

Living with the Future in Mind

Goals and Indicators
For New Jersey's Quality of Life



**1999
Sustainable State
Project Report**

NEW JERSEY



May, 1999

Dear Fellow New Jerseyan:

Homemakers from Cape May. Scientists from Rutgers University. Environmental activists from age 8 to 80. Corporate economists.

The voices of these and thousands of other New Jerseyans speak from the pages of this report.

Over the last four years we've been listening and asking New Jerseyans to describe the quality of life they'd like to live, and the kind of New Jersey they would like to leave for their children and grandchildren. In conferences, workshops and roundtables across New Jersey we've gathered these ideas and aspirations; and then balanced them against the reality of the information available today for measuring our progress.

Time and again we heard people wish for a "Dow Jones Industrial Average" for the way we live our lives — a measure available each morning to let us know if we're on the right track to a better future. In a sense, that's what this report is: a collection of the goals to which we aspire, together with the best data available on the trends influencing our course — trends we influence in turn through our individual decision-making.

New Jersey is at the forefront of a small number of states aiming to become "sustainable." Around the globe, thousands of communities have embraced the same aim of "sustainable development" — development that meets the needs of the present without compromising the ability of future generations to meet their own needs. Development that does not favor economic, social or environmental goals, but which considers them in balance with each other, and with our future.

New Jersey Future is grateful to the Administration of Governor Christine Todd Whitman for serving as our partner in charting this new course for New Jersey's future. As our cover says, the next step for all of us is Living With the Future in Mind.

A handwritten signature in blue ink, appearing to read "John J. Degnan". The signature is fluid and cursive, with a long horizontal stroke at the end.

John J. Degnan, Chair
New Jersey Future

Introduction

What kind of New Jersey are we passing on to the next generation?

That question has dominated the thinking and activities of New Jersey Future since its inception 12 years ago. In 1995, we launched the process that resulted in the report you now hold: a “report card” on the long-term trends that can enhance or destroy our quality of life, as well as the lives of those who inherit the Garden State from us.

The 11 goals offered in this report are the product of a creative community dialog about our common future, drawing on the knowledge and concerns of New Jerseyans from all walks of life: environmental and business leaders, social activists, scientists, government officials and citizens of all ages.

The 41 indicators were selected — and in some cases, created — by economic, environmental and social experts to measure specific progress toward our goals, and were reviewed by citizens as part of our community dialog.

Together, these goals and indicators function as new eyeglasses for New Jersey, helping us see our future differently so we can do things differently.

That “we” is important. The very reason for offering goals is so that all sectors of New Jersey society can agree about what is important and work together for our common good. In some places in this report we can hold government or business accountable for shaping a higher quality, more sustainable way of life; but in many others, we must look to our own actions.

A “Sustainable” State

All involved in this report share a similar motivation and concern: ensuring that the New Jersey we pass on to our descendants will be healthy,

efficient and just. The word “sustainability” is growing in use and popularity around the world as a way of expressing what we’re trying to achieve: an efficient economy, a healthy environment and a just society. We can’t have a “sustainable” state unless all three of these systems — economy, society and environment — are functioning in harmony.

Achieving a Sustainable State means making the hard tradeoffs and balanced judgments that take everyone’s interests into account — including those of our children and grandchildren.

The Next Step

Although this report is an important and necessary first step, much work remains to be done if we are to see this project bear sustainable fruit. We must continue to fill in gaps in our knowledge of trends affecting our future. We must set meaningful targets, or benchmarks, for each indicator. We must commit, as citizens, businesses and government officials, to achieving these benchmarks — and eventually, our goals of a sustainable and fulfilling life for all New Jerseyans.

The partnership that created this report is an unusual one. Our nonprofit, nonpartisan group is focused on New Jersey’s future, both tomorrow and in the next millenium. The State of New Jersey must balance its considerations of the future with a necessary focus on the needs of the present. Citizens, business leaders, local officials, social activists and environmentalists have all provided important information and perspective. It has proven to be the best of collaborations in moving us toward a sustainable future — but we can go no farther without your continued commitment to achieving the goals and moving the indicators.

The purpose of this report is to inspire us to act, as a community, in achieving these goals — in moving toward a sustainable way of life. ■

