Environmental Quality in Connecticut

Council on Environmental Quality 2009 Annual Report

April 2010

Welcome to *Environmental Quality in Connecticut*. This edition explores the condition of Connecticut's environment through 2009.

This marks the second year of a paperless format. The Council has not printed copies in booklet form. A one-page summary is available for viewing and printing.

This report illustrates clear trends in the condition of Connecticut's environment. The Council welcomes any questions, suggestions or comments you might have.

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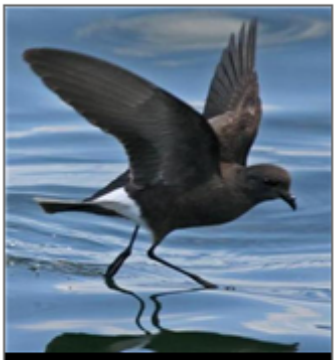


April 29, 2010

The Honorable M. Jodi Rell
Governor of Connecticut
State Capitol
Hartford, CT 06106

Dear Governor Rell:

I am pleased to submit the official report on the condition of Connecticut's environment for 2009.

While our first priority is the condition of the air, water, land and wildlife of today and tomorrow, the Council could not resist the urge to look back 40 years to the first Earth Day and the momentous events that followed -- including the public hearings where the overwhelming majority of citizens *opposed* creation of a Department of Environmental Protection. The introduction of this year's report highlights the successes and incomplete missions of the past 40 years.

The core of the report contains the standardized set of environmental indicators by which we measure Connecticut's progress. You will be encouraged, I'm sure, to read of several "best-ever" results among the data for 2009. Remaining challenges are also apparent.

As always, the Council looks forward to providing you with any additional information or assistance that you might request.

Respectfully,

Barbara C. Wagner
Chair

Introduction:

On a chilly spring day in 1971, dozens of Connecticut citizens drove to the State Capitol to have their opinions heard. Most represented groups of sportsmen, conservationists, farms and other businesses, and they were united in common purpose: to oppose a bill that would create the Department of Environmental Protection (DEP). Legislators on the General Assembly's Environment Committee heard testimony from groups as diverse as the Connecticut Wildlife Federation, the League of Women Voters of Connecticut and the Fairfield County League of Sportsmen's Clubs, as well as from municipal officials, all telling the legislators to abandon or at least slow down their proposal to create a new department from an assemblage of state boards and commissions. Only five speakers supported the bill, which ultimately passed with virtually no debate.*

The previous year saw public fervor for a better environment organized into the first Earth Day. Citizens attended rallies across Connecticut and much of the nation. Government reaction to this new public advocacy was already underway. Governor John N. Dempsey appointed 155 (!) citizens to a Governor's Committee on Environmental Policy, and by June the Committee submitted 60 detailed recommendations. Within a year, the General Assembly established its first Environment Committee and adopted several cornerstone laws, including the much-berated bill to consolidate state conservation and pollution control efforts into a DEP, a creation that was *not* among the 60 recommendations of the Governor's Committee.
So how did it turn out? Were hopes fulfilled? Has the DEP been the solution envisioned by its few proponents or, as the majority argued, would Connecticut be better off without it? What has been accomplished by the collective efforts of Connecticut residents since that first Earth Day? There has been more than enough time to assess success and failure. The inaugural Earth Day was closer in time to the presidency of Herbert Hoover than to the present, and many intervening events and programs have had their judgment.

Below, the Council assigns success or failure to the major categories of environmental protection based on the goals and expectations of Connecticut's citizenry on Earth Day, 1970.

Success!

By any measure, Connecticut's **air is so much cleaner today that success must be declared**. Connecticut still must devise and implement a plan to reduce some pollutants further, and must count on the federal government to limit emissions in states to the west, but residents are breathing unhealthful air only 10 to 20 days each year. It was not unusual in the 1970s for the air to be bad on 100 days of the year, and the lead in gasoline was showing up in children's blood. Regulation, enforcement and private-sector innovation and investment paid off.

Forty **eagles are building nests today across Connecticut**, even in Hartford. In 1970, the Bald Eagle's steep decline and complete elimination from Connecticut and most other states was a powerful symbol of human contamination of the environment. Certain chemicals were implicated, most famously the insecticide DDT. Those chemicals were banned by state and federal law, and the results are soaring overhead.

Connecticut's law that protects **tidal wetlands** has been unusually effective and stands as one of the most successful regulatory programs anywhere, mostly because it presumes that destruction of wetlands along the coast will not be permitted. Not only has legal wetlands destruction been limited to less than an acre per year, but towns and the state have restored nearly 600 damaged coastal acres to ecological health.

Inland wetlands do not have the same restrictions as tidal wetlands, and thousands of acres have been destroyed legally since the first Earth Day. However, a switch in emphasis at the state level to training of municipal wetlands officials has slowed the loss considerably. With inland wetlands permit decisions in the hands of more than a thousand citizens, there still is a hit-or-miss element to effective inland wetlands conservation.

It is not possible the to fully measure the positive impact of **problems prevented.** Nonetheless, when one compares current practices to the incautious way in which industrial facilities and landfills were built over drinking-water aquifers in decades past, one can only assign a successful grade to Connecticut's groundwater classification and **aquifer protection** measures. Similarly, there has been a **virtual revolution in the management of wastes**. Hazardous materials are regulated closely, and operating garbage **landfills are nearly nonexistent** as most residents' garbage is burned for electricity generation.

Failure?

Connecticut taxpayers have spent billions on **sewage treatment**, and industries have spent commensurately to treat and/or eliminate their chemical wastes. Big rivers, streams and harbors have improved dramatically, so "failure" would seem a harsh judgment. Residents who remember the conditions in the 1960s assert that the rivers are much more attractive today, and many thousands of boaters and sportsmen and sportswomen can attest to fun days on the water and great fishing where 40 years ago neither was an option. But in the 1970s, the goal was to have *all* rivers "fishable and swimmable" by 1983. For a while the goal looked nearly attainable, but in fact most waters today are further from the goal even as the water itself has improved. New revelations and understandings, such as how mercury from air pollution accumulates in fish, have complicated the goals. Also, some small streams that held trout and other fish in 1970 are today muddied by runoff from development or are dry because of too many new wells in their watersheds.

Our **use and conservation of land,** beyond acquisition and management of state forest, parks and wildlife areas, shows mixed results. Only in recent years have large land-clearing projects been subject to substantial requirements to control runoff (though some towns and cities have performed excellently in this regard). Low-impact development is in its infancy, as are state government's efforts to use land and infrastructure more efficiently. Because the overall pattern of development since 1970 has been a sprawling one, many more miles of rivers and streams are degraded today by runoff from developed areas than are polluted by sewage treatment plants and industrial discharges combined.

Jury Still Out

So many Connecticut citizens have worked tirelessly at the local level to **preserve land** for the future that it seems harsh and misleading to characterize the end result as anything but success. Every acquisition is a success, and the Council learned in 2009 that there have been far more of those successes, totaling tens of thousands of acres, than have ever been tallied by the state. No one knows how much land has been permanently preserved in Connecticut. The Governor's Committee in 1970 wanted to see about 350,000 acres preserved by towns, cities and the state by 1980. We reached that mark at some point, though not with as much emphasis on ridgelines as envisioned. The goal in place since 1997 – to have cities and towns, land trusts and other nonprofit organizations, water utilities and the state save 673,000 acres by 2023 – might be in jeopardy but, again, nobody knows.

The **loss of farmland has been continuous** despite episodic efforts to preserve it. The constant conversion of farms probably contributes significantly to residents' sense of loss in a changing environment. Current efforts to

assist farms' profitability and preserve the land are strong by historical standards, but goals are in jeopardy and any farms lost are more noticed than the farms preserved.

Thousands of **properties remain contaminated by chemicals** that spilled, leaked or were dumped in decades past. Despite numerous laws and programs aimed at restoring these properties, many sit idle and polluted. If the goal were simply to keep the contamination separated from people and their drinking water, the laws could be deemed partially successful. If, however, the goal is to see the properties cleaned and re-used for productive purposes, few would call the mission accomplished.

One fact that might have been true in 1970 has since been well documented: most people would like to live their lives as they wish while creating as few negative impacts on the environment as possible. State government and municipalities have put in place several tools that allow each citizen to reduce their **personal impacts** each day of their lives, such as recycling, enforcement of regulations, and energy-efficiency and renewable-energy options. Most citizens, however, do not have realistic transportation options to the automobile, and zoning laws have led mostly to sprawling land use patterns that limit residents' choices. Compared to 1970, the average Connecticut resident drives at least fifty percent more miles each day and uses more electric things; if today's vehicles and appliances were as polluting and inefficient as they were in 1970, Connecticut might be a disaster area.

As environmental knowledge and expectations have evolved, citizens, their organizations and local and state governments have had to spend considerable time and money solving environmental **problems that in 1970 were mentioned only briefly or not at all**. Among the many examples are the tracking and regulation of hazardous chemicals emitted into the air, the diversion of streams by dams and pumping, the proliferation of telecommunications towers and their proper siting, and the illegal use of vehicles on park and forest land. These remain continuing challenges to Connecticut and its communities.

Big Plans

If one wants to add paper successes to the measurable advances cited above, then the creation of **comprehensive goals and plans** for most aspects of Connecticut's outdoors must be mentioned. Connecticut has citizen-approved plans for open space conservation, air quality, forest management, water quality in rivers, streams and Long Island Sound, wildlife conservation, outdoor recreation, solid waste disposal and recycling, and nearly everything else. These plans need only be implemented to fulfill the public's vision of Connecticut. In this respect, environmental protection has entered an era of deliberate bureaucracy and slow change, replacing an earlier period of obviously unacceptable conditions, passionate hearings, and rapid improvement. Residents surely care greatly about clean air and water today, and most would vigorously oppose measures to allow more pollution; nonetheless, today's problems, aside from the loss of beauty, are subtle and require a practiced eye to observe. Even the person who spends much of his or her time outdoors will not see changes from year to year. This is especially true for people 25 and younger, who view their immediate environment as mostly unchanged over their lifetimes except for periodic and dramatic losses of favorite fields, woods, and even buildings.

Meanwhile…

The forty-year view is interesting, and each Connecticut resident can take justifiable pride in his or her contributions to the improvements. But in 2010, those same residents live every day breathing today's air, drinking today's water, and taking in today's landscape. More important than past accomplishments are the risks and acceptability of current conditions. Progress and decline seem imperceptible until something dramatic

occurs such as the unexpected destruction of a cherished view or woods or fields. As always, the core of this report presents data that document the condition of Connecticut's environment today and the direction in which it is heading.

*During the public hearings of 1971, many citizens spoke on the proposal to create a Council on Environmental Quality. Read more...

New in This Edition

Regular readers of this report know that its key elements are the 30 or so environmental indicators that describe Connecticut's environment objectively and reliably. A few changes were made this year to enhance some of the indicators:

The Forest indicator now illustrates the total acreage of forested land in Connecticut and a subset of forest that is termed "core forest." Core forests are those most likely to carry out all potential functions of a forest because they are undisturbed by development.

The Preserved Land indicator is now limited to state-owned land. The Council determined in 2009 that all estimates of open space owned by municipalities and nonprofit organizations are inaccurate.

The Sound and Shore indicators have been reorganized. Several charts that used to stand alone are now grouped under Life in Long Island Sound or Pollution in Long Island Sound. The latter includes a new indicator of approved shellfish beds that better reflects the condition of the water than did the old measure of leased shellfish beds.

Many of these changes were suggested by readers. The Council greatly appreciates their advice. Additional changes proposed by readers are in the works.

Arrowheads Explained

Above each environmental indicator on the pages that follow, readers will find an arrow that illustrates improvement (arrowhead up) or decline (arrowhead down) in environmental conditions. There are four variations of the arrow symbols:

The data show a positive change from the previous year. The one-year change is not always consistent with the long-term trend, which is displayed on the chart.

The data show a negative change from the previous year. The one-year change is not always consistent with the long-term trend, which is displayed on the chart.

The data for 2008 (or the latest year available) show a very small change, positive or negative, from the previous year.

Connecticut is not on track to meet its long-term goal. This symbol is used for those indicators that, except in the most unusual circumstances, always will show some progress. ("Preserved Land" is one example.) It would be misleading to label the one-year change as "improved" if the progress is not sufficient to get the state to its goal by the established target date.

