indicators in future years, up to a maximum of thirty-five. Next year's report is likely to include indicators for chemical emissions, outdoor recreation and safety, drinking water quality, and land use.

Please consider the following set of twenty indicators to be experimental. Do they tell you what you want to know about Connecticut's environment? The Council welcomes your criticisms of the twenty included here and your suggestions for additional indicators.

GOOD AIR DAYS

Number of Days CT's Air Met Health Standards



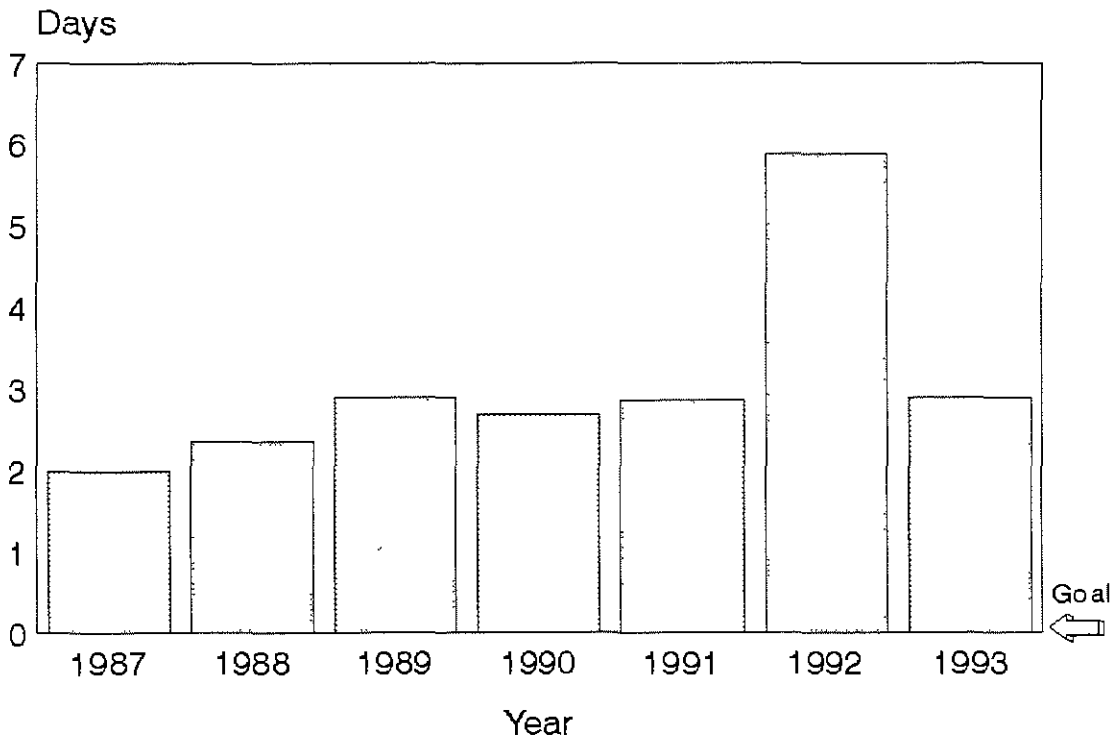
INDICATOR: Number of days each year that every monitoring station in the state recorded good air quality.

DESCRIPTION: "Good 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. (Local concentrations of most chemical pollutants (such as emissions from nearby factories) are not usually monitored and are not considered in this indicator. Small particulates (so-called PM-10) are monitored, but are a localized problem and also are not considered here.) 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).

DISCUSSION: 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 must take many steps to reduce emissions from the transportation sector to comply with the 1990 Clean Air Act.

BEACH CLOSINGS

Average Number of Days Coastal Municipalities Closed Their Beaches



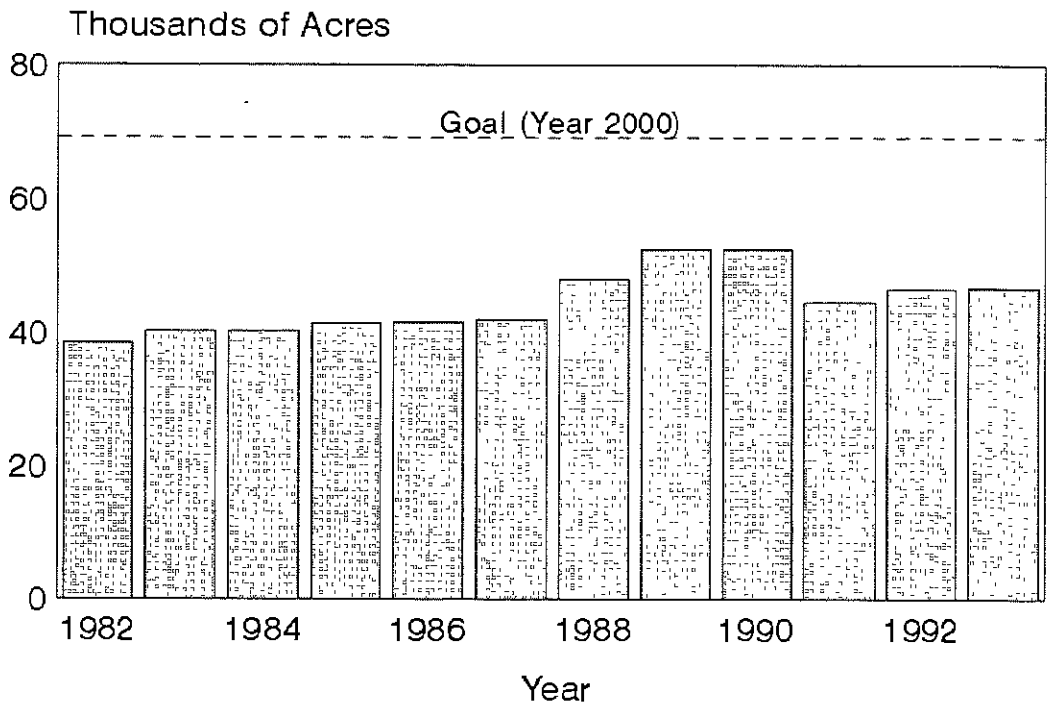
INDICATOR: Average number of summer days that coastal municipalities closed one or more of their beaches.

DESCRIPTION: 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. Beaches are sometimes closed for other environmental health reasons such as the clean-up of hazardous wastes in one community. After rain storms, overflow discharges 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. (Extended closings of small private beaches were disregarded for this indicator).

DISCUSSION: Year-to-year variations are a product of rainfall patterns as much as they are of incidents such as sewer-line ruptures. In 1993, some towns had to close beaches as many as 12 days, while several towns had no closings and contributed to the overall low average.

SHELLFISH BEDS

Acres Cultivated and Open for Commercial Harvesting



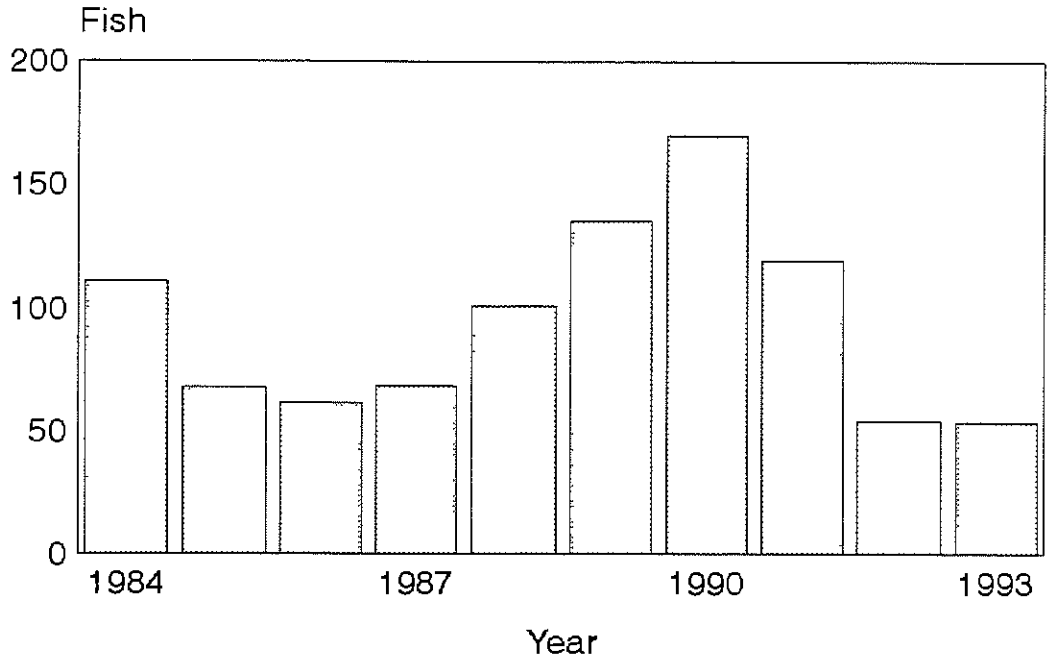
INDICATOR: Acres of commercial shellfish beds that are clean enough and monitored sufficiently to allow them to be open for harvesting.