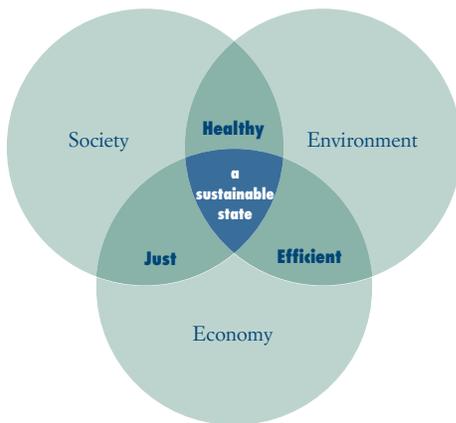
Table of Contents

What is Sustainable Development?	4	Goal: Healthy People	35
How to use this report	6	Indicator 22: Life expectancy.....	36
Goal: Economic Vitality	8	Indicator 23: Infectious diseases	37
Indicator 1: Income.....	9	Indicator 24: Asthma.....	38
Indicator 2: Unemployment	10	Indicator 25: Workplace fatalities	39
Indicator 3: Productivity	11	Goal: Efficient Transportation and	
Indicator 4: Poverty.....	12	Land Use.....	40
Indicator 5: Gross State Product (GSP)	13	Indicator 26: Need for road	
Indicator 6: Energy efficiency	14	and bridge repairs.....	41
Goal: Equity	15	Indicator 27: Vehicle miles traveled	42
Indicator 7: Equal pay	16	Indicator 28: Workplace transportation	
Indicator 8: Legislators' reflection of		options.....	43
population	17	Indicator 29: Traffic fatalities	44
Indicator 9: Disparities in infant mortality	18	Goal: Natural and Ecological Integrity.....	45
Goal: Strong Community,		Indicator 30: Fresh water wetland losses	46
Culture & Recreation	19	Indicator 31: Nesting water bird populations	47
Indicator 10: Newspaper circulation.....	20	Indicator 32: River health/Dissolved oxygen	48
Indicator 11: Crime rate.....	21	Indicator 33: Marine water quality	49
Indicator 12: Open space available for		Goal: Protected Natural Resources.....	50
public recreation	22	Indicator 34: Energy consumption	51
Goal: Quality Education	23	Indicator 35: Farmland	52
Indicator 13: Graduation rates.....	24	Indicator 36: Beach and bay closings	53
Indicator 14: Student/teacher ratio.....	25	Indicator 37: Preserved and developed land	54
Indicator 15: Standardized test scores	26	Goal: Minimal Pollution and Waste	55
Indicator 16: Access to higher education	27	Indicator 38: Greenhouse gas releases	56
Goal: Good Government	28	Indicator 39: Drinking water quality	57
Indicator 17: Knowledge of government.....	29	Indicator 40: Total solid waste production.....	58
Indicator 18: Voter turnout.....	30	Indicator 41: Air pollution.....	59
Goal: Decent Housing	31	Glossary	60
Indicator 19: Rent affordability	32	About New Jersey Future	62
Indicator 20: Home prices vs. income.....	33	Acknowledgements	64
Indicator 21: Housing choice.....	34		

What is Sustainable Development?

“Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”

— THE UNITED NATIONS WORLD COMMISSION ON ENVIRONMENT AND DEVELOPMENT (THE BRUNDTLAND COMMISSION, 1987)



“Sustainability” — or the usual term of art, “sustainable development” — means protecting the resources and systems that support us today so that they are still available to future generations. In short, it means preserving our civilization and the things we hold dear in perpetuity, as well as enhancing today’s quality of life.

The symbol above is a graphic representation of a sustainable state. Each ring represents one of the three systems that support humanity: the economy, the environment and our society. Each of these rings is connected to, and dependent upon, the others. To be sustainable — that is, to have a dignified and still prosperous human civilization in the future — each of these three systems must be healthy and in balance. In truth, you can not alter one without affecting all three.

This is the essence of sustainable living. Beautiful beaches mean little if you’re unemployed. A good job doesn’t mean much if you have to worry about being mugged on the walk home. A safe, friendly neighborhood isn’t a haven if its air is not breathable.

We can not degrade any one of the systems that support us without bringing down the other two. Sacrificing the future for the present is not sustainable. As depicted in the symbol at left, when all three systems are healthy and in balance, our state and our civilization will be healthy, just and efficient.

A History of Sustainable Development

During the late 1970s and early 1980s, a number of independent scientists, activists and other policy makers worldwide began working on responses to problems where issues of the environment linked with human development and progress. They began to use the term “sustainability” to describe the goal of joining economic development with ecological health.

In 1987, the United Nations’ World Commission on Environment and Development released a report, “Our Common Future,” which brought the terms “sustainability” and “sustainable development” into widespread use.

The definition quoted earlier is the one used most often today throughout the world. In defining sustainability, the UN World Commission offered these five key concepts:

- The needs of the future must not be sacrificed to the demands of the present.
- Humanity’s economic future is linked to the integrity of natural systems.
- The present world system is not sustainable because it is not meeting the needs of many, especially the poor.
- Protecting the environment is impossible unless we improve the economic prospects of the Earth’s poorest peoples.
- We must act to preserve as many options as possible for future generations, since they have the right to determine their own needs for themselves.

Representatives from nearly every nation on Earth adopted these principles in the form of inter-

national treaties and agreements at the 1992 United Nations “Earth Summit” in Rio de Janeiro, Brazil. The non-binding agreement signed by the world nations is known commonly as “Agenda 21.” At the same time, a “Global Forum” of citizen groups from around the world developed grass-roots initiatives designed to monitor governments and push sustainability efforts beyond what traditional activities were able to achieve.

New Jersey’s Sustainable State Project represents the first effort of this scale within the United States to achieve sustainability on a statewide basis.

New Jersey’s Efforts

To date, the most comprehensive effort we have made in New Jersey to achieve sustainable development is the State Development and Redevelopment Plan. This “smart growth” plan was adopted in 1992 to counter suburban sprawl and urban disinvestment by channeling development into new and existing centers.

While not binding on municipalities, the State Plan’s strength comes from its use by state government in regulatory and investment decision-making. To complement the plan’s emphasis on protecting open space and encouraging appropriate development, New Jersey voters in November 1998 approved the expenditure of funds to protect approximately half of the state’s remaining open land from development by the year 2010.

A sustainable state cannot be achieved without tackling land use. Land use is at the heart of many environmental, social and economic issues facing the state. The decision to build an office campus in a rural area, instead of within an existing town or city, has an obvious environmental impact through loss of open space and increased local traffic and pollution; but also great social and economic impact. The increased local revenues brought by the campus will be offset by the need to impose additional local taxes for new roads, sewers and services — not only for the campus, but also for the new homes, schools and stores the additional workers will need. The social cost is high as well: the rural character of the community will be forever changed.

Learning to recognize such linkages between the economic, social and environmental impacts of our decisions is the essence of sustainable living.

The Sustainable State Project

New Jersey policy makers got their first look at sustainable development efforts in action with a 1994 fact-finding trip to the Netherlands.