Bottom Line

A very brief summary of 2009

Improved or Held Steady at a Positive Level in 2009:

- Air Quality
- Bald Eagles & Piping Plovers
- Drinking Water
- Recycling

What these improvements have in common: *They are the results of effective regulatory programs and modest public capital investments.*

Declined or Held Steady at a Level Insufficient to Meet Goals:

- Beach Closings
- Forests, Fields, Farms
- Inland Wetlands
- Life in Lond Island Sound
- Pollution in Long Island Sound
- Sewage-free Rivers

What these deficiencies have in common: *They will require substantial public capital investment or, in some cases, improved strategies before goals will be met.*

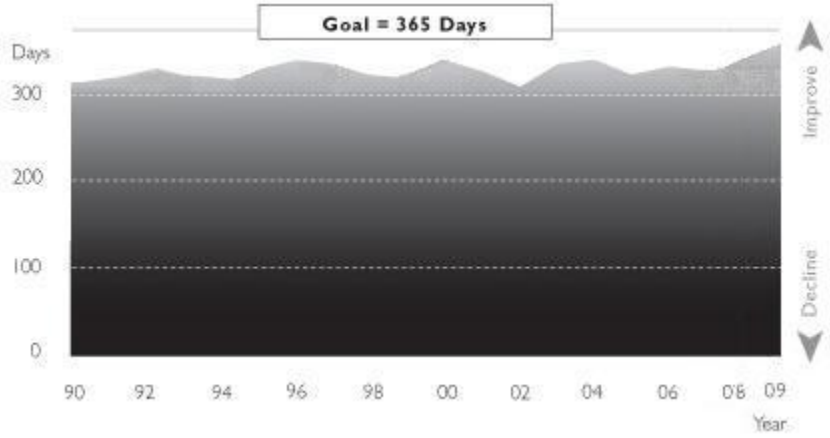
Trends in Personal Impact indicators:

- Connecticut residents used electricity more efficiently, and might have recycled more -- all good!
- Residents did not continue their shift to greater bus use that had been apparent for three years, but they did drive less.
- Compliance with environmental laws fell below 90 percent for the first time in five years.

Good Air Days

In 2009, Connecticut saw the most Good Air Days it has seen in more than 40 years.

Levels of ground-level ozone violated the standard that protects human health on six sunny summer days, but fine particles violated the standard on only one day.



A Good Air Day is a day when every monitoring station in the state records satisfactory air quality. "Satisfactory air quality" is defined here as air that meets the health-based ambient air quality standards for all of the following six pollutants: sulfur dioxide, lead, carbon monoxide, particles, nitrogen dioxide, and ground-level ozone.

Connecticut's goal is to have air that meets health-based standards for all pollutants. Violations of health-based air quality standards have been eliminated for all pollutants except ground-level ozone and fine particulates.

Ozone is created when nitrogen oxides and organic compounds in the air react in the presence of sunlight. Weather is a big factor in year-to-year fluctuations. Motor vehicles remain a major source of ozone-forming emissions despite improvements in tailpipe standards. Much ground-level ozone originates in states to Connecticut's west.

In most years, cities and towns in the western and coastal regions of the state see the most bad air days. In 2007 and again in 2009, however, inland towns had more. Only one community (Stafford) had as many as three bad air days in 2009, and many towns had none.

Fine particles, such as those found in smoke and haze, are 2.5 micrometers in diameter and smaller. These particles can form when gases emitted from power plants, industries and automobiles react in the air. Violations of the standard occur mostly in summer and winter, rarely in spring and fall. The one violation of 2009 occurred in New London in January. All of Connecticut except for

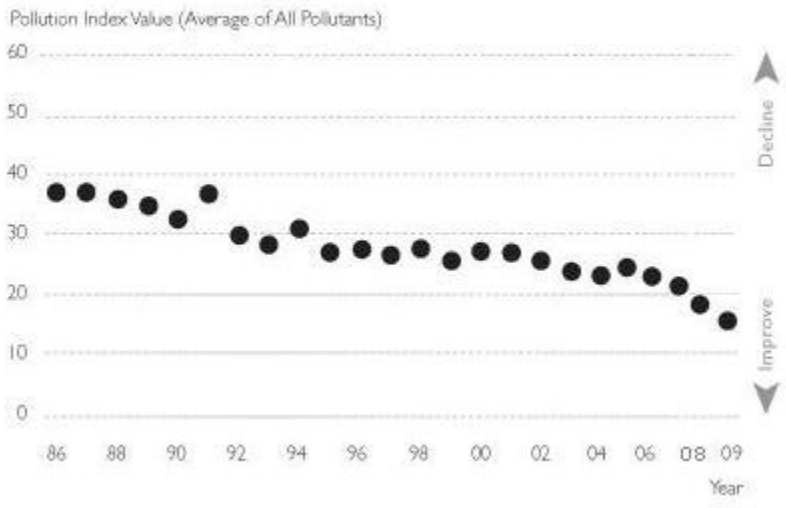
Fairfield and New Haven counties meet this standard for fine particles. Those counties must meet the new air quality goals for fine particles by 2015.

Technical Note: The federal government modified the standards for fine particles in December 2006 and for ground-level ozone in early 2008. The chart above was redrawn to illustrate the state's historical pattern of good air days by applying the new, stricter standards to all years. In 2010, the federal government is again reviewing the standards for particles and ground-level ozone.

Air

Clearing the Air

Connecticut's air in 2009 was the best in decades -- the third record-breaking year in a row. Every pollutant showed improvement.



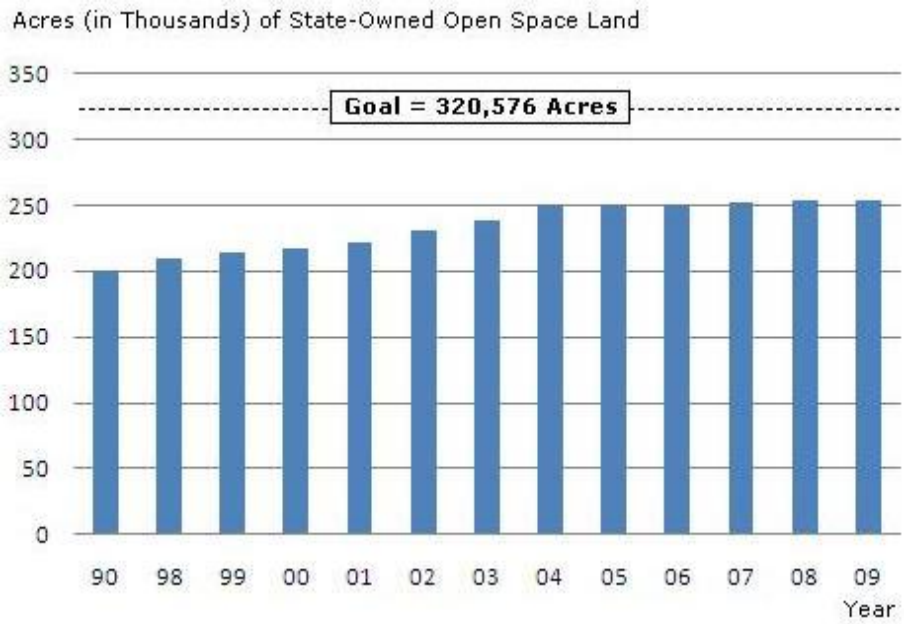
Six air pollutants -- sulfur dioxide, lead, carbon monoxide, particles, nitrogen dioxide, and ground-level ozone -- are measured across the state by the DEP. At the end of every year, the Council expresses the average level of each pollutant on a numerical scale, where zero equals no pollution and 100 represents the "unhealthful" level of the specified pollutant. The Council then takes this annual number for each of the six pollutants and averages them to yield the single index value on this graph. Levels of lead in the air have dropped so low that they barely register in this indicator. Following several years of measurable improvement, 2005 was the first year since 1994 to see all of the pollutants (excluding lead) get worse. In 2006, all pollutants except particles showed improvement, and in 2007 all pollutants except ground-level ozone showed improvement. Every measure except carbon monoxide showed improvement in 2008. Every pollutant showed improvement in 2009.

Preserved Land

Connecticut's goal is to preserve 21% of the state's land area by 2023, but nobody knows how much land has been preserved.

State law (C.G.S. 23-8(b)) sets a goal of conserving 21% of Connecticut's land area. The Green Plan, Connecticut's official land conservation plan, establishes 2023 as the target date. That goal includes conservation land owned by towns and cities, land trusts and other nonprofit organizations, water utilities and the state. However, the Council determined in 2009 that previous state estimates of the acreage owned by municipalities and nonprofit land trusts were inaccurate. Those estimates, which were reported in previous editions of *Environmental Quality in Connecticut*, are not included in this edition.

The same law sets a goal for state ownership of land for parks, forests, and wildlife areas. Records of state-owned lands are accurate, and are reported here:



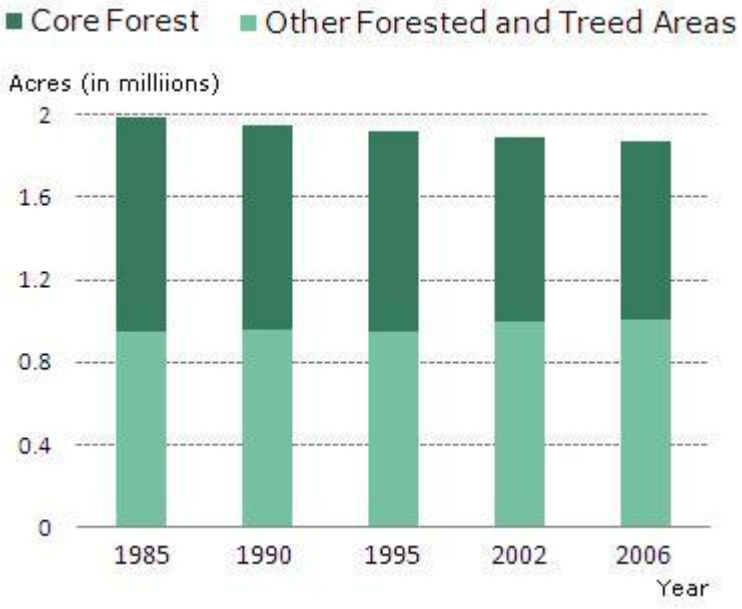
From 2000 through 2004, the pace of state land preservation was sufficient to keep Connecticut on track toward its 2023 goal, but acquisition since slowed.

The absence of an accurate inventory of protected land in Connecticut is a serious deficiency. The Department of Environmental Protection has been working on an inventory for many years, but the data will be static and not up to date when and if the project is completed. To make land preservation more strategic and cost-effective, Connecticut needs a reliable registry of protected lands.

Farm, Forest, Wetland

Forest

After a century of growth and relative stability, Connecticut's forests -- especially the most valuable core forests -- have been shrinking for two decades.



Most of Connecticut's forests were cleared for agriculture and industry in the 19th century and then allowed to regenerate. From 1960 to 1980, the overall acreage of forest did not change much even with the rapid spread of roads, housing and commercial development. According to the U.S. Forest Service, the spread of forests on abandoned farms equaled the conversion of forested land to other uses. The late 20th century brought a change, with forest acreage now declining.

This indicator shows the total acreage of forests in Connecticut. The forests are divided into core forests and other forests. Core forests are at least 300 feet from non-forest development such as roads, buildings and farms. Forests that are fragmented or divided by roads and buildings serve some forest purposes but are not fully-functioning forest ecosystems. Fragmented forests are known to provide substandard habitat for many species of wildlife and, in many cases, less opportunity for hunting and other types of recreation.

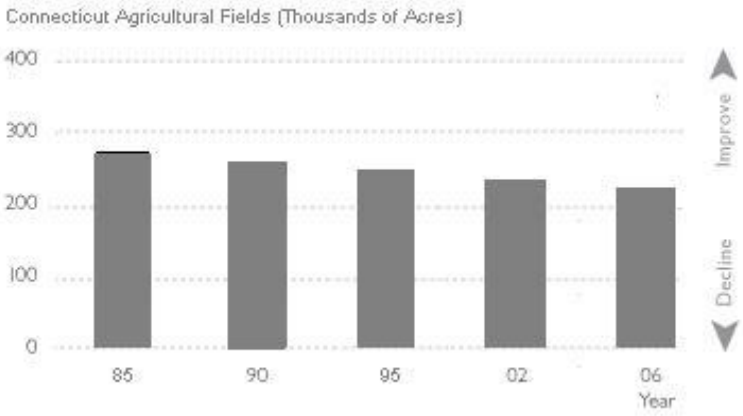
Even as the total acreage of forests might fluctuate over years or decades, the extent of core forests will always show a decline, except in rare instances where roads or developments might be abandoned and reclaimed by forests.