DESCRIPTION: 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.

DISCUSSION: 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.

WINTER FLOUNDER

Catch Per Tow*



* geometric mean

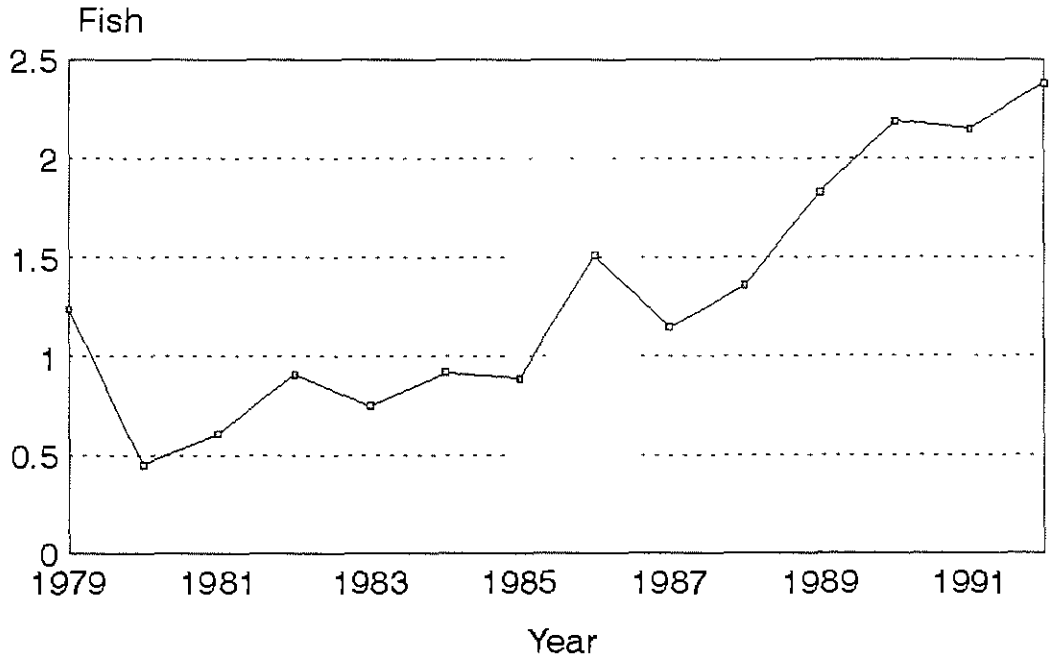
INDICATOR: Average number (geometric mean) of winter flounder caught per tow.

DESCRIPTION: 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.

DISCUSSION: 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; a cool spring in 1993 might have delayed the flounders' migration to the sampling area.

STRIPED BASS

Catch per Unit Effort *



* mean catch per fishing trip

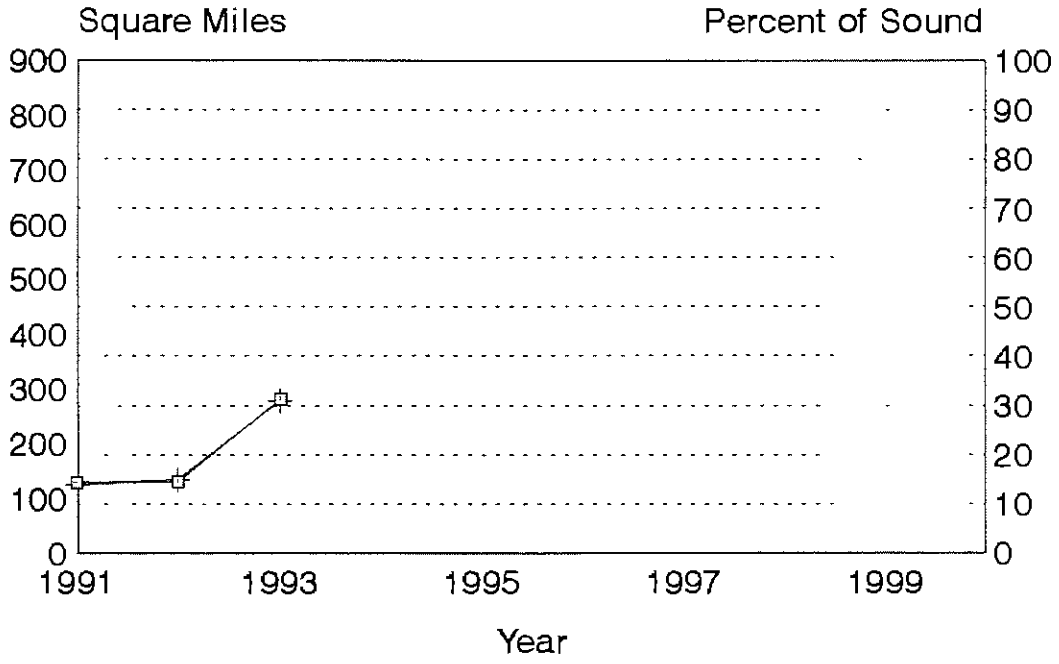
INDICATOR: Catch per unit effort, or the average number of striped bass caught per recreational fishing trip.

DESCRIPTION: 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.

DISCUSSION: Low population levels in the 1980s spurred cooperation among coastal states to impose conservative restrictions on fishing. Current regulations allow an angler to keep only one fish of legal size (36 inches) per fishing trip. These regulations appear to have been successful in restricting the harvest of striped bass and allowing its recovery.

LONG ISLAND SOUND

Area Affected by Hypoxia*



* hypoxia = low oxygen (≤3 mg/l)

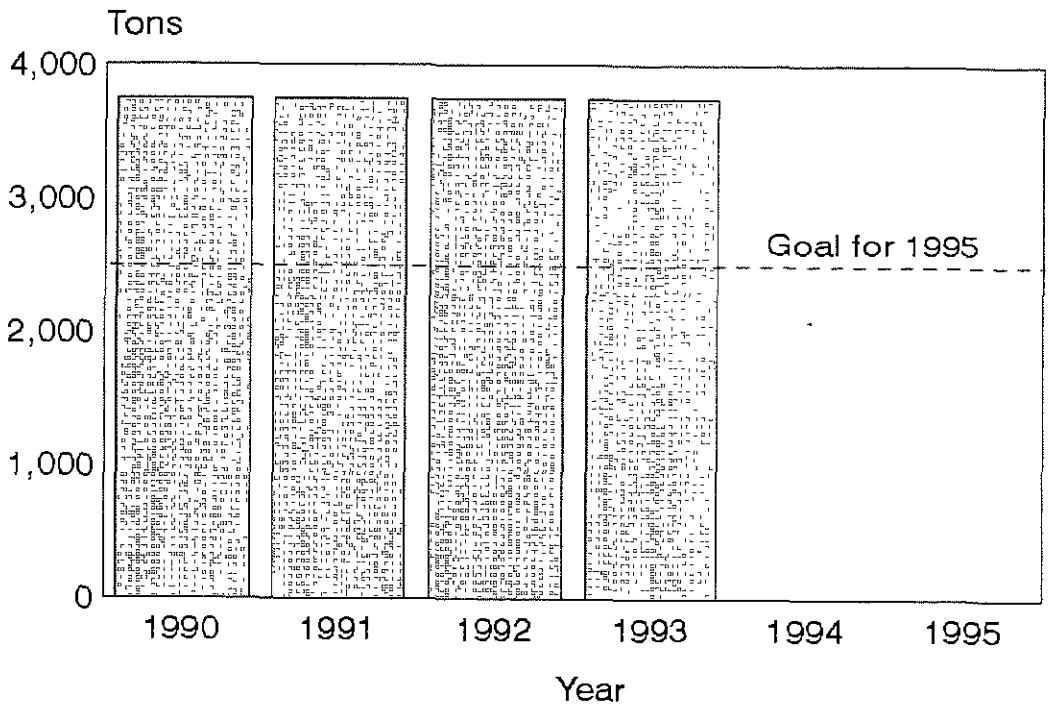
INDICATOR: Square miles (and percent) of the Sound that hypoxia affects each year.

DESCRIPTION: 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. Data is from the DEP's intensive summer sampling; if funding for sampling is lost, this indicator will be eliminated.