There, Whitman administration officials, members of the Legislature and representatives from non-governmental organizations saw firsthand the Netherlands’ success in building consensus around goals and involving business and private citizens in the realization of those goals. One result is that major corporations and environmental regulators in Holland were able to reach broad agreements, or covenants, containing new strategies for reaching broadly accepted environmental goals.

In follow-up to the trip, the State of New Jersey and New Jersey Future hosted the first Sustainable State Leadership Conference in May 1995 at Princeton University. Nearly 200 leaders from business, the environmental movement, civic groups and academia met to start the official process of bringing sustainable development to New Jersey.

That conference provided the impetus for a broad public process to create goals and indicators beginning in 1996. The goals in this report were initially developed and refined through a series of round table discussions and meetings around New Jersey involving varied business, environmental, academic, government and civic leaders. The goals were then subjected to review on a word-by-word basis in regional forums and in dozens of small working sessions around the state. For each goal, a team of prominent experts and academics was organized to select and create indicators. The resultant draft indicators were then subjected to extensive public review, alongside the draft goals, in statewide conferences, regional workshops and countless small working sessions.

By articulating what we need to achieve sustainable development, and by creating a clear way to track our progress, New Jersey takes its place alongside the Netherlands and other global leaders in the forefront of the sustainable development movement. Where we go from here is up to each of us. ■

How to use this report

This report contains 11 goals shaped with extensive public input, which embody the highest aspirations of New Jerseyans from all walks of life.

Each goal is accompanied by indicators for measuring our progress: the critical trends that shape our future every day and our ability to reach these goals.

Taken together, these goals and indicators enable us for the first time to clearly see these trends and how they affect our progress. This report could have a profound effect on our collective future — if each of us watches the indicators and thinks about how each of our decisions will affect them, and ultimately our goals.

To be successful in their purpose, these indicators must be used to guide change — in what we pay attention to as a community, in our personal priorities, in our collective decision-making and policy development and in our individual and organizational behavior.

General knowledge about the trends that shape the future is certain to have some effect on our behavior. However, achieving the long-term prosperity to which we aspire will require specific types of action. Where do you fit in?

Personal Lifestyle. Indicators can challenge us personally to explore how the way we live affects the world around us, and how our individual decisions move these indicators in a positive or negative direction. They can help us better understand how each individual makes a difference, and guide us in taking actions on our own and as a community.

Media. Newspapers and broadcasters can now

be aware of and cover these long-term trends directly. Perhaps more importantly, these goals and especially the indicators provide critical context to the reporting of news. They tell us the general conditions of our economy, environment and society and offer linkages among these interdependent systems. Are our economy, environment or society getting stronger in meaningful, lasting ways? These indicators also can help answer the following important question: What is the significance of any given event to the current and future well-being of New Jerseyans?

Public Policy. For political debate to be meaningful, it needs to be grounded in facts, mutual understanding of long-term goals and a common frame of reference. Candidate A accuses candidate B of being soft on the environment. Candidate C makes claims about improving the economy. How can an informed citizenry evaluate these claims?

This report will enable all New Jerseyans to clearly see how we are doing in the areas important to us.

Business and Economic Development.

These indicators will provide leading information on the long-term direction of society, and the role the market, and individual companies, can play within it. These indicators can be used for market analysis, and to spur the development of products and services that will advance our progress toward a more sustainable society. Perhaps most importantly, they can enable business leaders to see how each decision will impact society as a whole, for better or worse.

Education. These indicators can be used as teaching tools to educate students about sustainability and to promote an understanding of the systems that support us. They can also serve as a

model for additional research projects, such as devising a set of institutional indicators. The indicators can provide context for applying everyday lessons in every subject to the real world and to where students live.

The Civic Sector. Nonprofit and volunteer groups can link their work to the broader cause of creating a more sustainable society, and use the indicators to evaluate their efforts in a broader context. We all do good work. How can we all work well together to meet our common goals? Foundations and philanthropic organizations can use the indicators to help set their funding priorities as we move toward a common vision. ■

Technical notes and source information on the data used in this report are available from New Jersey Future as a technical appendix. For a copy, call 609/393-0008.

How we chose the indicators

Indicators chosen for this report represent the best collection of data available today for measuring our quality of life as we move toward sustainability.

To be included in this report, the data were required to:

- **report exclusively on New Jersey's statewide trends,**
- **measure significant trends that impact our progress toward the sustainable state goals,**
- **receive regular updates,**
- **offer historic trends, and**
- **be clearly and readily understood.**

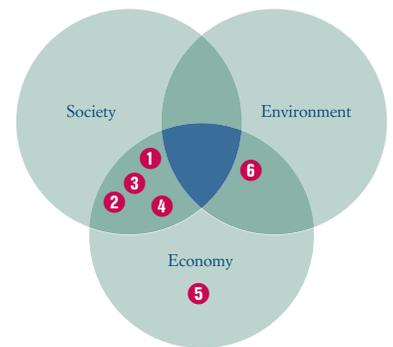
We particularly sought indicators that would highlight the interdependence of social, economic and environmental systems.

At the bottom of each goal and indicator page we have identified knowledge gaps in our understanding of particular issues. These gaps point to the need for additional research, and the creation of new indicators specifically designed to measure our progress toward sustainability. ■

Economic Vitality

GOAL: An economy that is competitive, diverse and attractive to business; that maintains and expands assets and capital; that provides a variety of entry-, middle- and high-level jobs; and that promotes the well-being of New Jersey’s communities and its workforce.

New Jersey’s economy is the “fuel” which drives almost everything else that happens in the state — it shapes our environment and enriches our social and cultural offerings. Our state’s economy has undergone a major transition in the latter half of the 20th century, moving away from dependence on manufacturing toward a more varied mix of advanced technology and service industries. While New Jersey ranks ninth among the states for population and 45th in size, we outperform our rank in several key categories: we have the third largest concentration of corporate headquarters, the second highest average income in the nation and we place sixth in the number of patents received. Amid this abundance of wealth and productivity we also have great disparities between our rich and poor citizens.