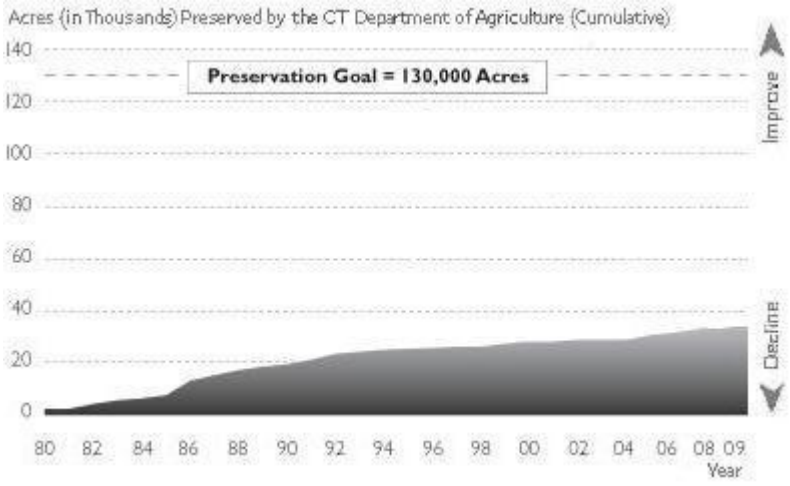
Technical Note: The definition and measurement of core forests is done by the Center for Land Use Education and Research (CLEAR) at the University of Connecticut as part of the Connecticut's Changing Landscape Project. The Council finds these data, derived from CLEAR's analysis of satellite imagery, to be the most accurate data available. Satellite data is examined by CLEAR every few years; this indicator includes the most recent data available (2006).

Farm, Forest, Wetland

Farmland

Connecticut preserved 1,370 acres of farmland in 2009. The state's goal cannot be reached at this pace because farmland loss continually outpaces preservation.





To preserve land for future agricultural use, the State Department of Agriculture purchases the development rights to farmland from volunteer sellers. This keeps the land in private ownership with severe restrictions on future nonagricultural development. In 2008 the state acquired development rights to seven farms totaling 675 acres. Those numbers improved in 2009 to 10 farms totaling 1,370 acres. A greater number of farms are reported to be pending closure in 2010. Funds are mostly from state bonding and the Community Investment Act.

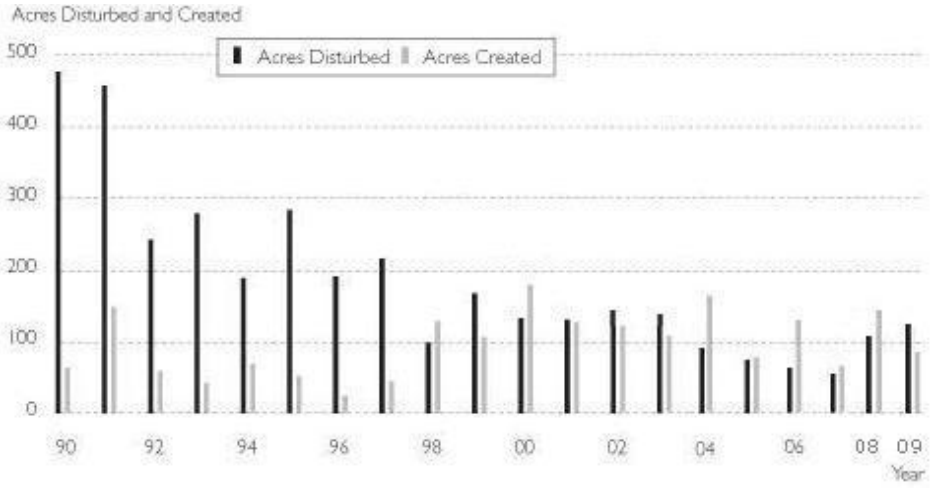
Connecticut's farmland preservation goal is based on the amount of land needed for food production needs (though non-food crops including potential biofuel crops could cause the goal to be raised). Mathematical projections of the current preservation rate show the goal being reached in the late 22nd century, but in reality there will not be that acreage of agricultural land remaining in the state by the end of the current century if the recent rate of loss continues. Preservation of at least 2,000 acres annually should result in success; that rate could be achieved in 2010.

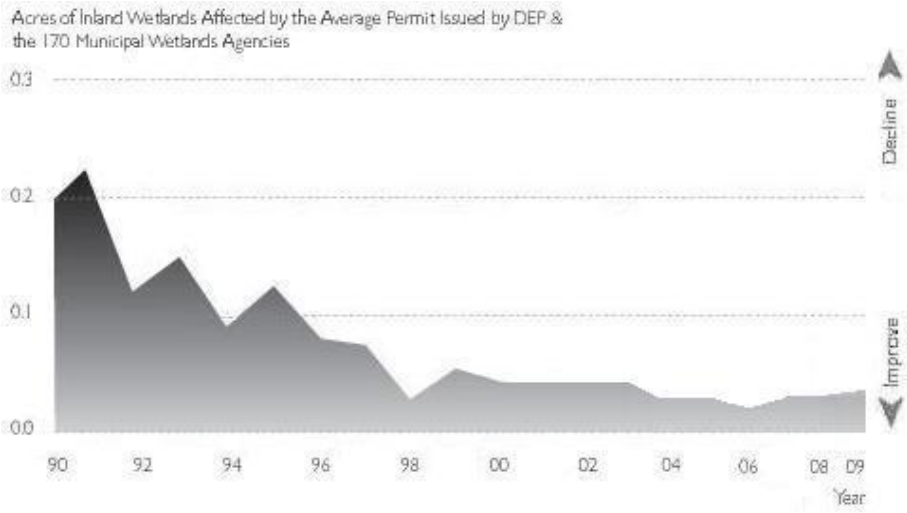
This indicator does not show agricultural land acquired for preservation by municipalities and nonprofit organizations. Several towns purchased farms in 2009 with no state assistance, and those acres are not reported or recorded at the state level. Along with a central registry of preserved open space, Connecticut needs a registry of preserved farmland to help state agencies and other organizations preserve land strategically.

Technical Note: Until 2008, the upper chart showed the total acreage of land in Connecticut farms as counted by the U.S. Department of Agriculture (USDA). The Council has found a superior data source in the University of Connecticut's Center for Land Use Education and Research (CLEAR). CLEAR staff analyzes satellite imagery to measure the actual area of fields, pastures, orchards and vineyards. In contrast, the UDA data counted all land in farms, even that which was not used for agriculture. CLEAR analyzes new satellite imagery every few years; the most recent imagery is from 2006.

Inland Wetlands

Cities and towns have permitted destruction of fewer wetland acres most years since 2000. However, that trend reversed in 2008.





The "Acres Disturbed and Created" graph shows the acreage of wetlands disturbed by development and the number of those acres replaced by human-made wetlands. "Disturbed" wetlands are those affected directly by human activity, which can range from total destruction (when the wetlands are filled and built upon) to conversion from one type to another (when, for example, a shallow swamp is dredged to create a small pond). 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 conservation.

Inland wetlands are estimated to cover about 450,000 acres, or 15 percent of Connecticut's surface. More than 95 percent of the development activity in and around wetlands is regulated by municipalities with minimal oversight or supervision by the Department of Environmental Protection (DEP). Some of the ups and downs in wetlands loss since 1990 are directly related to changes in the economy and the number of wetlands applications received. However, the trend in the graph showing the "Area of Inland Wetlands Affected by the Average Permit Issued" indicates that wetlands agencies have also become more conservative since 1990. Since 2004, the average permit has resulted in disturbance of only about .02 of an acre.

In October 2008 the Council published *Swamped*, a special report that analyzed performance of numerous aspects of the state's inland wetlands program, including training. State law requires every municipal wetlands agency to have at least one member or staff person complete the DEP's comprehensive wetlands training program, but many municipalities do not comply with this requirement. A thorough statistical analysis found that cities and towns that had at least one trained member or staff person allowed less wetlands disturbance than towns that were not in compliance with the training requirement. State-sponsored training is more thorough and convenient than it was in the 1990s.

The decline in local commissions' performance in 2009, when the average permit resulted in greater wetlands disturbance, should be considered a preliminary result, as some data for 2009 have not yet been reported and entered by the DEP.

Technical Note: There are numerous municipalities -- usually about 20 percent -- that fail to submit reports of permit decisions to the DEP as required by law. The Council adjusts the reported data to account for the non-reporting towns, but inaccuracies are inevitable. (The Council is confident that the statistical adjustment is reasonable, because *Swamped* also examined differences in performance between towns that report to the DEP and towns that don't and confirmed that non-reporting towns are similar to reporting towns in the average amount of wetlands destruction they permit.)

No Swimming at the Beach

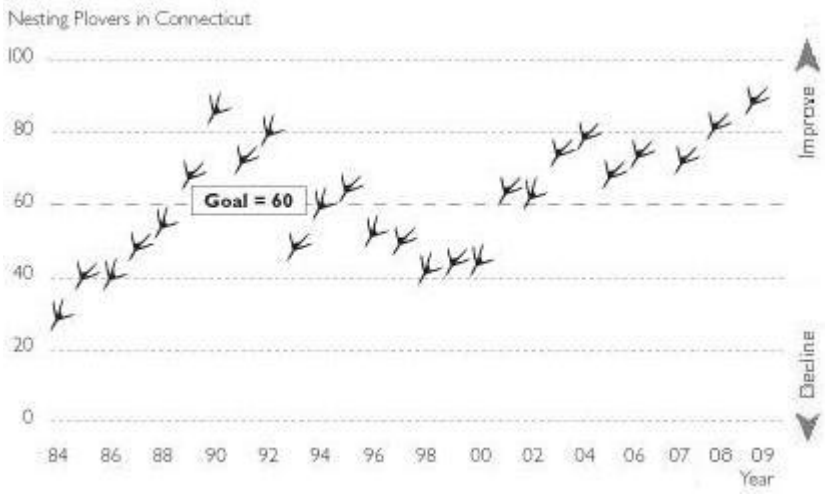
The average coastal town has had to close its beaches for two to four days in most years, usually because of pollution washed into the water by heavy rains. Most closings are in the western half of the state.

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. Yearly variations are products of rainfall patterns and incidents such as sewer-line ruptures. Dry summers will see fewer closings. After rain storms, runoff and overflows from combined sanitary/storm sewers are presumed to contaminate the water, prompting towns to close beaches automatically as a precaution. Such precautions accounted for the majority of beach closings in 2009. Other documented causes included bacterial contamination from septic systems and wildlife.

The Council adds up the number of days that each city and town closes one or more of its public beaches, and calculates an average for each year.

Piping Plovers on the Beach

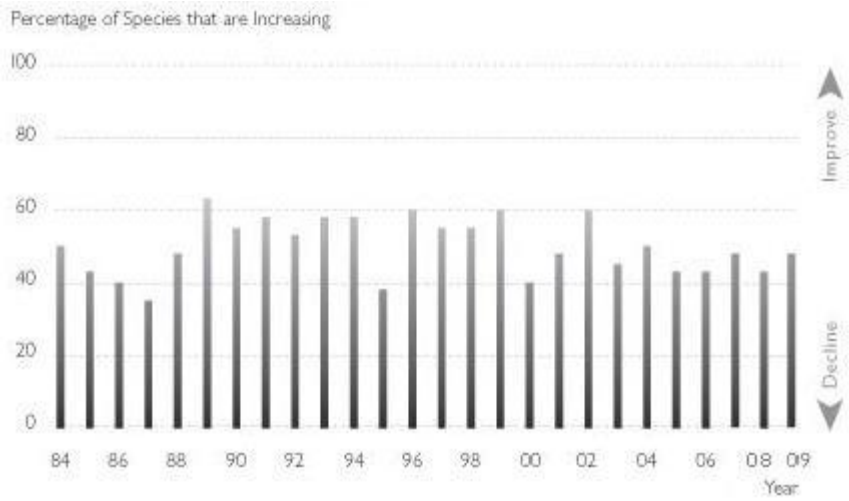
Their best year in decades: 88 of these small, threatened shorebirds nested on 16 coastal beaches from Westport to Groton.



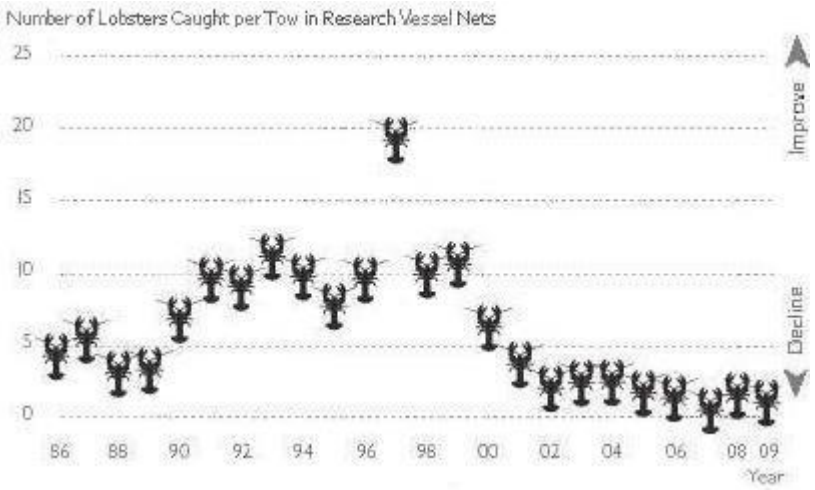
Piping plovers are small shorebirds that nest on sandy, vegetation-free beaches. Human intrusion, storm tides, and predators frequently destroy nests. Nesting adults are counted and in most cases protected every spring by the DEP and volunteers working with The Nature Conservancy. The piping plover's status is "threatened ." The protections afforded these plovers also benefit other nesting species, including least terns, which are also threatened in Connecticut. 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.