DISCUSSION: 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 are expected to adopt a comprehensive management plan early in 1994.

NITROGEN

Tons Discharged into Long Island Sound



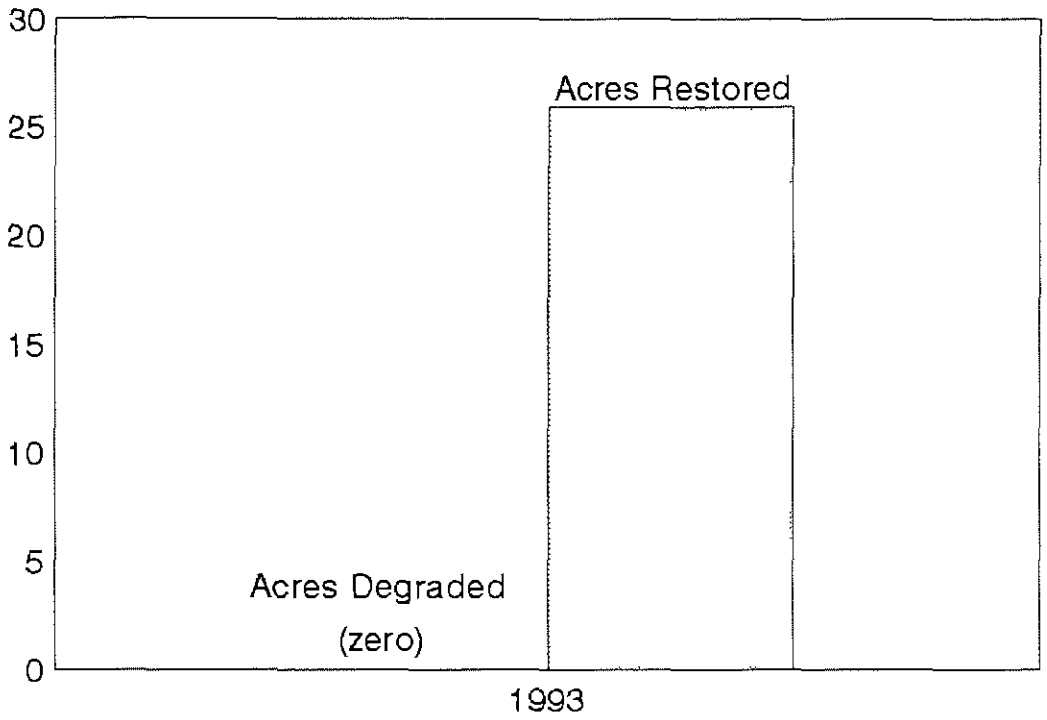
INDICATOR: Tons of nitrogen discharged into Long Island Sound from Connecticut's coastal sewage treatment plants and large industrial facilities.

DESCRIPTION: Connecticut's 18 coastal sewage treatment plants and three largest industrial facilities contribute 10% of the nitrogen going to Long Island Sound (see description of hypoxia on previous page). Connecticut has a short-term goal 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 30% by 1995. A long-term goal will be based on the scientific modeling now underway.

DISCUSSION: Connecticut's policy of "no net increase" in nitrogen discharges has kept them at or below 1990 levels.

TIDAL WETLANDS CONSERVATION

Acres Degraded and Restored



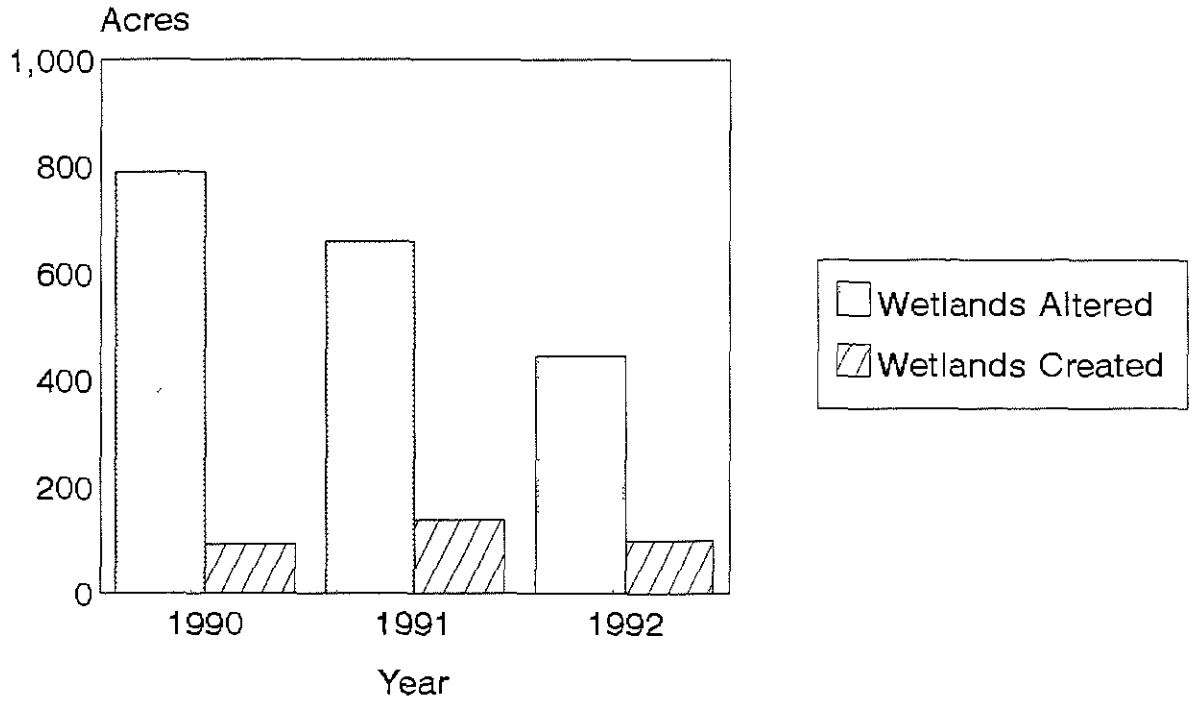
INDICATOR: Acres of tidal wetlands degraded and acres restored.

DESCRIPTION: 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.

DISCUSSION: Data are available from only the most recent year. No wetlands were lost to permitted development, and many degraded acres were restored.

INLAND WETLANDS LOSS

Total Acreage of Inland Wetlands Altered



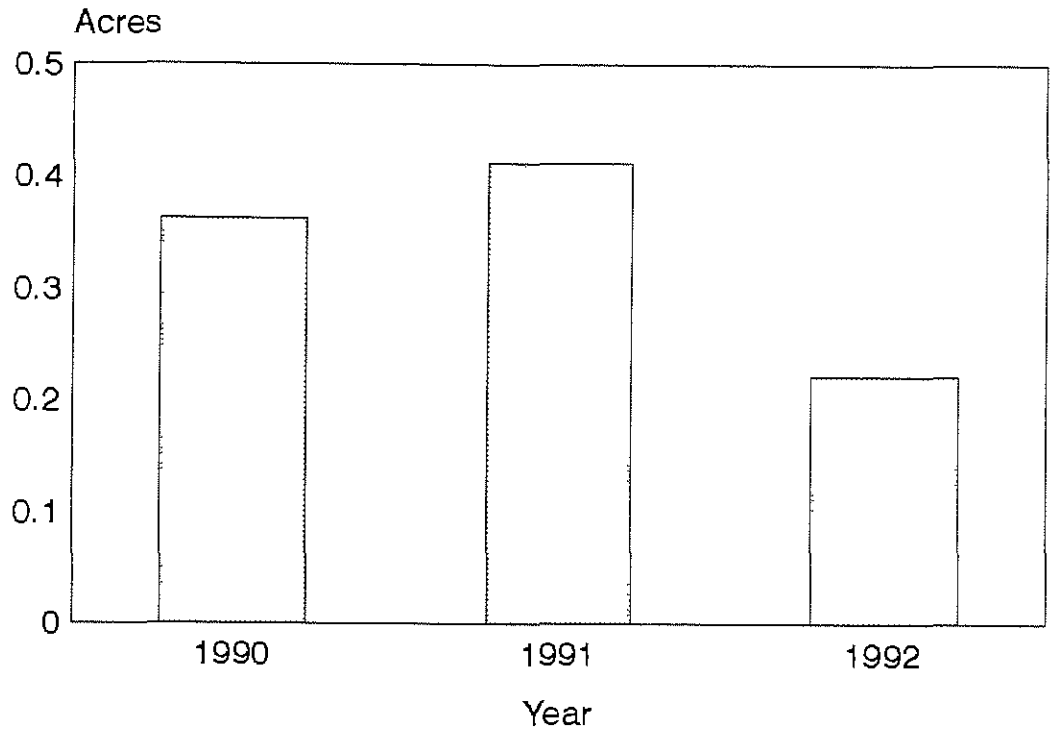
INDICATOR: Acreage of inland wetlands altered by development activities permitted by the DEP and the 169 municipal inland wetlands agencies.