What we know

- ❶ Income increasingpage 9
- ❷ Unemployment cyclical and decreasing.....page 10
- ❸ Productivity increasingpage 11
- ❹ Poverty cyclical and increasing.....page 12
- ❺ Gross State Product (GSP) increasing.....page 13
- ❻ Energy efficiency backsliding.....page 14

What we don’t know

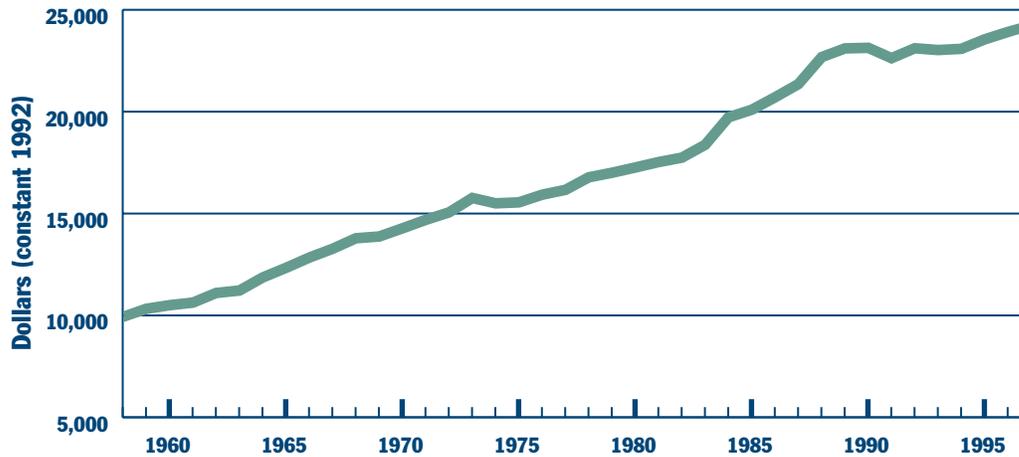
- Measuring overall growth is less meaningful if we can’t differentiate between the positive and negative components of that growth. We do not know the proportion of economic growth that comes from people buying things that they wish they didn’t need — such as security systems for their homes, cigarettes, health care, or automobile repairs after an accident — or at higher cost to cover expenses like pollution cleanup.
- Some aspects of our growing state economy are hard to measure, such as the disparity of opportunities among New Jerseyans.
- The proportion of our economic growth that comes from a drawing down of our “natural capital” — the environmental resources consumed for free that are not restored, such as woodland cleared for new houses or offices.
- The proportion of our economy that depends on the unsustainable use of fossil fuels, which cannot be replenished.



Income

Average annual disposable income among New Jerseyans (personal income remaining after taxes): Increasing

Income



Importance

New Jersey has the second-highest per capita income in the nation. The amount of money earned by the average New Jerseyan has risen impressively for many years, even at a time when people in many other places struggle to get by. However, our rise in per capita income has not eliminated all of our economic problems. The gap between the richest and poorest of us is large, and has grown during the last decades.

Economic

Our economy is only really strong in the long term if it is sustainable — that is, an economy that combines high incomes with a healthy distribution of those incomes, clean and environmentally sound production processes and products we want to buy.

Environmental

Sometimes what we call economic growth may really consist of converting our natural wealth, such as woodlands, into cash. But this is not a net creation of wealth if it consumes non-renewable resources, or renewable resources faster

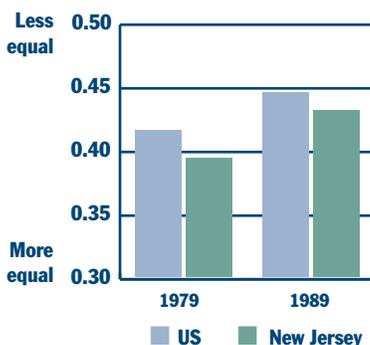
than they can replace themselves.

Especially in the long term, we may wind up missing the resources that we deplete.

Social

Rising incomes are a resource. We can use this money to invest in our homes, communities and our children's education. However, rising income can also signify the loss of free time as we work harder. This can mean we have less of ourselves to invest. At the same time, income is not rising equally for all New Jerseyans.

Income Inequality Index



When index equals 1, one person has all the income; when index equals 0, income shared equally by all

Things to think about

- Most of us want money to keep our families healthy and safe, buy a nice home and enjoy quality recreation. However, if we work too hard, we may not have time to enjoy these things.
- We often spend part of our income to remedy social and environmental problems, as when we purchase household security systems, car alarms and filtered water; similarly, a portion of our taxes is spent for prisons and pollution cleanup.

Knowledge gaps

We do not have a consistently collected measure of income inequality. Also, to provide a true picture of the rewards that we get from our income, we must weigh income against such issues as the cost of living, how much free time remains after our work is done and job satisfaction.