Life in Long Island Sound

About half of the fish species in Long Island Sound are increasing:



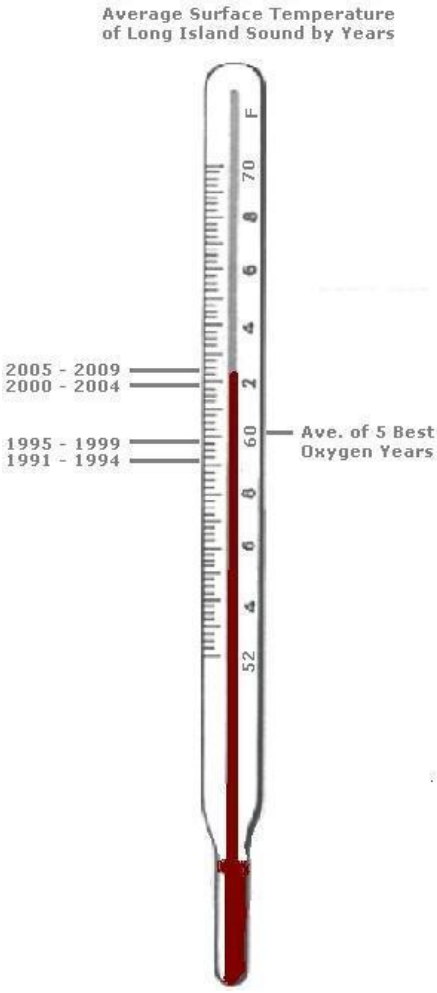
The American Lobster is still scarce:



Researchers are focusing on a combination of four possible causes for the dramatic downturn in lobster populations since 1999: disease, changes in water quality, changes in climatic conditions, and human impacts to the Sound. Research to date suggests that a trend toward warmer water temperatures is an important factor in the decline of lobsters. The autumn 2007 trawl yielded the lowest number in at least 20 years. The autumn 2009 trawl (illustrated on the chart above) showed a slight decrease, and the spring 2009 trawl (not shown) yielded the lowest totals on record.

The DEP samples marine fish, squid and lobster populations every spring and fall by towing nets from a research vessel. The top graph shows general trends in the collective populations of lobster, squid, and 38 species of fish. In 2005 through 2009, fewer than half of these species were as common as they were in the 1980s and 1990s. From 1984 through last year, about half of the species showed a decline. Scientists are unsure of the reasons behind the declines and fluctuations of recent years. One possible explanation for the decline of some prey species is the population growth of striped bass and other predators. Over recent years, some colder-water species such as Winter Skate and Atlantic Herring have declined as warmer-water species such as Scup and Northern Sea Robin have increased along with the average annual temperature of the Sound.

Does the Sound have a fever?



The Sound's surface temperature in 2009 was below average. Nonetheless, the last five years show the highest average temperature. All of the previous five years saw a warmer-than-average Sound. The warmest year to date was 2006.

The thermometer shows the trend over two decades and also the average temperature when oxygen levels in the Sound were at their best. Generally, a high surface temperature leads to more marked layering of the water which leads to lower oxygen levels, or hypoxia, in the depths.

Technical Note: The top graph shows trends in 38 species of fish plus Long-finned Squid and American Lobster. The number displayed for any year is the percentage of these 40 species that were above their long-term average populations.

Declined in 2009

Windowpane Flounder
Fourspot Flounder
Tautog or Blackfish (shown)

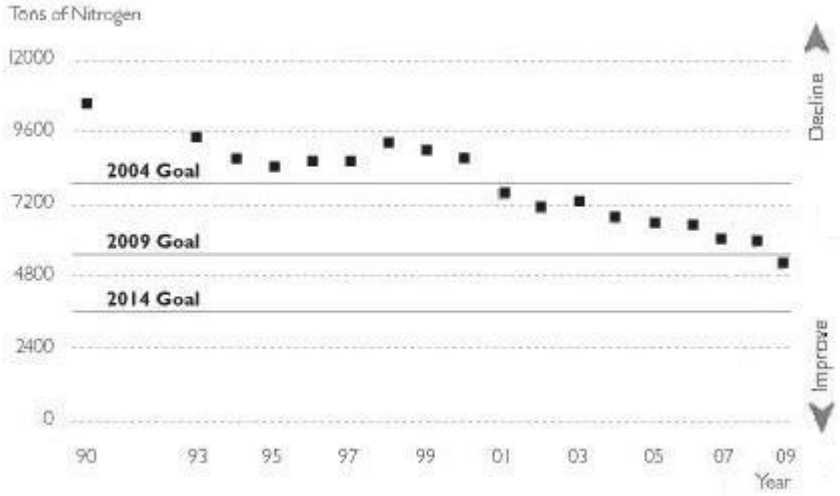
Improved in 2009

Butterfish
Moonfish
Summer Flounder
Long-finned Squid (shown)

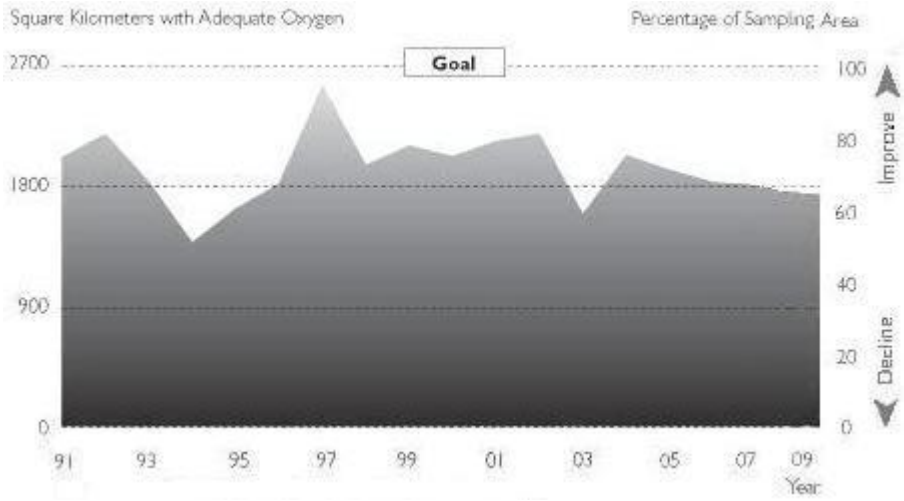
Pollution in Long Island Sound

No Change

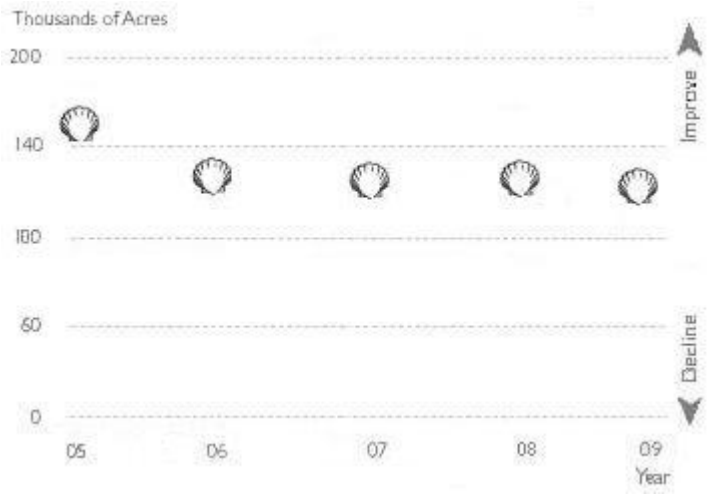
The amount of nitrogen dumped into Long Island Sound and its tributaries affects oxygen levels in the water. Connecticut has been reducing nitrogen discharges to Long Island Sound and has met all targets to date:



However, the area of low oxygen expanded again in 2009:



The area of shellfish beds unconditionally approved for harvesting has declined since 2005:



Hypoxia is a condition in the water when oxygen levels are too low to fully support desirable forms of life, including fish and lobsters. (For this indicator, hypoxia is defined as less than or equal to 3.5 mg/l of dissolved oxygen.) Hypoxia occurs when the nitrogen in pollution stimulates excessive growth of aquatic plants, which die and are consumed by oxygen-using bacteria. Connecticut's goal is to "eliminate the adverse impacts of hypoxia resulting from human activities." Hypoxia occurs predominantly in the western portions of the Sound. Weather greatly influences hypoxia, making year-to-year changes less important than long-term trends.

To reduce the nitrogen inputs that cause hypoxia, Connecticut and New York adopted a comprehensive management plan in 1994, and built upon that plan with an expanded agreement in 2002.

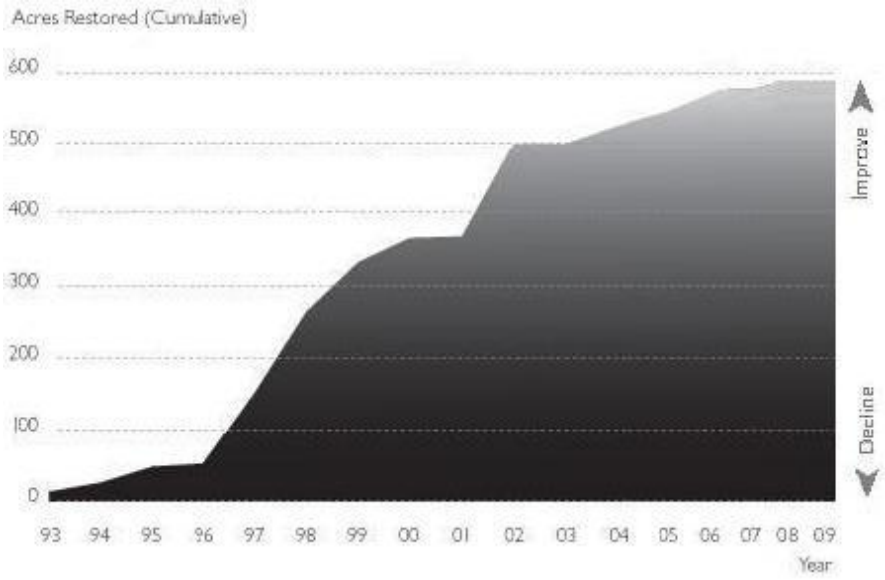
The top graph tracks the amount of nitrogen discharged to the Sound and major rivers by 79 sewage treatment plants, 3 large coastal industrial facilities, and a group of industrial sources in the Naugatuck River watershed. Connecticut's investments in nitrogen-removal technology have been successful. Also there are large uncontrolled quantities of nitrogen entering Long Island Sound in the rain that runs off lawns and pavement . Overall, Connecticut's share of the total nitrogen pollution in Long Island Sound is about one-third, and New York's is two-thirds. In April 2001, the federal Environmental Protection Agency approved the New York and Connecticut joint plan for implementing a Total Maximum Daily Load (TMDL). The TMDL is the maximum amount of pollutants that can be discharged while still allowing water quality standards to be attained.

The Connecticut Department of Agriculture's Bureau of Aquaculture and Laboratory Services monitors shellfish beds and classifies them according to their potential for the harvesting of healthful, uncontaminated shellfish. The third graph above shows the acreage of shellfish beds that are unconditionally approved for harvesting because they are generally unaffected by pollution. (Even areas that are fully approved can be closed as a precaution following exceptional rainfalls of three or more inches.) Aquaculture experts have suggested that the volume of runoff from lawns and pavement is increasing and flowing further into the sound, resulting in the shrinkage of the shellfish beds that are fully approved.

Technical notes: The second graph shows the area of Long Island Sound that had adequate oxygen levels throughout the year. The sampling area (2700 square kilometers) does not include the whole Sound (3400 square kilometers). The areas not sampled are shallow waters (less than two meters deep) near shore, which generally do not experience hypoxia; embayments; the eastern end of the Sound, which is not expected to experience hypoxia; and an area in the far western end, which probably becomes hypoxic in most years. In 2004, the DEP redefined hypoxia to include waters with less than or equal to 3.5 mg/l of dissolved oxygen (replacing the older 3.0 mg/l standard). The areas of adequate oxygen displayed on the graph were then recalculated for all years.

Reviving Tidal Wetlands

Restoration has slowed dramatically as the relatively simple projects have been completed leaving the less accessible areas and more complex restorations to tackle.