DESCRIPTION: The graph shows, for each year, the acres altered and the number of those acres replaced by human-made wetlands. Alterations show up in this indicator in the year they are permitted, which is not necessarily the same year development takes place. 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 wetlands loss; inland wetlands are estimated to cover about 450,000 acres, or about 15% of Connecticut's surface.

DISCUSSION: Since record-keeping began in 1990, the area of inland wetlands altered by development each year has declined. Some of this decrease is probably attributable to an economy- related decline in the number of applications received (which is why the following indicator is also included).

INLAND WETLANDS CONSERVATION

Acres of Inland Wetlands Altered Per Permit Issued



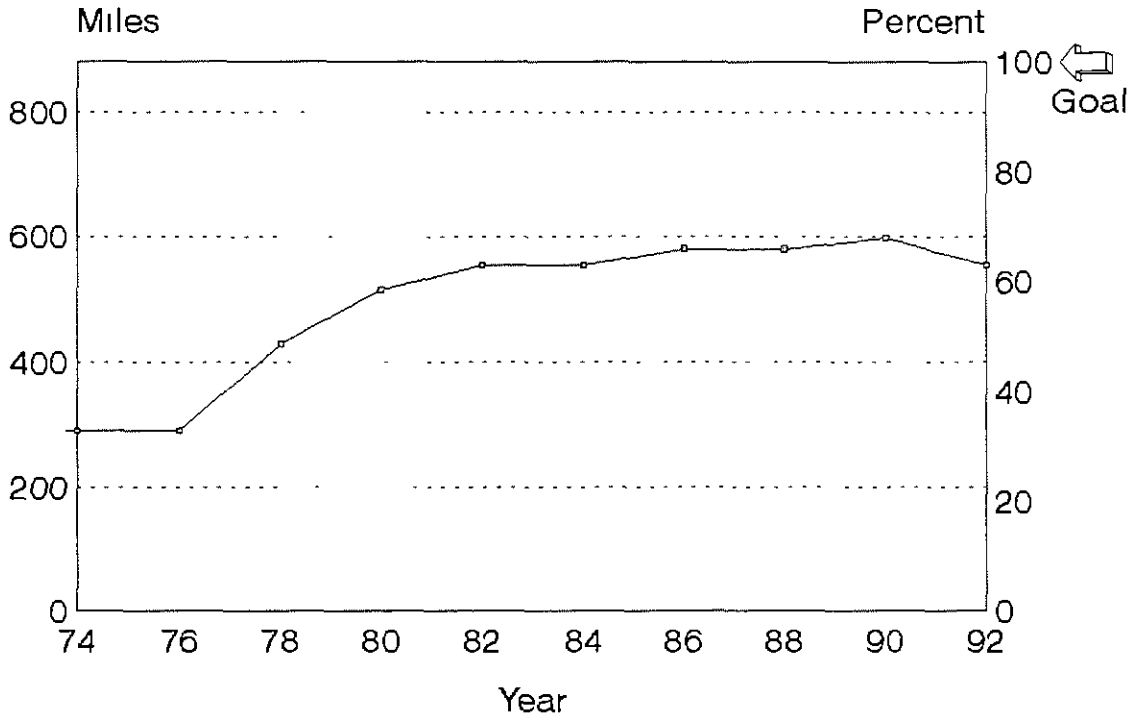
INDICATOR: *Average* area of inland wetlands affected by permits issued by the DEP and the 169 municipal inland wetlands agencies.

DESCRIPTION: 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. Since Connecticut's Environment–2000 objective is to "protect and preserve...the state's existing inland wetlands through consistent and equitable application of the Inland Wetlands and Watercourses Act," it is assumed here that a consistently low average wetlands impact is desirable; however, no numerical goal has been established.

DISCUSSION: 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.

CLEAN RIVERS

Miles of Major Rivers Clean Enough for Fishing and Swimming



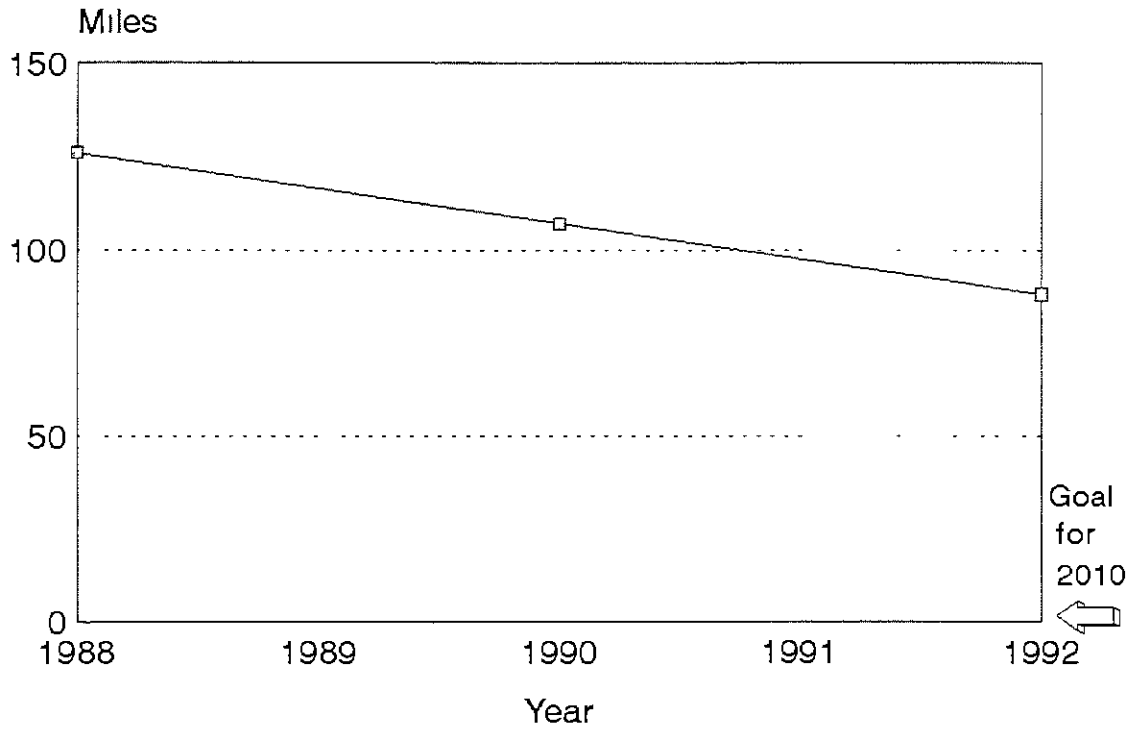
INDICATOR: Miles of major Connecticut rivers and streams classified as suitable for both fishing and swimming.

DESCRIPTION: Of the state's 8400 miles of river and stream, about 880 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.

DISCUSSION: Progress toward clean rivers 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 most recent small downturn resulted from a change in the criteria for the "swimmable" classification, not from a change in actual water quality.