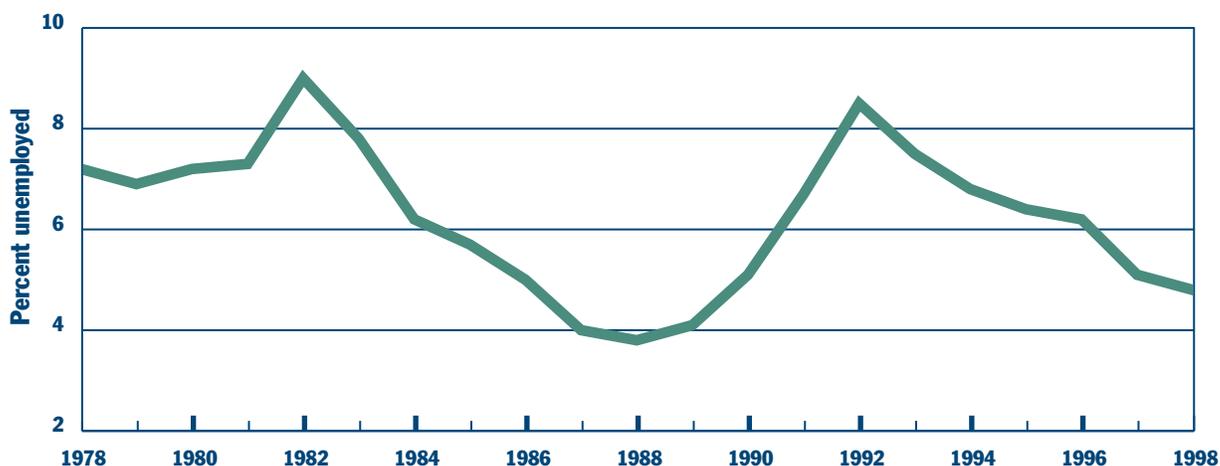
Unemployment

INDICATOR

2

Unemployment

Percent of the state's total labor force unemployed:
Cyclical and decreasing



Importance

This indicator measures our ability to put bread on the table, and our view of self-worth. The official unemployment rate has taken on great importance with public officials because they understand it is the fundamental measure of personal well-being. They also understand that elections can be won or lost as the rate rises or falls.

Economic

Unemployment means financial hardship for families. High unemployment is also a sign of economic

stagnation for the state. Those who lack jobs are less able to buy, which also detracts from the economy.

Environmental

Lack of a job hinders our ability to care about the environment as we become necessarily preoccupied with daily survival. People with secure jobs also pay taxes that go toward cleaning up hazardous waste sites and other environmental priorities. Some of the sectors with the most job growth are in service or “thinking” sectors with work that offers minimal harm to the environment.

Social

Communities with high unemployment suffer a host of other social problems including increased rates of crime, domestic violence and substance abuse. Some of these problems can be reduced by the creation of more jobs — a solution that costs less and works more effectively than some other efforts by police, counselors and doctors to fight these problems. Regional and ethnic disparities in unemployment rates in New Jersey may divide us as a society.

Things to think about

- Many European countries have unemployment rates about twice as high as ours; and with financial crises in East Asia and other regions, many countries have unemployment rates higher than 20 percent. The U.S. unemployment rate was 4.4 percent in November 1998.
- Teenagers and other young people often have a harder time finding work than people of other ages; yet it is during our younger years that often we establish our work ethic and generate opportunities for the future.
- Many economists consider 95 percent employment to be the maximum employment that our economy can sustain, or “full employment.” When unemployment is under 5 percent, some economists believe the tight labor market and risk of increased inflation have the potential to send the economy into recession.

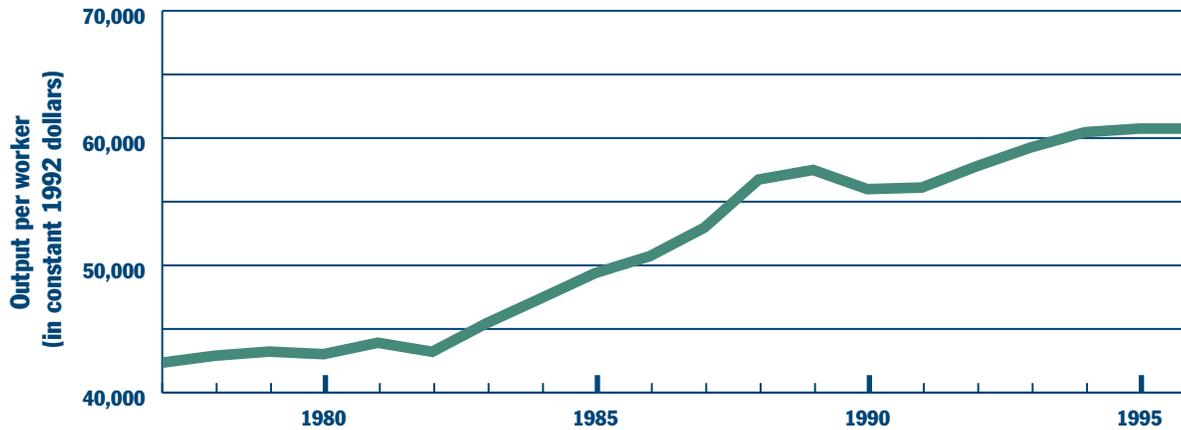
Knowledge gaps

This indicator does not measure underemployment, a situation where people have a job or jobs but are not challenged by their work and not encouraged to grow — nor situations where people hold undesirable jobs to make ends meet. The unemployment rate also does not measure the number of people who have given up on finding a job and have dropped out of the labor market.

Productivity

The amount of Gross State Product produced per laborer:
Increasing

Productivity



Importance

Higher productivity means getting more output from the same amount of work. It can let us enjoy more fruits from the same amount of labor and live better, with more time to spend with our families and for recreation. Productivity has increased during most of the last 20 years.

Economic

Rising productivity is key to a healthy business sector in New Jersey. It increases profits and keeps companies competitive in global markets. It can also lead to higher

wages and living standards for New Jersey's workers — although many people feel that they still work as long and hard as ever.

Environmental

Another measure of productivity (currently not available) would be how much we can produce from the materials that we use. As our "environmental productivity" rises, we can put less of a burden on natural resources while still producing just as much. This is one of the most powerful ways we have to protect nature.