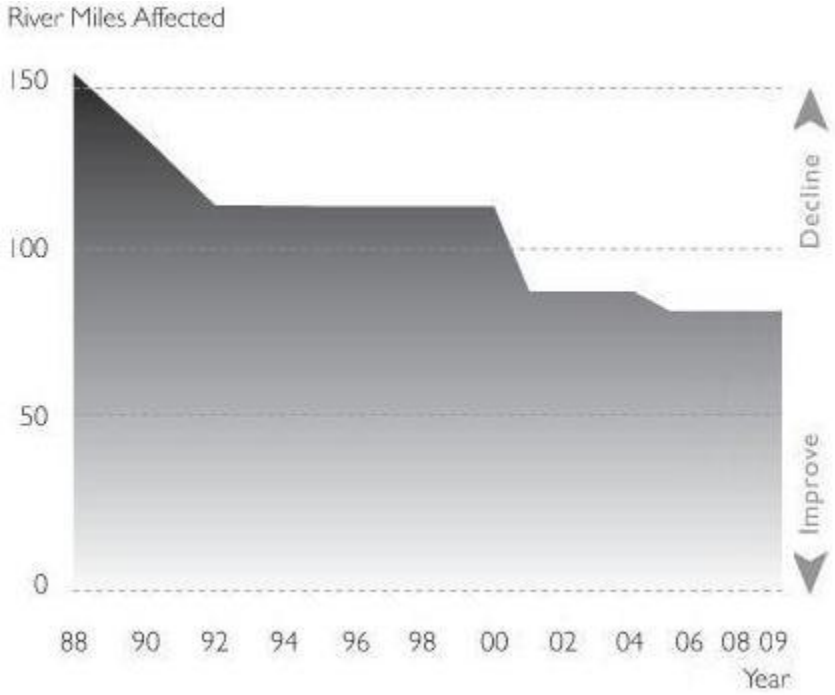
Restoration includes work performed by the state as well as by coastal landowners required by the DEP to restore wetlands as conditions of their permits. Restoration acreage is counted only where tidal flow has been restored permanently, and does not include minor enhancements or simple vegetation management.

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. In 2002, more than 100 acres were restored, mostly associated with the Connecticut and Quinnipiac Rivers. In 2005, about 40 acres were brought back to life (in Stratford and Old Saybrook). Three acres were restored in 2007, twelve in 2008, and five in 2009.

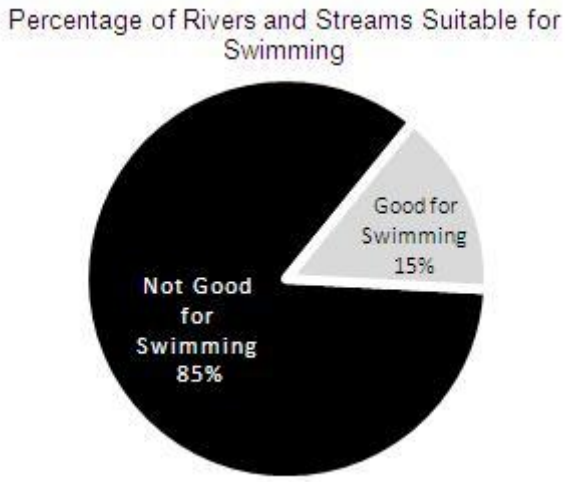
Restoration has been outpacing development: less than one acre of tidal wetlands has been lost each year to permitted development.

No Swimming in the River

About 80 miles of rivers still receive overflows of raw sewage during storms.



Throughout the state, only 15% of rivers and streams are classified as being clean enough for swimming and other water contact sports.



In fourteen Connecticut cities and towns, sanitary sewers were built in combination with storm sewers. 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 and Long Island Sound. Several of these combined sewer systems have been completely or partly separated since 1990, reducing the impact of untreated sewage on rivers. The improvement in 2001 can be attributed to the completion of projects in the towns of Waterbury and Naugatuck. It also reflects greater precision in the DEP's data collection and analysis. Connecticut's goal is to eliminate the effects of raw sewage discharges from combined sewer systems. Progress is slow because of the extraordinary expense of separating the sewers. In 2005, the Jewett City project was completed, eliminating overflows of raw sewage into the Quinebaug River.

The pie chart illustrates the percentage of the state's rivers that fully support recreation. This is an estimate based on sampling and statistical analysis by the DEP. Most streams are not monitored directly.

Is There Water in the River?

(Better 40 Years Late Than Never)

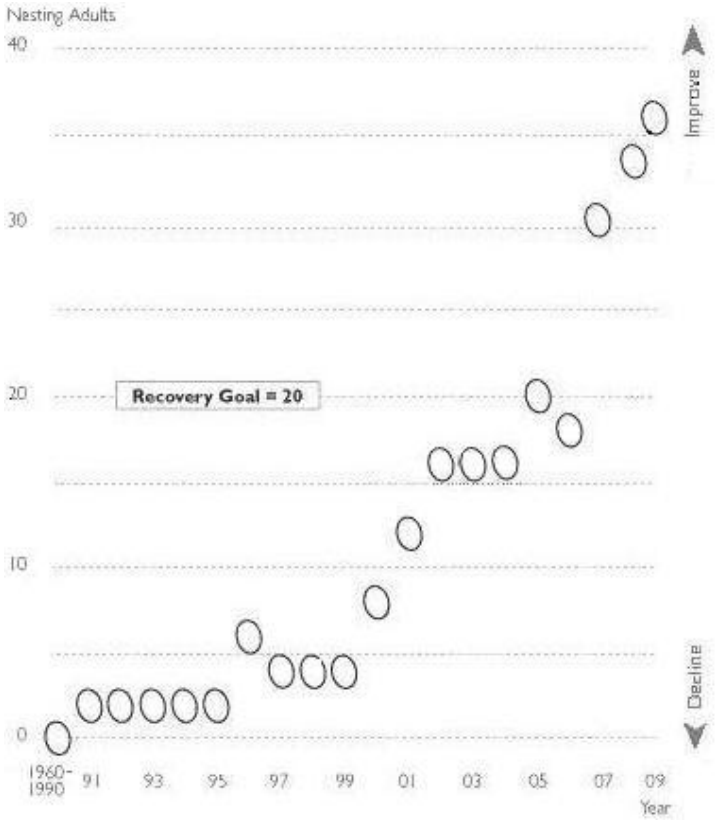
January 21, 2010: The Department of Environmental Protection holds a public hearing on proposed Stream Flow Standards and Regulations, specific to the hydrological and ecological character of each stream and requiring release from storage under certain conditions to augment flow.

June 23, 1970: *"The Water Resources Commission, with the advice of the Board of Fisheries and Game, should be authorized to establish and regulate minimum stream flows…Flows must be tailored to fit the hydrological and ecological character of each stream as established by the minimum demands of aquatic life. Authority should include the power to augment flow from storage…"*

Governor's Committee on Environmental Policy, Recommendation #48

Bald Eagles

Bald eagles have come back to Connecticut, even to cities. The chemical pollutants that interfered with their reproduction have been controlled, and large trees along fish-rich rivers offer good nesting sites.

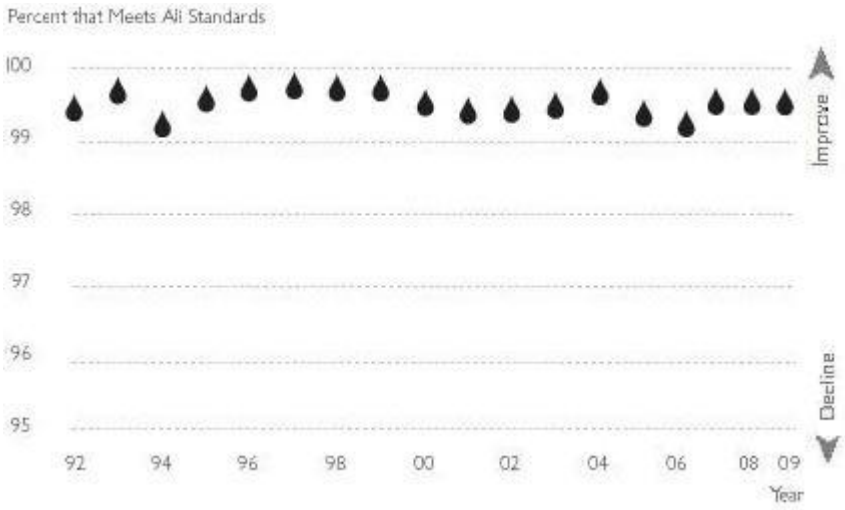


Bald eagles stopped breeding in Connecticut in the 1950s. The species declined throughout the lower 48 states and was declared endangered in 1967. A variety of environmental conditions harmed the eagle, including the widespread use of certain chemicals (chlorinated hydrocarbons) that accumulated in its prey (mostly fish). When those chemicals were banned and polluted waterways were improved, the bald eagle was able to reproduce again. Young eagles were reintroduced into nearby states in the 1980s, and a pair found their way to Connecticut in 1991 and successfully raised a family in 1992. Many more pairs have since found acceptable nesting habitat on land protected by government and private landowners including utility companies. The DEP monitors the eagles with the assistance of the Bald Eagle Study Group and other volunteers.

The bald eagle is listed as endangered in Connecticut. The federal government removed the bald eagle from its list of threatened and endangered species in August 2007. The Northern States Bald Eagle Recovery Plan established a goal for Connecticut of 20 breeding birds (10 nests), which was reached for the first time in 2005. The population of bald eagles is included as an indicator because the eagle is representative of species, especially predators, that share similar habitat requirements: large areas of relatively undisturbed land near rivers or lakes where the birds can find adequate supplies of fish and other prey that are – very importantly – only minimally contaminated.

Drinking Water

All of the large water companies delivered water that met all standards in 2009. Violations occurred only in small and a few medium-sized systems.

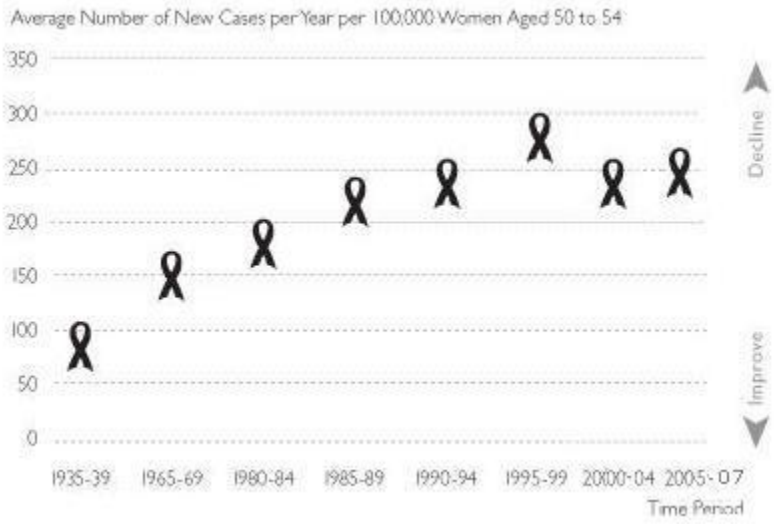


Every public water utility submits monthly quality reports to the Department of Public Health. This indicator shows the percentage of monthly reports that demonstrate full compliance, after weighting the reports to account for the number of people served by each utility. Though long-term problems persist, they occur most frequently with small systems serving relatively few households. This indicator would show greater fluctuations if the larger systems failed to deliver good water. As in most years, most of the contamination problems of 2006 occurred in small systems, but a few short-term problems in larger systems caused this indicator to show a downturn for a second consecutive year. The pattern was similar in 2007 but showed improvement and in 2008 and 2009 was unchanged. The most commonly encountered contaminants included bacteria and byproducts of disinfection, with an assortment of other chemicals and radioactive substances.

Customers of the Metropolitan District Commission who remember the precautionary notice to boil their water in April of 2009 might be wondering why no drop in water quality is shown in the data for 2009. The history of this warning is that copepods & rotifers were detected in the treated water at one of the MDC facilities. These two organisms are not in themselves harmful; they exist naturally in the environment and can be found in just about any surface water reservoir. A warning was issued while an investigation was undertaken to determine if there were any other organisms present that could pose a health threat. At no time was any drinking water standard violated because these organisms are unregulated under the federal Safe Drinking Water Act. There are no mandated testing requirements for these organisms because they do not pose a human health concern.

Breast Cancer in Connecticut

Connecticut has the highest incidence of breast cancer among the 50 states, but has seen improvement since a peak in the late 1990s.



Of every 100,000 women in the state aged 50 to 54, a number will discover each year that they have breast cancer. That number is depicted in this graph. (The council presents data on this one age group, rather than on the entire female population, to control for factors such as changes in the average age of the larger population; age 50 to 54 was selected as a representative age group and is used in each year's report.) To minimize year-to-year fluctuations, groups of years are averaged together. (In other words, each data point on the graph shows the number of new cases in a single year, but that year is actually the average of five years.) While some breast cancers are linked to genetic factors, most are associated with non-genetic factors including diet, reproductive history, lifestyle, and external agents.