SEWAGE OVERFLOWS

Miles of River and Stream Affected by Combined Sewer Overflows



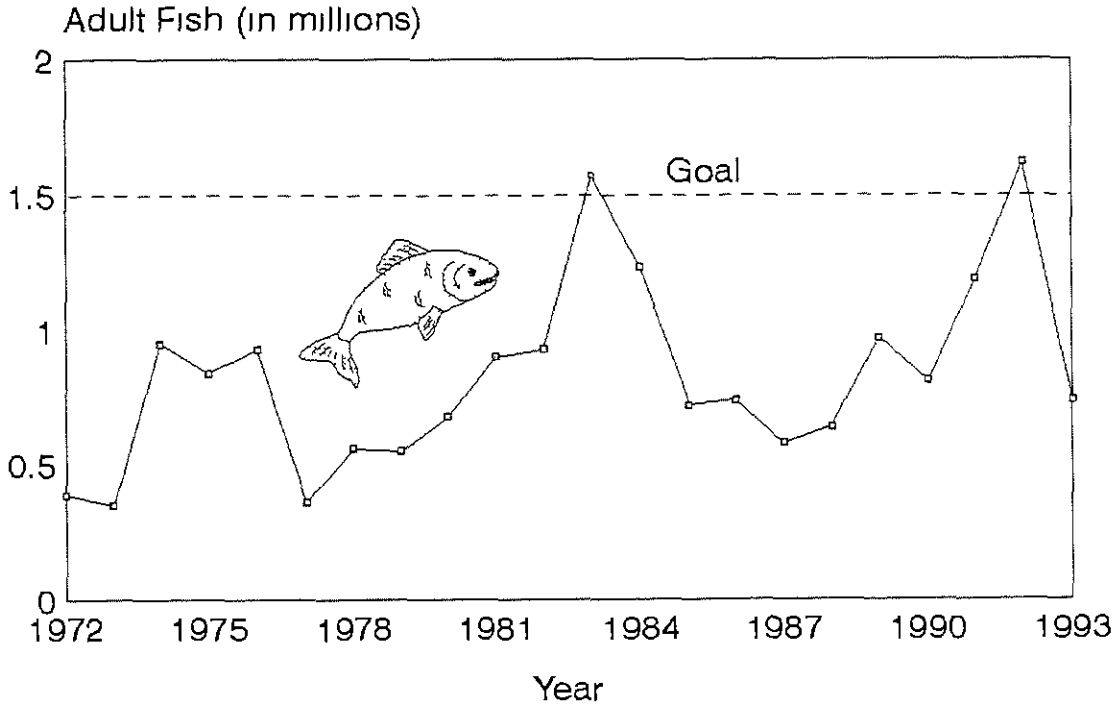
INDICATOR: Miles of river affected by "combined sewer overflows."

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.

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

SHAD

Number of American Shad Returning to Connecticut River



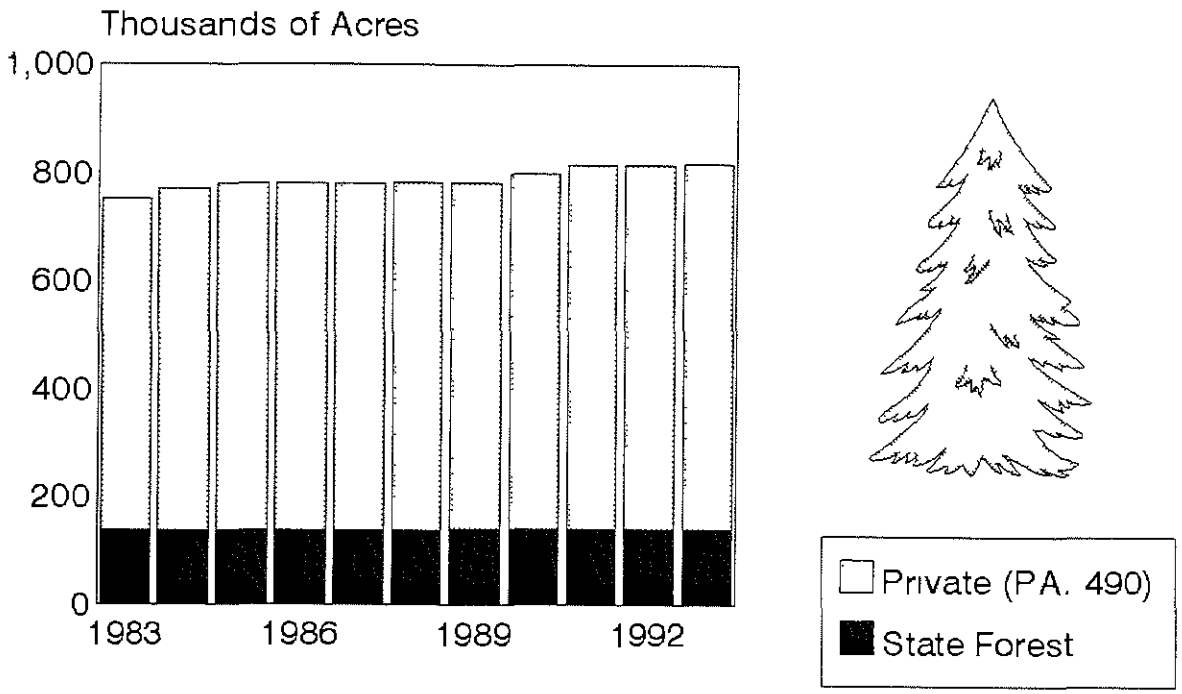
INDICATOR: Estimated number of American shad that return each year to the Connecticut River.

DESCRIPTION: 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. The goal is to have 1.5 to 2 million adult shad return to the Connecticut River each year. The shad management plan calls for maintaining harvest rates at an acceptable level. Population estimates are made annually by the DEP.

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

FOREST

Total Acreage of Large State and Private Tracts*



*Large = greater than 25 acres

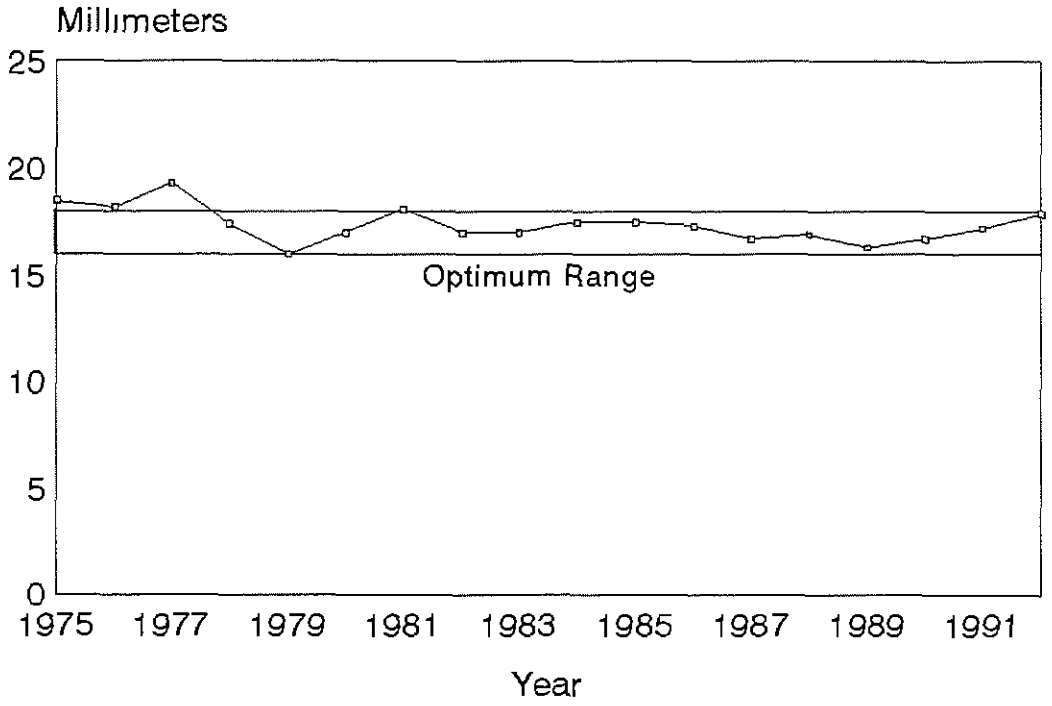
INDICATOR: Combined acreage of 1) state forest and 2) privately-owned forest that is enrolled in Connecticut's preferential property tax-rate program (P.A. 490).

DESCRIPTION: 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, i.e. those in large tracts.

DISCUSSION: The apparent upward trend in forest acreage is believed to be a product of property revaluation in the 1980s, 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 landholdings, which in turn will cause this indicator to show a negative trend.