Social

Through higher productivity, we can win the opportunity to live well materially while still having time to spend with our families and communities. Doing so will strengthen the social condition of our state. Not all people get this opportunity, or make this choice — but high productivity presents the possibility.

Things to think about

- Increases in productivity can, in some cases, concentrate the jobs of many into a single well-paying job.
- The more we are able to produce, the more important it becomes that we make careful choices about which products we make and about how cleanly and safely we make them. Otherwise, our high productivity can work against our environmental goals.

Knowledge gaps

This measure considers only how much we produce, but not *what* we produce or whether we cause harm when we produce it. It doesn't consider, for example, increases in pollution that come with increased production, or increases in the energy or natural resources consumed. A better measure would adjust for those costs.

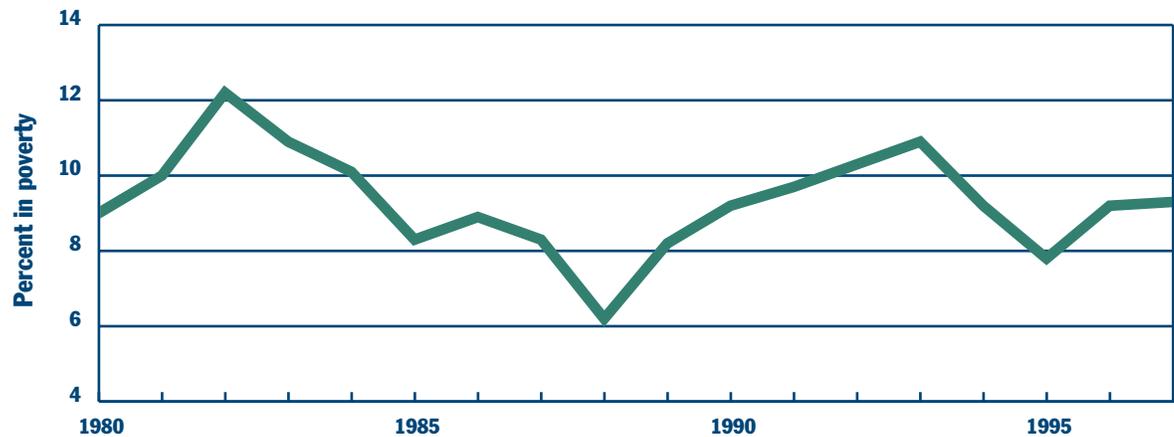
Poverty

INDICATOR

4

Poverty

Percent of New Jerseyans who fall below the official poverty level: Cyclical and increasing



Importance

We live in the second wealthiest state in the world's wealthiest nation — but nearly 10 percent of us suffer from poverty. During some years, more than one-quarter of us who are black live below the poverty line. The percent of New Jerseyans who have too little money to provide for their basic needs is a measure of our economy, our values and our priorities.

Economic

High poverty rates impose costs on the state welfare system and can slow our economic expansion. Poverty is correlated with poor health, reduced training of workers, decreased opportunity, higher crime rates and other factors that inhibit economic growth.

Environmental

Understandably, concern for the natural environment is often secondary to basic survival needs for those of us who live below the poverty threshold. Poverty

hinders us from participating in conservation efforts, even though our future depends on healthy surroundings.

Social

Poverty can be very destructive to our social fabric. Inequities between races and social classes deepen social divisions and create tensions that undermine a healthy society. The success of our state depends on our ability to move forward and react to problems as a unified society; poverty works against our ability to do that.

Things to think about

- During most years, the percentage of blacks living in poverty is double, or more than double, the percentage of other New Jerseyans living in poverty.
- Twice as many of us live in poverty as are unemployed. This means that many of us are among the “working poor” — we are employed but still live below the poverty threshold.
- An increase in the number of part-time and low-skill service industry jobs that do not provide a “living wage” is one reason why more working people are unable to make ends meet.

Knowledge gaps

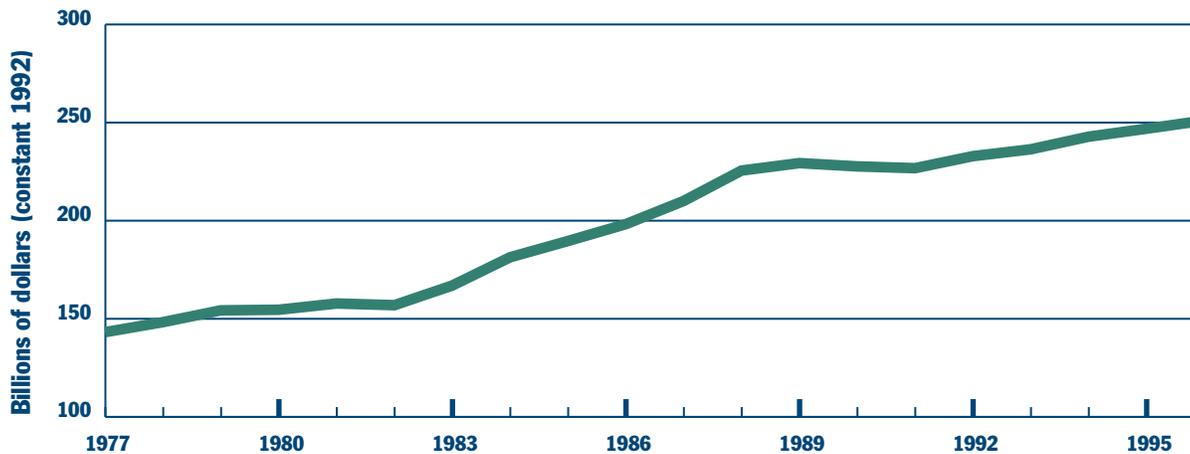
The poverty rate is considered by many to be based on antiquated calculations of the cost of living. Many people who are above the formal poverty line may nevertheless be struggling economically.