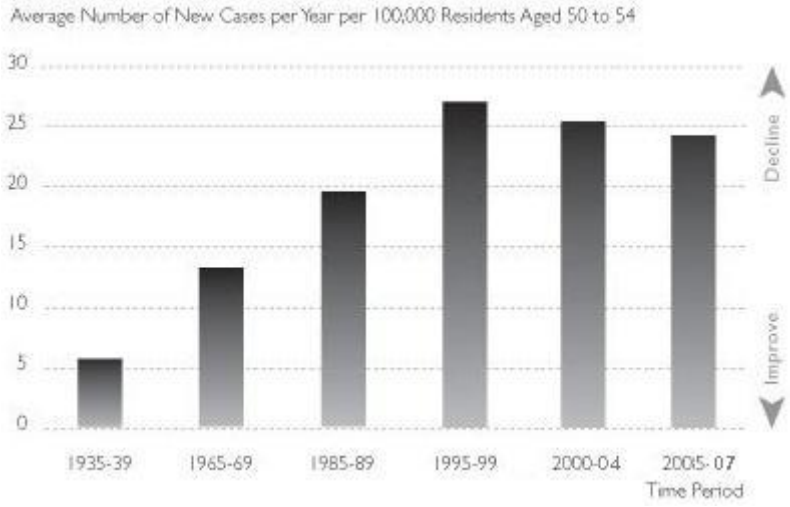
Breast Cancer as an Environmental Indicator

There are numerous studies connecting certain chemicals and other environmental factors to breast cancer. These factors, if significant, do not appear to be as important statistically as a woman's own reproductive history, but it is important to note that breast cancer rates vary greatly in different parts of the country. Among the fifty states, Connecticut has the highest incidence of breast cancer; this assessment is based on average incidence rates from 2002 through 2006, the latest years for which 50-state data are available. (Source: North American Association of Central Cancer Registries). There is little doubt that some of the increase since 1980 is attributable to better detection methods. But better detection, which might save lives by allowing for earlier treatment, cannot be responsible for all of the apparent increase in new cases.

The rate of new cases showed improvement in 2000 through 2004 (using the average of the five years) but worsened very slightly over the three-year period of 2005 through 2007 (the most recent years for which Connecticut data are available).

Non-Hodgkin's Lymphoma

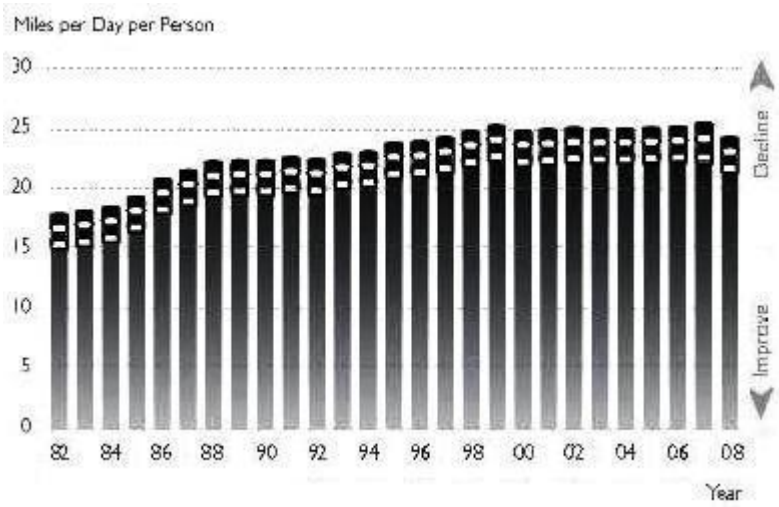
The reasons for the steep increase in this cancer are not well understood, but many reports cite exposures to specific chemicals as potential factors.



Non-Hodgkin's lymphoma is a cancer of the lymphatic system. It begins in the lymphoid tissue which contains lymphocytes, white blood cells that help the body fight infections. Lymphocytes travel throughout the body and can carry abnormal lymphocytes, spreading the cancer. The data for this indicator are from the Department of Public Health's Tumor Registry, which records all known cancer cases in the state. (Please see the note on the previous page, under Breast Cancer in Connecticut, about the use of the 50 to 54 age group.) Non-Hodgkin's lymphoma has increased markedly since record keeping began. The reasons are not well understood, though the rise of Acquired Immune Deficiency Syndrome (AIDS) since the 1980s accounts for some cases. Several studies also cite environmental factors, including exposure to diesel exhaust and certain fertilizers, pesticides, and chemicals. In 2000 through 2004 and again in 2005 through 2007 (the most recent years for which data are available), the annual rate of new cases showed improvement.

Driving Our Cars

Nearly every year, the average Connecticut resident drives several more miles than he or she did in the previous year. That trend shifted into reverse in 2008.

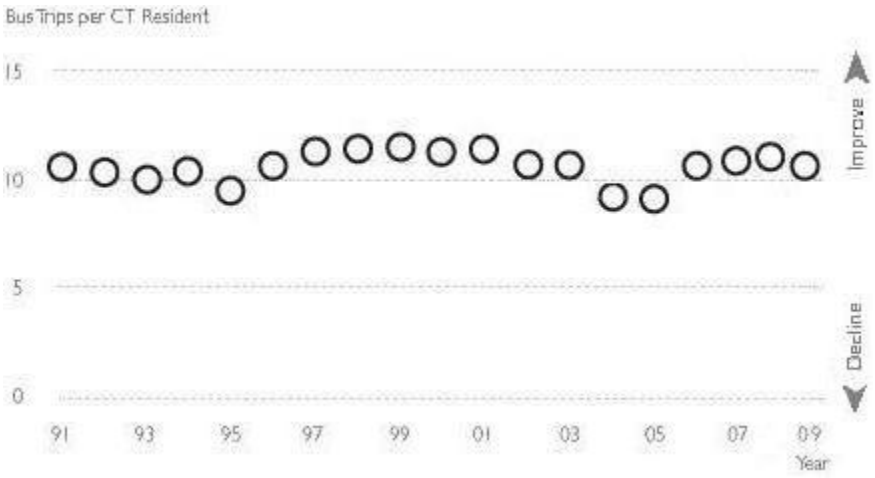


Driving a car, truck or sport utility vehicle is probably the most environmentally harmful activity a Connecticut resident will engage in personally. Impacts are direct (air pollution, oil leakage, etc.) and indirect (stimulating demand for new roads). The Department of Transportation estimates the total miles driven each year in Connecticut. Every year through 2007, the average Connecticut resident drove more miles than in the previous year. The reasons are complex and include the fact that most new development is accessible only by private vehicle. In 2008 (the latest year for which data are available), Connecticut drivers reversed this trend.

*Personal Impact indicators illustrate trends in behavior or practices that can be expected to influence the condition of tomorrow's air, water, land and wildlife.

Taking the Bus

The average Connecticut resident took the bus slightly less often in 2009.

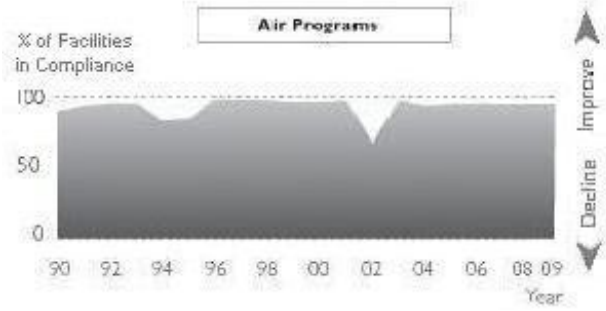


After a four-year slide in bus riding, the average Connecticut resident took six percent more bus rides in 2006. Riding a bus is just one way to avoid the negative environmental consequences of driving a car. Ridership data are collected by the Department of Transportation. There was a 20% decline in per capita bus ridership from 2001 through 2005. Fares were increased in 2004 and 2005. Ridership rose about six percent in 2006, perhaps in response to high gasoline prices, and improved again slightly in 2007 and 2008. Ridership declined in 2009.

* Personal impact indicators illustrate trends in behavior or practices that can be expected to influence the condition of tomorrow's air, water, land and wildlife.

In Full Compliance

For the first time since 2005, the overall rate of compliance with pertinent environmental regulations fell below 90%.



This indicator shows the approximate percentage of inspections performed by the DEP that found the inspected facilities in full compliance with pertinent environmental laws and regulations. (Monitoring data self-reported by permit holders are not included.) The sharp downturn in 2002 was due to a large number of minor violations in one air quality program (Stage Two Vapor Recovery at gas stations). Short-term downturns might not reflect serious problems if the long-term trend is toward full compliance.

The overall compliance rate rarely has been better than 90%. Generally, compliance with air quality regulations is higher than with waste and water regulations. The number of inspections conducted by the DEP declined between 1997 and 2007, increased in 2008 and declined again in 2009.

Some industrial sectors require fewer inspections than they did a decade ago because the number of active facilities has declined. The compliance rate for all programs decreased from 90% in 2008 to 88.6% in 2009.

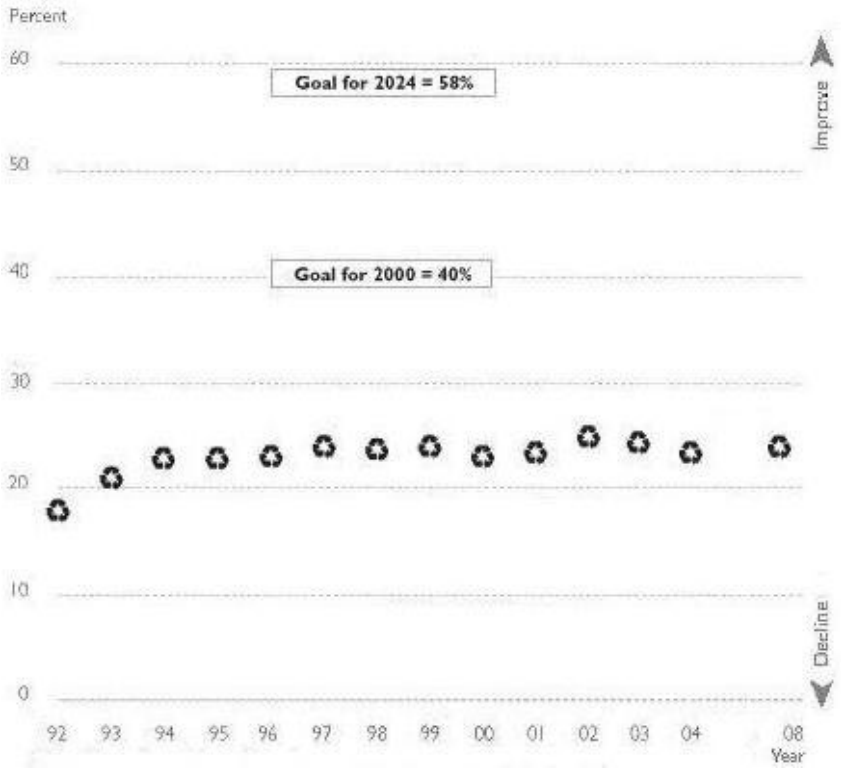
The relationship between the number of inspections and rate of compliance is not clear. The stability of the compliance rate in the face of ever-diminishing staff resources might be regarded as a success for the DEP. However, the failure of the state to advance affirmatively toward the goal of full compliance is apparent.

*Personal Impact indicators illustrate trends in behavior or practices that can be expected to influence the condition of tomorrow's air, water, land and wildlife.

Personal Impact*

Recycling

Some municipalities and regional waste authorities have reported greater participation in recycling programs since adopting single-stream recycling in the last two years. However, the statewide average is well below the recycling goal.



The General Assembly established a goal of reducing and recycling 40% of Connecticut's municipal solid waste stream by the year 2000 (Sec.22a-220(f)). That goal was never met, and the consequences have been enormous. A ton of material that is recycled instead of disposed can save a municipality, hauler or resident from $40 to $93. In Connecticut, hundreds of thousands of tons of waste are shipped out of state each year, putting thousands of diesel trucks on the highways for trips of many hundred miles. One consequence of this needless truck traffic is the yearly addition of 300,000 or more pounds of diesel pollutants into the air.

As total tonnage of waste has grown the percent that is recycled has not grown. In December 2006, the DEP amended the State Solid Waste Management Plan to include a goal of diverting 58% of Connecticut's municipal solid waste stream from disposal by 2024. This would be accomplished through recycling, composting and waste reduction (such as use of lighter packaging material). If this goal is met, Connecticut will be able to manage all of its garbage without exporting it.

This indicator was dropped from last year's report because statewide data collection halted after 2004. It returns this year because the DEP compiled data for 2008.