WHITE-TAILED DEER

Average Diameter of Yearling Antler Beams

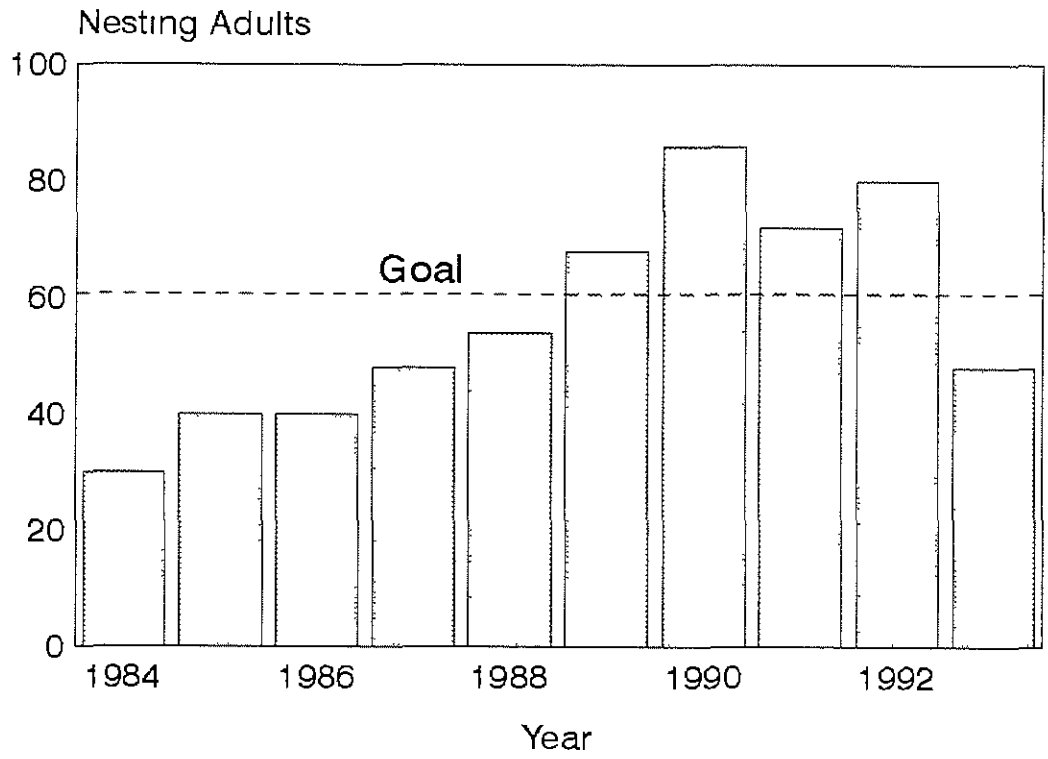


INDICATOR: Average diameter of antlers on yearling deer (i.e. deer one to two years old.)

DESCRIPTION: 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.

DISCUSSION: 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.

PIPING PLOVER

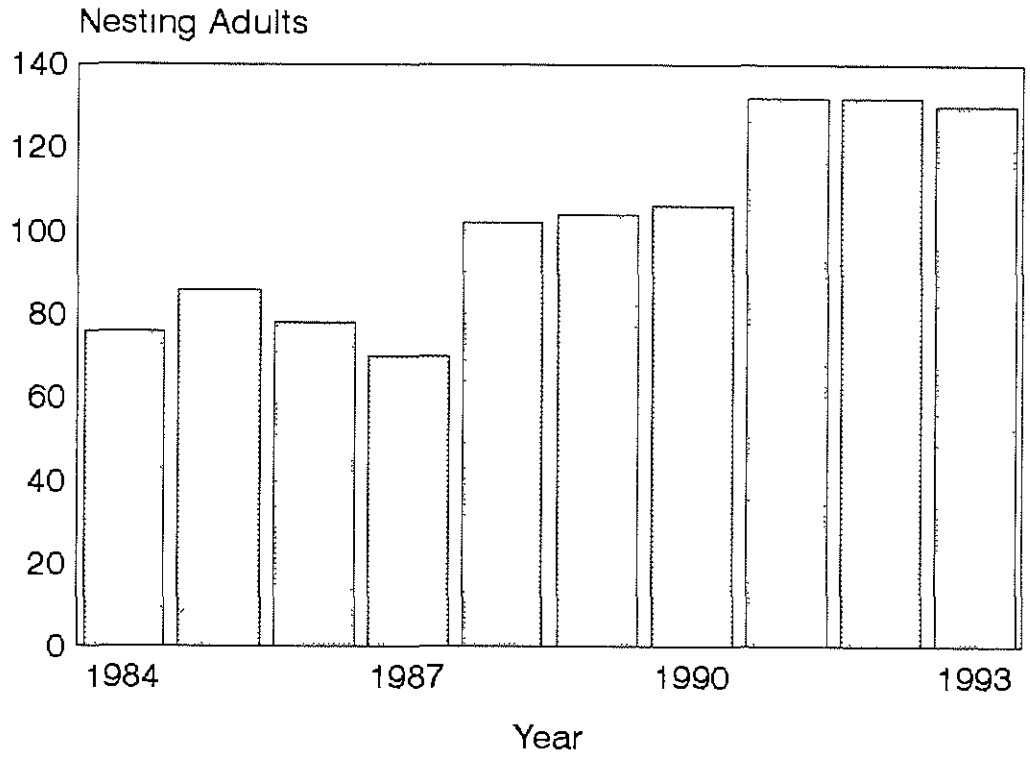


INDICATOR: Number of adult piping plovers that nest each year in Connecticut.

DESCRIPTION: 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 in Connecticut is "threatened". The goal shown on the graph is Connecticut's portion of the U. S. Fish and Wildlife Service's objective for all of New England.

DISCUSSION: Since protection and monitoring efforts were begun by The Nature Conservancy and the Department of Environmental Protection in 1984, nesting success has improved, resulting in more returning adults in subsequent years. Year-to-year variations can occur because adult birds sometimes move from one state to another. Predators took a heavy toll in 1993.

OSPREY

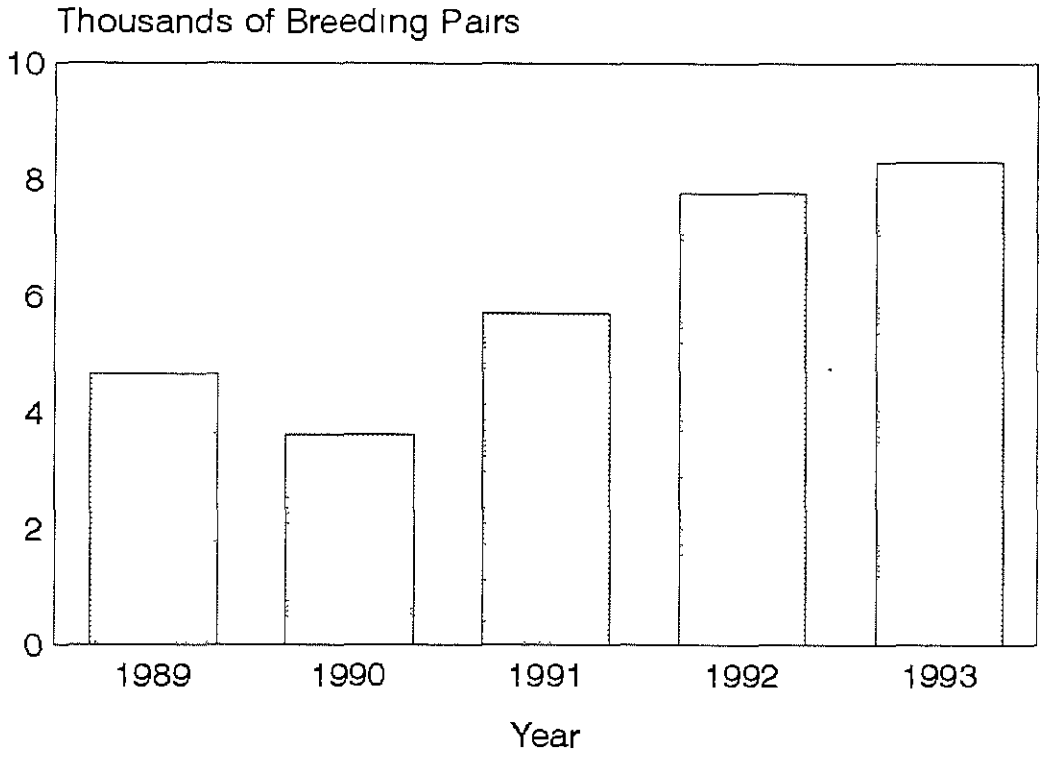


INDICATOR: Number of adult osprey that nest each year in Connecticut.

DESCRIPTION: Ospreys are fish–eating birds of prey that nest 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.

DISCUSSION: 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 if additional nesting sites are available.