Gross State Product (GSP)

In dollars per year: Increasing

GSP



Importance

The Gross State Product (GSP) measures the goods and services our economy produces. New Jersey's GSP has increased sharply since the mid-1970s, even after adjusting for inflation. GSP has long been considered the most important measure of the state's well-being. However, GSP is flawed in that it does not differentiate between the desirable and undesirable things we spend our money on. For instance, Florida's GSP for 1992 suggests a state in the middle of a wonderful spending boom, caused in fact by the high expense of rebuilding after Hurricane Andrew. Some people have proposed alternative measures of well-being that add the value of economic production, as measured by the GSP, but then subtract such costs as natural resource depletion, crime and accidents. These alternative

measures show less improvement than GSP — and often suggest that we are less well off now than in past years. In any consideration of state production, it is important to ask careful questions: How has such production been distributed among our population? How much better off has it made us? What have we given up? And most importantly, how long can we sustain it?

Economic

GSP is the traditional measure of basic economic activity. When it grows rapidly, we are considered to be in good times. When the growth slows, we may be in a recession or depression. Although GSP tells us how much is being produced by our economy, it does not tell us how fairly it is distributed, or what environmental or social costs we pay for growth.

Environmental

If we look only at the GSP to find out how we are doing, then we miss much of what is happening in New Jersey. We may see the GSP rise, but we may not see the forests and farms that have disappeared, the pollution that may have entered our rivers and coastal areas, the animals that may have disappeared forever, or any other environmental changes.

Social

GSP shows that our state has become richer, but it does not tell who among us has received that wealth. It would be possible for GSP to give a rosy picture of our state even during times when crime rates were rising, when poverty was high and when many people could not afford health insurance.

Things to think about

- New Jerseyans produce nearly \$200 billion in goods and services a year. This is more than many countries, including Denmark, Thailand, Turkey, Argentina, South Africa, Greece, Austria and many others — usually much more.

Knowledge gaps

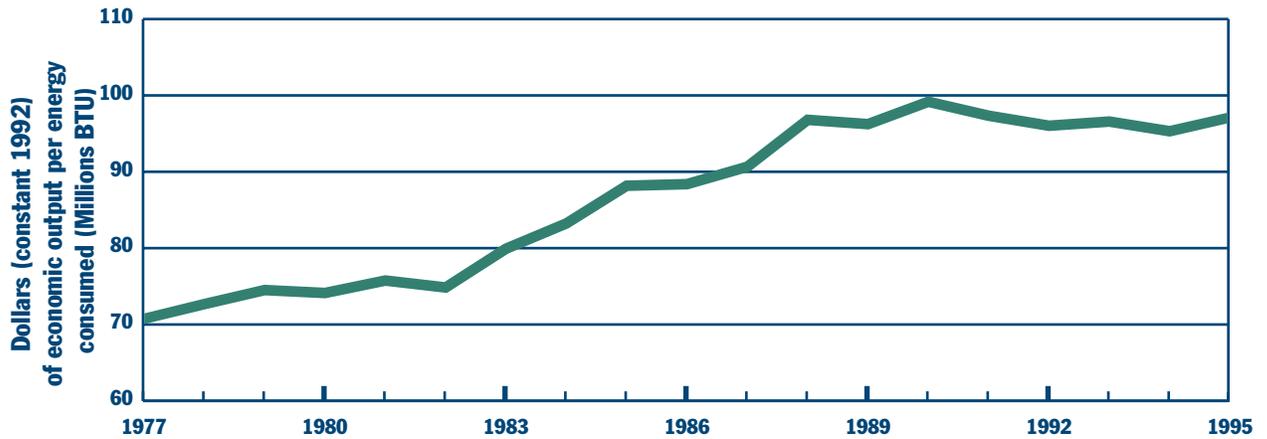
GSP tells us how much has been produced, but it does not tell us *what* has been produced. Recent research suggests that many people find themselves paying for things that they wish they did not have to pay for, such as security systems and divorce proceedings. It is important to have a measure that distinguishes among the positive and negative contents of the GSP.

INDICATOR

6

Energy Efficiency

Economic output per unit of energy consumed: Backsliding



Importance

This indicator measures how much energy our economy consumes for each dollar it produces. Energy efficiency is a measure of economic competitiveness. Most of our energy comes from sources outside New Jersey (oil, coal, nuclear, natural gas) and creates large environmental impacts. As our energy efficiency increases we become less dependent upon our out-of-state sources of energy and better able to reduce the amount of pollution and greenhouse gases that we emit. Getting more out of each unit of energy means paying less when we heat our homes, drive our cars, purchase products and run our industries. Those savings can become an investment instead in new businesses, in education and in new technologies.

Economic

Efficient businesses have a powerful advantage over their inefficient competitors. They pay less when they buy energy and then pay less again when they are spared from expensive cleanup of pollution. Fluctuations in the price of fuel have less effect on efficient companies and government regulators have less need to focus on them. Energy efficiency is a mark of a well-run company. Lower energy expenses also result in more disposable income for individuals.

Environmental

The production of most energy is very harmful to the environment, as evidenced by pollution, strip mining, radioactive waste, or radically changing the landscape with dams. Massive burning of fossil fuels is the major cause of global

warming, which may have disastrous environmental effects. Impressive reductions in the use of polluting fossil fuels is available to us from technologies like compact fluorescent lightbulbs (CFL) and cars that get high gas mileage. For instance, a CFL is four times as efficient as an incandescent bulb, lasts 10 times longer and saves about \$40 per bulb over its lifetime, yet is still not widely accepted and used.