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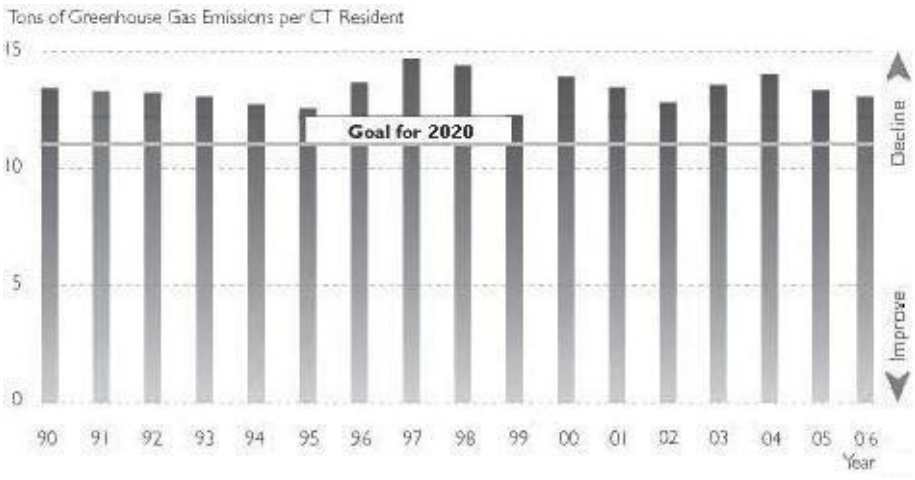
Personal Impact*

Climate Watch

The most recent data for Connecticut's emissions of carbon dioxide and other greenhouse gases are from 2006.



Certain gases in the air function like the glass of a greenhouse: they allow the sun's energy to pass through, then trap the heat that radiates from the ground. They often are called "greenhouse gases." Worldwide, a build-up of greenhouse gases is contributing to the ongoing rise in temperature. Carbon dioxide is the greenhouse gas emitted in greatest volume, but it is not the most powerful. Methane and other less common gases have much greater ability to trap heat. For the emissions inventory calculated by the Department of Environmental Protection, the quantity of each gas is adjusted according to the strength of its greenhouse characteristics and then reported in a common unit, the Metric Ton of Carbon Dioxide Equivalents.

Public Act 08-98 set two new goals for reducing greenhouse gas emissions: reduce statewide emissions to 10 percent below 1990 levels by 2020 and 80 percent below 2001 levels by 2050.

The chart above shows the average Connecticut resident's share of greenhouse gas emissions. The goal line shows the level of the average resident's share of emissions that must be achieved if the 2020 goal is to be reached. Because there probably will be at least 300,000 more people living in Connecticut in 2020 than there were in 1990, each person's share of emissions will have to drop below 1990 levels to reach the 2020 goal. Most human-generated carbon dioxide results from the combustion of fuels in houses, businesses, power plants, and vehicles, and the last of these is the largest source. Connecticut is more energy-efficient than the nation as a whole, and the average Connecticut resident's contribution to global climate change is less than the average American's.

There have been improvements in some emission sources since 2001, such as a reduced use of natural gas in commercial buildings, but those gains were countered by sharp increases in fuel combustion in homes and vehicles. According to Falling Behind, a report published in March 2008 by the Environment Connecticut Research and Policy Center and the Clean Water Fund, home energy use increased substantially between 2001 and 2005 along with consumption of diesel fuel and gasoline.

Connecticut data for 2007 should be available by July 2010; data analysis depends on certain federal data which usually are made available only after some delay.

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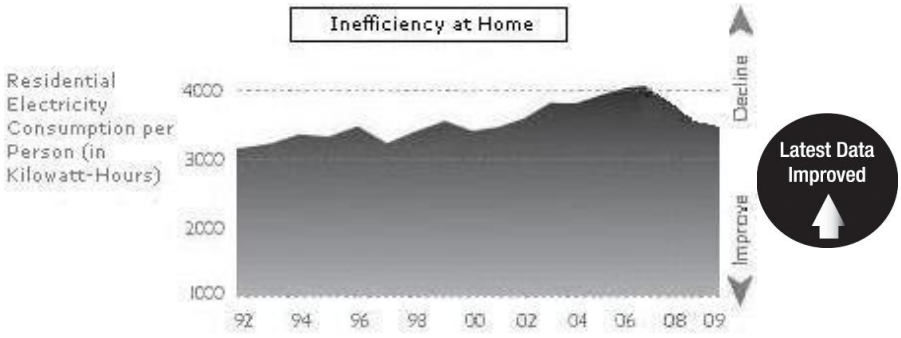
Personal Impact*

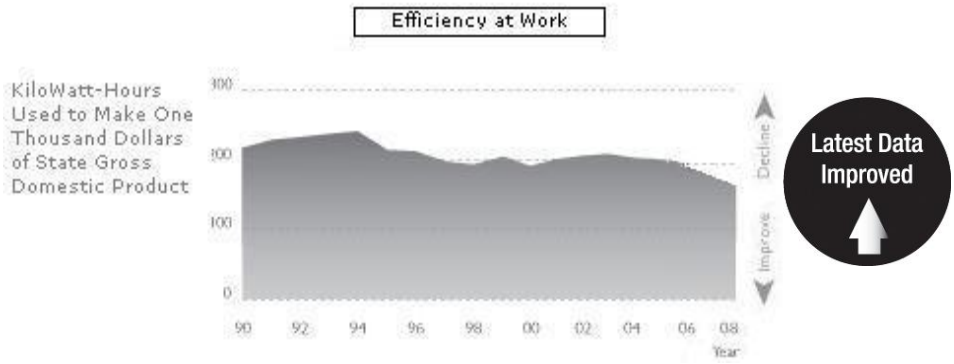
Electricity

For the second year in a row the average Connecticut resident reduced electricity use at home.

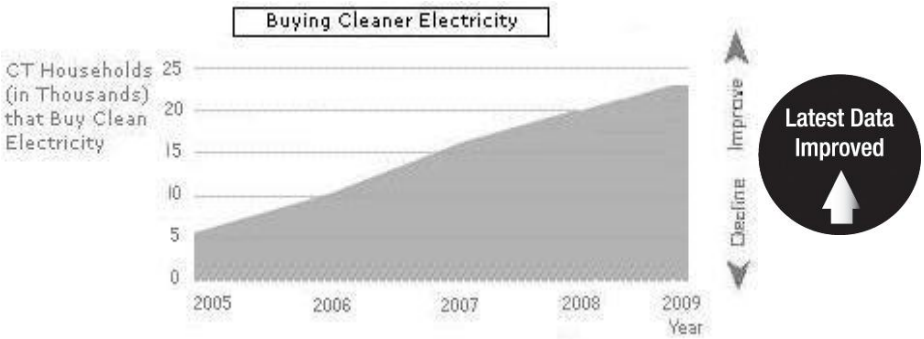


Most appliances bought in Connecticut were not the most efficient models.

For five years in a row, Connecticut businesses have used electricity more efficiently to produce goods and services.



Thousands of households have been signing up annually to buy electricity generated by renewable energy sources through the CTCleanEnergyOptions program.



Electricity: Inefficiency At Home: According to the Connecticut Siting Council many Connecticut residents have been using electricity more efficiently in recent years except during summer heat waves. The result has been growth in peak summertime consumption even as growth in year-round electricity use has been slowing. The increase in summertime consumption has significant environmental consequences. On the hottest days, Connecticut's basic power plants are unable to meet the additional demand, and older fuel-burning plants are brought on line. Because they are used sporadically, many of these older plants are permitted to operate with more lax pollution control requirements. As a result, state residents generate the most air pollution on the hottest summer days when air quality is already bad.

The vast majority of Connecticut's electricity is generated from nuclear energy and the combustion of natural gas, oil and coal. Hydropower, solar and other renewable resources are small but growing sources of electricity. Each source, renewable or not, has its own negative environmental consequences. Reducing those consequences will require Connecticut households to use electricity much more efficiently. Such efficiency can be attained in part with ENERGY STAR appliances.

Electricity: Inefficiency in the Kitchen: In a typical home, the refrigerator consumes more electricity than any other appliance. (Central air conditioning uses more but is not in everyone's home.) To be labeled ENERGY STAR efficient, a refrigerator must operate using at least 15% less energy than the federal standards for household appliances set forth by the U.S. Department of Energy. It also must use 40% less energy than 2001 conventional refrigerator models.

ENERGY STAR appliance sales are tracked state by state by ENERGY STAR for each quarter. In 2008 (the most recent data available) about 35% of refrigerators bought by Connecticut consumers were ENERGY STAR efficient. This percentage had increased from 2001 through 2005 but has decreased by 10% since that high.

Sales trends for other ENERGY STAR appliances have been similar. ENERGY STAR clothes washers were only 26% of sales in 2008, down from 51% in 2005. ENERGY STAR dishwashers were 74% of sales, down from 94% in 2006. Room air conditioner sales dropped in 2008 by 10% to 44%.

Public surveys show conclusively that most people are aware of the ENERGY STAR label and what it means, so reasons other than awareness must be addressed to boost ENERGY STAR labeled products and stem the ongoing waste of electricity in homes.

The ENERGY STAR program was created in 1992 as a joint effort of the U.S. Environmental Protection Agency and the U.S. Department of Energy to identify and label energy efficient products. By consuming less electricity, ENERGY STAR products help to reduce air pollution and greenhouse gas emissions.

Electricity: Efficiency at work: The third graph shows trends in the efficiency with which Connecticut's economy uses electricity to produce goods and services. Connecticut generally produced more goods with less electricity from 1995 to 2000, when the trend reversed for three years, then reversed again, favorably, in 2004.

State Gross Domestic Product (GDP) represents the total amount of goods and services produced within the state in a single year. Payment to employees constitutes about 60% of the GDP. In 2008 (the most recent data available), Connecticut's GDP was $177 billion (in 2000 dollars), a three percent decrease from the 2007, while electricity consumption decreased by 7%. This the fourth straight year that the economy used electricity more efficiently than it had in decades, demonstrating that with advances in energy efficient technology it is possible for Connecticut's economy to continue growing while using less electricity.

Electricity: Buying Cleaner Energy: The CTCleanEnergyOptions program enables customers to sign up to purchase electricity from renewable sources that include water (low-impact hydroelectric), wind, solar, biomass and landfill gas. The bottom chart shows the number of Connecticut households that have signed up in the past four years. 2009 saw a slight decrease in the rate of sign ups. The electricity that actually enters these houses is not necessarily from renewable sources. The consumer who elects this option is paying for the generation of renewable electricity on the regional electric grid. This reduces the amount of electricity that otherwise would be generated by nuclear, coal, oil and natural gas-fired generating plants, all of which generate pollution. The CTCleanEnergyOptions is a program of the Connecticut Clean Energy Fund.

*Personal Impact indicators illustrate trends in behavior or practices that can be expected to influence the condition of tomorrow's air, water, land and wildlife.

Activities of the CEQ in 2009

The Council was very busy in 2009 with all aspects of its duties: research and reports, citizen complaints and review of other agencies' projects.

Research and Reports

The Council published *Environmental Quality in Connecticut* as a completely paperless, web-only report for the first time.

In the midst of its ongoing review of state laws and policies intended to protect scenic resources, the Council made an unusual discovery: the State of Connecticut purchased strips of lands along several of the state's most scenic highways in the 1960s and 1970s, and forgot about them. Using federal dollars, the Department of Transportation purchased these scenic strips from dozens of willing landowners. The lands are permanently restricted from development or sale, but no state agency had a map of their locations. The Council learned that a cell tower had been approved in 2008 in a narrow gap in one of these strips, and at the time none of the state or municipal agencies reviewing the project was aware of the scenic strip. The Council wrote to Governor M. Jodi Rell to advise her of these forgotten lands. Governor Rell convened several state agencies and asked them to locate and map them all, which they did speedily. Today, regulatory agencies and the public can find the scenic strips online.

The Council also determined that nobody knows how much land has been preserved as open space throughout Connecticut. All previous estimates from the Department of Environmental Protection (DEP) were found to be off by tens of thousands of acres. Counts of state-owned land are accurate, but thousands of parcels owned by municipalities and nonprofit land conservation organizations had not been counted by the state. When a town or land trust acquires land or a conservation easement with no financial assistance from the state, there is no mechanism for reporting that acquisition to the state's data base of conserved land. The DEP has been mapping protected lands town-by-town for about ten years, but if that Protected Open Space Mapping project is ever completed the data will be out-of-date and static. The Council has recommended creation of a registry where towns and nonprofit organizations can voluntarily submit acquisition data to the DEP on a continuous basis.

The Council also determined that nobody knows how many acres of forest and farmland are classified as such for property-tax purposes. Despite a 2004 law that required the DEP to collect data on all so-called Public Act 490 lands, the DEP collected only forest land data. Acting on a recommendation from the Council, the DEP worked with municipal assessors in 2009 to collect complete acreage numbers for the first time. Though compliance with the DEP's request has been incomplete to date, eventually the public will know how many acres have been kept undeveloped, at least temporarily, by Public Act 490. Public Act 490, adopted in 1963, sets property tax rates for forest, farmland and some open space land at its use value rather than its potential market value and is regarded as an important land conservation tool.

Review of State Projects and Programs

The Council commented extensively on a proposal by the Office of Policy and Management to amend the Environmental Classification Document (ECD) used by most agencies. The ECD lists the types of projects for which agencies might have to prepare an Environmental Impact Evaluation. The Council pointed out that the proposed ECD did not mesh with the regulations of the Connecticut Environmental Policy Act (CEPA), which the DEP had not revised since 1978 despite a major statutory overhaul of CEPA in 2002. The proposed ECD was revised and released for additional public comment in 2010. Through this and other efforts, the Council is hoping to help make CEPA the efficient planning tool that was envisioned rather than the bureaucratic hurdle it sometimes is.