WOOD DUCK



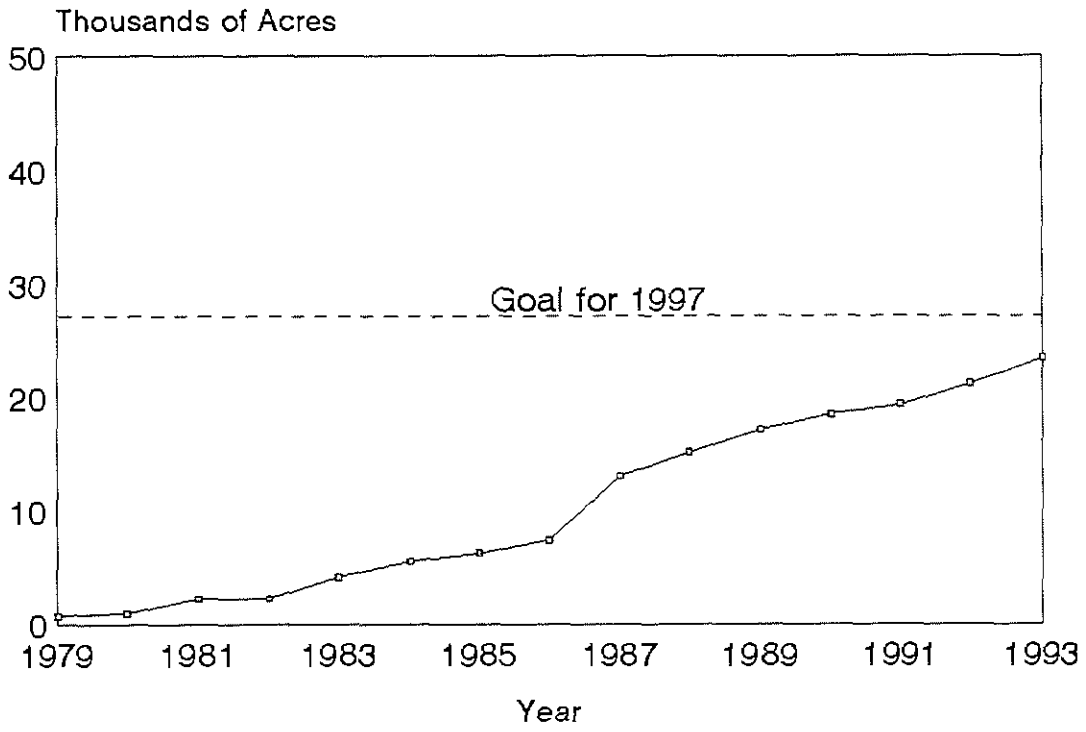
INDICATOR: Estimated number of adult wood ducks that nest each year in Connecticut.

DESCRIPTION: 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.

DISCUSSION: 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.

FARMLAND

Acres Preserved By CT Department of Agriculture (cumulative)



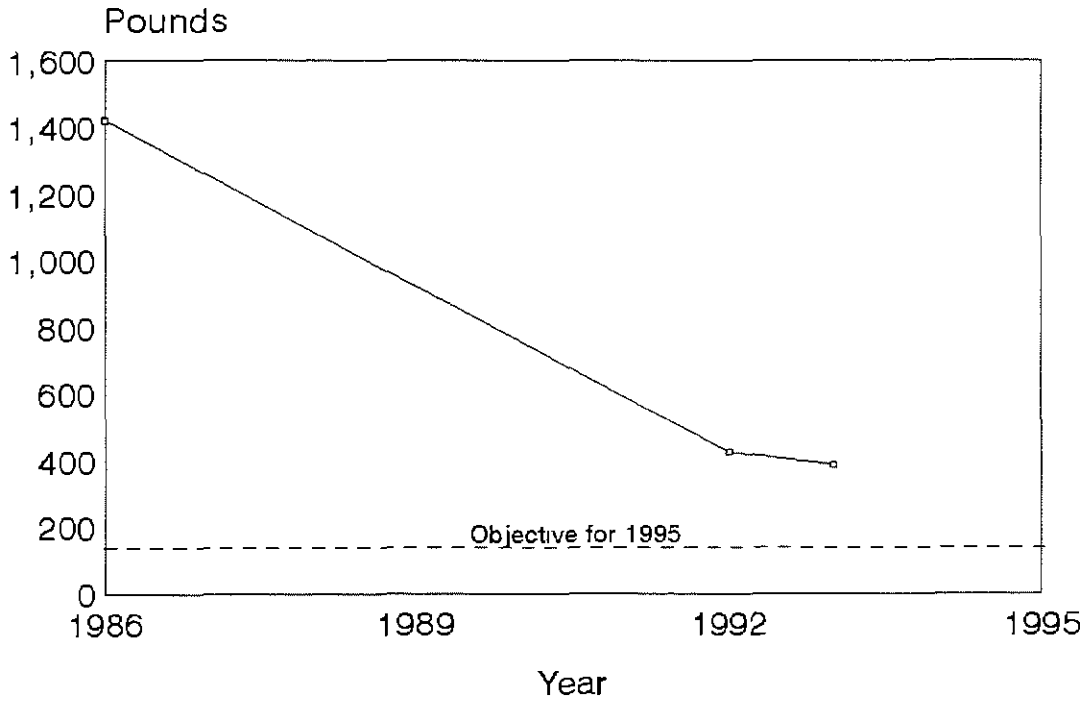
INDICATOR: Acreage of agricultural land preserved by the Department of Agriculture.

DESCRIPTION: The graph 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.

DISCUSSION: 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.

GARBAGE BURIAL

Pounds of Garbage Deposited in Landfills (Per Capita)



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

DESCRIPTION: 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 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.

DISCUSSION: 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.

Conclusion

Half of the twenty indicators show a positive trend toward the state's goals for a better environment. The other half show retreats or no progress at all. (Sometimes, no change can be misleading, if in fact conditions would have worsened had certain programs not been in place.)

The Council cautions readers about drawing conclusions from any summing of trends (as is done in the previous paragraph). There are two important reasons that a numerical summation of these twenty indicators cannot give a complete picture. First, an indicator can be presented only if relevant data exist, and data tend to be more available for programs which receive a lot of attention and for which positive progress is more likely. For example: the graphs for osprey, piping plovers, and wood ducks all show long-term improvements. The DEP counts those species because it is working hard to increase their numbers; if the work was not being done, those species would probably be declining, but the Council would not be including indicators for them because the population data would not be available. Conversely, several species of songbirds are believed to be on a decline, but their numbers are not actually counted because there are no management programs for them; thus there can be no indicator for songbirds. The result is a set of indicators skewed toward species likely to show positive progress.

The second problem with any summation is that the Council has found it difficult to devise indicators for some of Connecticut's most serious environmental problems. For example, Part I of this annual report details the inadequate planning and development of land in this state, but identification of a suitable indicator to track this problem has eluded the Council.

The addition of more indicators in subsequent years should help to give a more complete picture of environmental trends. In the meantime, each indicator should be examined separately for what it is -- an indicator of one important component of the environment in which we live.

More About Environmental Indicators

Some indicators are more meaningful than others. Many states and the United States Environmental Protection Agency are working on a set of core indicators that would enable the entire nation to monitor and report environmental progress. After three conferences (attended by Council staff) several criteria have been established for what constitutes a good indicator. For example, it must be measurable, data must be available, it must be simple enough to understand while being scientifically reliable, and it must accurately reflect changes in the environment. The most desirable indicators reflect actual health or ecological impacts (e.g., number of illnesses or deaths caused by pollution; measures of ecological health, etc.). The least desirable indicators merely report government activity (e.g., number of enforcement activities, number of permits issued). In between are such things as amounts of pollution emitted or fuel conserved. Unfortunately, data on actual impacts are usually unavailable, and it is necessary to go down the scale and use less desirable indicators.

Officials of the federally-funded Chesapeake Bay Program devised a scale of 1 to 6 to rate the usefulness of each indicator, with Level 6 being the best and Level 1 the least useful or desirable. The Council keeps this scale in mind when selecting indicators. While aiming for the highest-grade indicators possible, realities of data availability require the use of some lower-grade indicators (such as "nitrogen discharges" as a substitute for "ecological health index for Long Island Sound," and "acres of wetlands altered" as a substitute for "acres of functioning wetlands existing in Connecticut.") It is the Council's goal in future reports to emphasize Level 6 indicators, and to have as few lower-level indicators as possible.

PART III

1993 ACTIVITIES

OF THE COUNCIL ON ENVIRONMENTAL QUALITY

1993 ACTIVITIES OF THE CEQ

The Council on Environmental Quality pursued its core statutory mission along with new advisory responsibilities. Highlights of 1993 activity include:

♦ In its annual report to Governor Lowell P. Weicker, Jr., released in April, 1993, the Council documented deficiencies in the DEP's budget that could hinder both economic development and environmental protection. An abbreviated summary of the problems includes the following:

-- No taxpayer support: The individual (non-corporate) Connecticut taxpayer contributes less than $5.00 per year to the operation of the DEP.

-- Depleted special funds: Three special funds which support large segments of the DEP are being spent at non-sustainable rates. In two to four years, the funds will be empty, and the harsh reality of the recent cutbacks in General Fund support of the DEP will become apparent.

-- Declining enforcement: Nearly all measures of enforcement activity have declined. The DEP's Strategic Plan calls for further reductions in certain inspections and related activities.

-- Stubborn permit backlog: Many people inside and outside state government see the DEP's permit backlog as its most critical challenge. However, even with the significant shifting of staff from enforcement and other environmental quality programs to permit-issuance, the backlog is proving to be stubborn. (During 1993, the backlog was reduced by ten percent from approximately 2240 permits to about 2040 permits).