The Council continued to receive questions and concerns about proposed telecommunications towers, and submitted comments to the Connecticut Siting Council on several. In one extraordinary case, a tower was proposed on farmland for which the state had purchased the development rights for preservation purposes. The Council submitted a detailed letter urging denial. The application was withdrawn.
The Council submitted detailed comments on several Environmental Impact Evaluations, including two prepared by the DEP for state-funded sewer projects. The Council urged the DEP to require sewer extensions to adhere to the concept of Responsible Growth.

Citizen Complaints

Citizens of Haddam spoke to the Council about contamination of land and groundwater that has existed in Tylerville for more than 25 years. Among many issues, the apparent lack of remedial action by one company was of particular note, as the company had been required by the DEP to investigate the contamination and prepare a clean-up plan. The Council decided to follow this case in detail in order to learn more about the adequacy of existing laws and programs. (Update: In April 2010, the Council wrote to the DEP recommending immediate enforcement action against the company in question, though this is just but one element of the contamination problems in Tylerville.)

The following are a sample of the many other complaints investigated in 2009:

- The DEP's use of emergency authorizations to permit a power plant's operation for eleven years.
- Difficulties that citizens were encountering in getting their town to comply with DEP recommendations regarding inland wetlands regulation.
- The consequences of the "fast-tracking" of smaller power plants under a 2005 law.
- Weakness of laws regarding illegal felling of trees by a trespassing party on private land.
- Tree removal along state roads.
- Proposed re-opening of a railroad line in a residential community.
- Proposed sales of Seaside Regional Center and other state properties and the potential loss of public access to shoreline property.

The Council researched all of the above complaints and contacted the relevant state agencies with recommendations. Some problems, such as illegal tree removal on private property, will require legislative action to correct.
The Council periodically holds public forums in different parts of the state to learn what environmental topics are most on residents' minds. The information presented at these forums has been extremely useful to the Council

The Word from Manchester

The Council periodically holds public forums in different parts of the state to learn what environmental topics are most on residents' minds. The information presented at these forums has been extremely useful to the Council

In May 2009, the Council heard from citizens and municipal officials in Manchester. The importance of preserving farmland and open space was raised, as it usually is at these forums. A municipal leader had questions about the adequacy of state programs to encourage redevelopment of potentially contaminated properties. The Council heard excellent suggestions for incorporating more indicators of sustainability into Environmental Quality in Connecticut, and even received a movie recommendation.

Many people across the state expressed their concerns during 2009. The Council worked to address them all, and truly appreciates the efforts people made to bring environmental problems to light. The Council looks forward to helping citizens and agencies solve the challenges of 2010.

What Were They Thinking?

Over the course of three public hearings in March and April of 1971, more than 50 people testified on proposals to create a Department of Environmental Protection (or something similarly named) and a Council on Environmental Quality (CEQ). While a handful endorsed the concept of a DEP, support for the CEQ was overwhelmingly favorable with no negative comments. Creation of a CEQ was the central recommendation of the 1970 Governor's Committee on Environmental Policy. That Committee proffered 60 recommendations, of which 58 were unanimous; the controversial two would have assigned additional powers to the Council and were not adopted by the General Assembly. Great faith was placed in a panel of citizens to properly characterize Connecticut's whole environment and identify deficiencies and future challenges. The current members of the Council judge that their predecessors fulfilled that faith in outstanding fashion, and work to build on their success.

Council Duties

The duties 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 works independently of the Department of Environmental Protection (except for administrative functions). The Chairman and four other members are appointed by the Governor, two members by the President Pro Tempore of the Senate and two by the Speaker of the House. The Council's primary responsibilities include:

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

2. Review of state agencies' construction projects.

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

In addition, under the Connecticut Environmental Policy Act (CEPA) and its attendant regulations, the Council on Environmental Quality reviews Environmental Impact Evaluations that state agencies develop for major projects. The Council publishes the Environmental Monitor (http://www.ct.gov/ceq/monitor.html), the official publication for scoping notices and environmental impact evaluations for state projects under CEPA; and the official publication for notice of intent by state agencies to sell or transfer state lands.

CEQ Members

Barbara C. Wagner (Chair)
Resident of Glastonbury. Attorney with law office in Glastonbury, specializing in commercial and residential real estate. Co-Founder and Board Member of Town Center Initiative, addressing walkability issues in Glastonbury's center. Board of Trustees, Diamond Lake Land Trust. Former member, State Open Space and Watershed Land Acquisition Board.

M. Howard Beach
Resident of Simsbury. Conservation & Zoning Compliance Officer / Planning Analyst, Town of Simsbury. Member, Simsbury Conservation / Inland Wetlands Commission from 1980 to 2004, Chairman from 1994 to 2004. Member, Board of Directors, The Farmington River Watershed Association. Life Member and past Board Member, Simsbury Land Conservation Trust. Founding Member, Farmington Valley Biodiversity Project. Member, Town of Simsbury Open Space Committee, 1999 to 2004. Member, CT Developers Council. Member, Government Affairs Committee, Simsbury Chamber of Commerce. In 2004, completed a Masters Degree in Environmental Law at Vermont Law School.

Janet P. Brooks
Resident of Middletown. Partner and member of the law firm D'Aquila & Brooks, LLC, with a practice in environmental, land use, municipal and real estate law. Member of the Connecticut Bar Association Planning & Zoning Section and Environment Section. Co-author of *Connecticut Environmental Protection Act*, Volume 15 of the Connecticut Practice Series published by Thomson West. Formerly Assistant Attorney General in the Environment Department of the Connecticut Attorney General's (AG's) Office for 18 years enforcing the state's environmental laws running the gamut from noise, odor, water pollution, air pollution, pesticides to habitat

protection and preservation of land. While at the AG's Office, coordinated the wetlands appeal practice and developed the legal training for wetlands commissioners for DEP's annual training. Recipient of 1984 German Marshall Fund grant to study the effect of citizen participation on hazardous waste clean-ups in four European countries. Based on those experiences, author of chapter published in *America's Future in Toxic Waste Management: Lessons from Europe.* Staff Attorney for five years at the Connecticut Fund for the Environment, Inc., representing citizens groups in administrative and court proceedings. Began practice of law assisting the Middletown City Attorney in the city's opposition to the utility company's burning of PCB waste oil within the city boundaries.

Bruce R. Fernandez
Resident of Farmington. Technical and Marketing Executive and Entrepreneur. Former President and CEO of insurance software and energy efficiency companies, including AMS Rating Group, Savage Rating Services, and BTU's Inc. Served in United States Army Corps of Engineers as small unit commander; served in Viet Nam and ten years in Army Reserves.

Karyl Lee Hall
(Appointed February 2010) Resident of Branford. Attorney with the Connecticut Legal Rights Project. Formerly, with Murtha Cullina, the Connecticut Fund for the Environment and Connecticut Legal Services. Co-Chair, Branford Conservation Commission. Co-chair, Scenic Roads Advisory Committee for Routes 146 and 77. Member, Advisory Board, Branford Land Trust. Vice President, Citizens for Branford's Environment, 2002-2009. Connecticut Bar Association Pro Bono Service Award, 2003. Former Co-chair, State Implementation Plan [for Air Management] Revision Advisory Committee.

John M. Mandyck
Resident of West Hartford. Vice-President of Government and International Relations, Carrier Corporation. Directs environmental sustainability activities on domestic and international levels. Former Director of Government Relations for the Greater Syracuse Chamber of Commerce. International Advisor to the China Green Building Council.

Earl W. Phillips, Jr.
(Served through January 2010) Resident of Middle Haddam, village of East Hampton. Partner with the law firm of Robinson & Cole LLP and Chair of its Environmental and Utility Practice. Executive Committee, Environmental Section of the CT Bar Association. Member, past and present DEP Advisory Committees, including E-2000, Waste, and Water. Executive Steering Committee (15 years), CBIA Environmental Policies Council and past Chairman of its Hazardous Waste Section. Multiple publications, including: *Brownfields Law and Practice: The Cleanup and Redevelopment of Contaminated Land*, CT Chapter (Matthew Bender), *Environmental Law Practice Guide*, Connecticut Chapter (Matthew Bender). Past Adjunct Instructor of Environmental Law, Wesleyan University, University of Connecticut, and Rensselaer Polytechnic Institute (Hartford Graduate Center). Former Chairman, Environmental Section, National Institute of Municipal Law Officers.

Richard Sherman
Resident of Chaplin. Architectural designer and construction manager of earth sheltered, passive solar and energy efficient residences. Former CEQ Representative to the Route 6 Advisory Committee (during previous term on CEQ). Charter Member, Transit Alliance of Eastern CT, and Citizens for a Sensible Six. Former Organizer, the Progress and Equity Partnership. Member of CEPA Working Group, League of Conservation Voters of CT. Former President, Northeast Chapter of ACLU-CT Board of Directors. Member of Peoples Action for Clean Energy (PACE) and Northeast Sustainable Energy Association (NESEA). Former Chair,

Mansfield Transportation Advisory Committee. Former President, Mansfield Commonground. Member, Mansfield Planning and Zoning Design Review Panel. Former Chair, Mansfield Democratic Town Committee. Host and producer of the radio show, "A Distant Shore" on WHUS (91.7 FM, Storrs). Former Public Affairs Director of WHUS. Stopover host, American Tour d'Sol solar electric car race.

Ryan Suerth
Resident of Madison. Attorney with the law firm of Saxe Doernberger & Vita, P.C., where he represents insurance policy holders in disputes with their insurers. Served for four years in the U.S. Army, including a one year deployment to Baghdad, Iraq. Served in Washington, D.C. as legislative aid to former Connecticut Congressman Rob Simmons advising Mr. Simmons on a variety of issues, including transportation. Member, Madison Land Trust.

Norman VanCor
Resident of Harwinton. Owner of Buy Safe Home Inspection, LLC, and Mizzentop Antiquities. Served in United States Marine Corp in Viet Nam. Awarded the Navy Cross, Vietnamese Cross of Gallantry and other decorations. One of first ten inductees to CT Veterans Hall of Fame. Former Director, Yankee Energy in sales, marketing, government relations, communications. Founding member and President Emeritus, Quinnipiac River Watershed Association. Former member Rivers Advisory Committee. Former Chairman, Southington Conservation Commission. Former host of radio program on environmental topics. Former President, Southington Water Works. Former member, Board of Directors of Operation Fuel. Active Pheresis donor at American Red Cross with over 36 gallons of whole blood and platelet donations. Former Volunteer Hunter Safety Instructor for the DEP Conservation Education Program. Certified Master Gardener.

Wesley L. Winterbottom
(Served through June 2009) Resident of West Hartford. Professor of Science and Coordinator of Environmental Programs, Gateway Community College. Instructor of Environmental Issues, Eastern Connecticut State University. Fulbright China Seminars Abroad Program Scholar. Fulbright-Hayes Fellow. Registered Connecticut Professional Engineer. Diplomat, American Academy of Environmental Engineers. National Science Foundation Fellow Advanced Technology Environmental Education Center, University of Northern Iowa. ANSI/GETF Certified ISO 14000 Trainer. Faculty Advisor, Mt. Rainer National Park, Rocky Mountain National Park, Western Arctic National Parklands. Board Member, Northeast Partnership for Environmental Technology Education. Past President, Connecticut Consortium for Enhancing Learning and Teaching. Past Director, Gateway Community College Center for Teaching Excellence. Certified FEMA Trainer – Awareness Level – Homeland Security.

Acknowledgments

PHOTO CREDIT: The photo at left was taken on July 13, 2009 on Long Island Sound by Norwalk resident Larry Flynn. The bird is a Wilson's Storm-Petrel, a species that is seen occasionally in the Sound during mid-summer. The birds are actually "wintering" here: they breed around Antarctica during the southern summer, and spend their winter (our summer) in the North Atlantic. A century ago they were seen more commonly near the Connecticut coast. Some experts have speculated that fewer came to the Sound when water quality declined.

The Council appreciates the work of its Executive Director, Karl Wagener, and Environmental Analyst Peter Hearn in drafting this report for review by the Council and preparing the final version for publication.

The Council notes the valuable contributions of intern Brianna Cohoon of Fairfield University toward production of this report.

The Council also appreciates the assistance of the many people in the Departments of Agriculture, Environmental Protection, Transportation and Public Health and the Connecticut Siting Council who provided data. Researchers at the Center for Landuse Education and Research (CLEAR) at the University of Connecticut provided new and very valuable data.

The Council especially thanks the many citizens, businesses, and organizations who offered information and viewpoints to the Council throughout the year.

Contact Us

We would like to hear from you. Does this report give you the information on Connecticut's environment that you need? Is there something missing?

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