-- Unmet mandates: The General Assembly has required the DEP to develop dozens of new regulations, many of which remain undone and long overdue. With the emphasis on permits, it is not clear that the backlog in regulations will be cleared up in the next few years. (None of the 15 mandatory, overdue regulations described in last year's report has been completed.)

During the current two-year budget cycle, the Council has been discussing new ways to help solve this chronic problem. One solution being considered is working with the Connecticut Environment Roundtable to bring industry, environmental groups, and government agencies together to explore their common interest in solving the problem.

♦ The Council developed a preliminary set of twenty "environmental indicators" (described in Part II of this report) as part of a renewed commitment to focus on environmental results, not budgetary woes or bureaucratic output. While working on this state effort, Council staff participated in one regional and one national conference (at U.S.E.P.A. expense) to coordinate with the "indicators" work of federal agencies and other states.

♦ Early in 1993, Council staff coordinated the Governor's Task Force on Hunting and Public Safety (chaired by Council member Donal C. O'Brien, Jr.) which made more than 40 recommendations to improve safety outdoors. Though the Task Force disbanded upon completion of its work, Council staff helped to keep the members informed of administrative and legislative activity related to the recommendations. Staff expects to continue in that role in 1994.

♦ In 1992, the Council recommended that Connecticut embark on an ambitious "Greenways" project to enhance open space and provide residents with convenient access to the

outdoors. Governor Weicker agreed, and with Executive Order #8 created The Greenways Committee. Since that time, Council staff has served as staff to The Greenways Committee. During 1993 the Committee prepared a manual for the public on how to obtain assistance for greenway development, to be published in 1994. The Committee will conclude its mission and deliver its report -- including details of several completed Greenway projects -- to Governor Weicker in 1994.

♦ Council staff served on the Land Use Task Force created by the General Assembly in 1991. The Task Force was extended in 1993, and delivered a draft bill in early 1994.

♦ Council member Gregory A. Sharp represented the Council on the DEP's Clean Standard Advisory Committee, and the Council paid considerable attention to the details of the Committee's work. An appropriate standard is one of the critical elements of an overall solution for alleviating the serious backlog in cleaning up contaminated urban properties, as documented in last year's report (and repeated in Part I of this report).

♦ The Council reviewed Environmental Impact Evaluations, Findings of No Significant Impact, and "Scoping" documents prepared by other state agencies. Review and analyses of these documents led the Council to conclude that more environmental benefits could be obtained if the money were spent in other ways (see Part I of this report).

♦ The Council continued its long-standing efforts to help resolve citizen complaints, especially those from citizens who have not been able to find help through another agency.

The Council looks forward to maintaining productive relationships with Governor Weicker, the General Assembly, the Departments of Environmental Protection and Transportation and other state agencies, and all citizens in working toward our common goal of environmental quality in Connecticut.

CEQ MEMBERS

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

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 (1987-1989). President, Beth Hillel Synagogue. President, Federation Homes, Inc. Board of Directors, Bloomfield Chamber of Commerce. Board of Directors, Jewish Federations Community Relations Council. Board of Directors, Schechter Day School. Board of Directors, Hillel House of UConn. Member, Connecticut-Israel Exchange Commission.

Stephen H. Broderick. Resident of Brooklyn. Extension Forester, University of Connecticut Cooperative Extension System. Chairman, Brooklyn Conservation Commission. Past Chair, Connecticut State Tree Farm Committee. Chair, Northeast Forest Resources Extension Council. Co-founder and director, Eastern Connecticut Forest Landowners Association. Director, Southern New England Forest Consortium, Inc. Former member, Board of Directors, Southern New England Chapter, Society of American Foresters. Former member, Brooklyn Inland Wetlands 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. Masters degree in economics from the University of Connecticut.

Mark R. Kravitz. Resident of Guilford. Partner in the law firm of Wiggin & Dana. Member, Environmental Permitting Task Force (1992). Member, Board of Directors, Guilford Free Library. Member, Board of Directors, Friends of Yale Pediatrics. Former Director and Chairman, The Connecticut Food Bank (1980-1986, 1984-1986). Member, Task Force on Recommendations of National Commission on Children, Connecticut Commission on Children. Board of Directors, Connecticut Foundation for Open Government. Former member, Board of Directors, The Children's Center of Hamden, Connecticut (1976-1986).

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). Former 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. President, International Council for Bird Preservation.

John D. Pagini. Resident of Coventry. Director of Planning and Community Development, Town of Enfield. Former Senior Land Use Analyst, Robinson & Cole. Former Environmental Planner, Town of Glastonbury. Former member (1979-1981) and Chairman (1980-1981), Coventry Planning and Zoning Commission and Inland Wetlands Agency. Recipient, Professional Conservationist Award, Connecticut Association of Soil and Water Conservation Districts (1980). Member, American Planning Association, American Institute of Certified Planners, and American Society of Public Administrators.

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, Conservation and Environmental Quality Section of the Connecticut Bar Association. Member, Department of Health Services' Scientific Advisory Panel. Secretary, Injured and Orphaned Wildlife, Inc. Former member, Steering Committee, Earth Day 20. Former member, 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. Former member, Solid Waste Management Advisory Council. Former Director of Information and Education, Connecticut Department of Environmental Protection.

Richard Sherman. Resident of Mansfield Center. 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. Architectural designer and construction manager.

Dana B. Waring. Resident of Glastonbury. Vice-chairman, Glastonbury Conservation and Inland Wetlands Commission. Former Chairman, Glastonbury Beautification Committee. Member, Advisory Board, Connecticut Land Trust Service Bureau. President and founder, Kongsgut Land Trust. Former trustee, Connecticut Chapter of The Nature Conservancy. Former member, Board of Directors, Connecticut Environmental Mediation Center. Former Vice-president, Natural Resources Council of Connecticut. Former engineering manager, Pratt and Whitney Aircraft Corp., and consultant to United Technologies Corporation. Licensed professional engineer.

Acknowledgments

This report was researched and drafted by Council staff -- Karl J. Wagener, Executive Director, and Melissa S. Ryan, Environmental Analyst -- working closely with Council members. Staff was assisted by three very capable interns: Jeffrey L. DiDonato from Southern Connecticut State University collected much of the preliminary data for the environmental indicators; Chad Wollard of Trinity College continued the effort and developed a computer format and file; and Brett K. Bloomberg of the University of Connecticut developed more indicators and helped create the computer graphics.

As always, the Council is grateful to the many DEP employees who provided useful data and information. The Council also received information from many people in other state agencies, municipalities, and private organizations, too numerous to name. Thanks are due Mitchell Kennedy, President of Pollution Prevention Consultants, Inc., who contributed some independent research and innovative ideas. The graphics were done on a computer lent to the Council by the law firm of Murtha, Cullina, Richter, and Pinney for work related to The Greenways Committee (and because of its superior graphics capability, staff used it for some Council work as well).

STATE OF CONNECTICUT

COUNCIL ON ENVIRONMENTAL QUALITY

The duties and responsibilities of the Council on Environmental Quality are described in Sections 22a-11 through 22a-13 of the Connecticut General Statutes. The Council is a nine-member board that functions independently of the Department of Environmental Protection (except for administrative functions). The Chairman and four other members are appointed by the Governor; two members are appointed by the President Pro Tempore of the Senate, and two by the Speaker of the House.

The Council's primary functions include:

1) Submittal to the Governor of an annual report on the status of Connecticut's environment, including progress toward goals of the "Environment 2000" statewide environmental plan, with recommendations for remedying deficiencies in state programs;

2) Review of state agencies' construction projects; and

3) Investigation of citizens' complaints and allegations of violations of environmental laws.

In addition, under the Connecticut Environmental Policy Act and its attendant regulations, the Council on Environmental Quality reviews Environmental Impact Evaluations that state agencies develop for major projects; the Council must be consulted when disputes arise regarding any agency's finding that its project will not cause significant environmental impact.

COUNCIL MEMBERS -- 1993-94

John A. Millington, Chairman
Washington Depot

David A. Baram (beginning 2/93)
Bloomfield

Stephen H. Broderick
Brooklyn

Marian R. Chertow (beginning 11/93)
New Haven

Shawn R. Fisher (beginning 4/93)
Hartford

Astrid T. Hanzalek (through 2/93)
Suffield

Mark R. Kravitz
Guilford

Donal C. O'Brien, Jr.
New Canaan

John D. Pagini (through 9/93)
Coventry

Gregory A. Sharp
Northford

Richard Sherman (beginning 1/94)
Mansfield Center

Dana B. Waring (through 3/93)
Glastonbury

Karl J. Wagener
Executive Director