Social

Although laws and government regulations play a large part in our energy choices, reducing energy consumption will require small changes and choices in all of our lives that can only come about through social awareness. It means driving less, buying more efficient homes and appliances and choosing sustainable energy sources.

Things to think about

- Even though we have access to better technologies every year, some aspects of our energy efficiency have actually fallen in recent years.
- The state and federal governments often give cash incentives to people who use more energy-efficient technology. Recent programs promoting efficient equipment have included refrigerators and light bulbs.
- With the deregulation of the electric industry, we may be able to choose where our electricity comes from and how it is made.

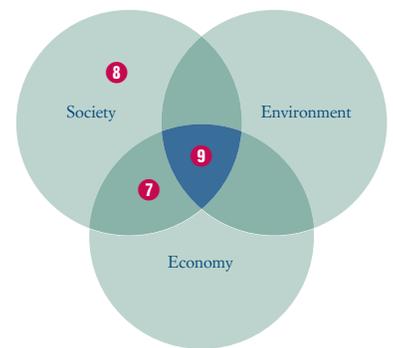
Knowledge gaps

We need measures of economic resource efficiency that include more than just energy, but also cover our use of timber, land, water, metals and other materials. We also need better data on how much of the energy production upon which our economy relies comes from renewable and sustainable sources.

Equity

GOAL: A more equitable distribution of the positive and negative products of civilization among New Jerseyans, from north to south, urban and rural, men and women and among all classes and races. This includes fair access to healthy environments, good health care, governmental decision-making, economic opportunity and natural/cultural amenities.

The idea of social justice is a high ideal, one on which our nation was founded: All men are created equal. Today we tend to think of equity in relation to discrimination, but equity is not an issue limited to those who are disadvantaged. A community functions best when all its members are included in the economic or social structure. We all share in the economic, political and social costs of inequity through such manifestations as homelessness and crime. Inequity is also evident in New Jersey’s unequal infant mortality rates. Inequity means that those of us who are female or from minority backgrounds earn lower wages. It also means that noisy and polluting facilities are more likely to be located in poor and minority neighborhoods.



What we know

- 7 Little change in equal pay.....page 16
- 8 Legislators increasingly reflect populationpage 17
- 9 Disparities in infant mortality show little changepage 18

What we don't know

- Data are limited for ethnic groups outside of the overly simplified “black-white” breakdown. New Jersey is much more diverse than this and measuring equity is more complex than traditional racial comparisons show.
- We do not have recent or historical information on inequality in education, access to health care and responsiveness of government.
- We do not know the fairness or full effect of our actions today on the ability of future generations to meet their own needs.

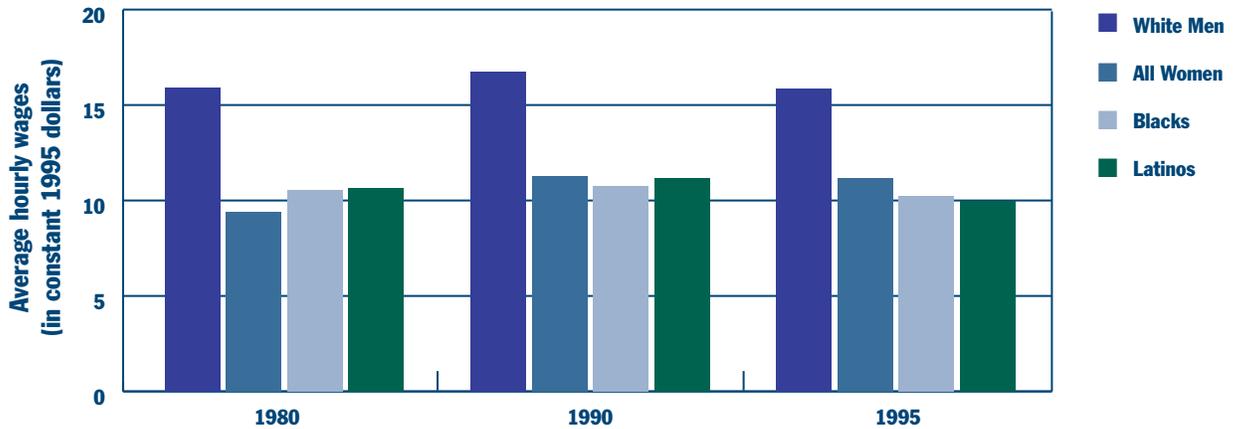
Equal Pay

INDICATOR

7

Equal Pay

Median hourly wages by gender and race: Little change



Importance

We have worked hard to rid our society of many forms of discrimination.

Unfortunately, some discrimination is difficult to identify and hard to prove. Not giving equal pay for equal work is one of the ways in which our society can subtly put women and minorities at a disadvantage. Between 1980 and 1995, women made significant gains in wages. However, wages for blacks and Latinos have remained stagnant relative to their white male counterparts. Not only are these differences unfair, they divide us and reduce our ability to work together as a society to solve our problems and

build a unified, cohesive future together.

Economic

A free market economy, when working well, should provide the same compensation for the same work. Fairly rewarding people for hard work and initiative is the drive behind the innovative and entrepreneurial spirit that has made our economy and our country great. It is this spirit that creates the desire to work and participate productively in the economy for the betterment of all. If a rising tide does not move all boats, there will be fewer people working to raise it.

Environmental

Economic power often translates into political power and can mean greater environmental protections for some at the expense of others.

Social

Unequal wages divide the state's citizens. Under this situation, any sense of unity is difficult to achieve and the development of a cohesive statewide community is hindered. Divisions in society hamper our ability to act cooperatively to solve some of our most pressing problems.

Things to think about

- Unequal pay builds a vicious circle, where those of us with less income may also receive less education and fewer opportunities and, as a result, are likely to earn lower pay.

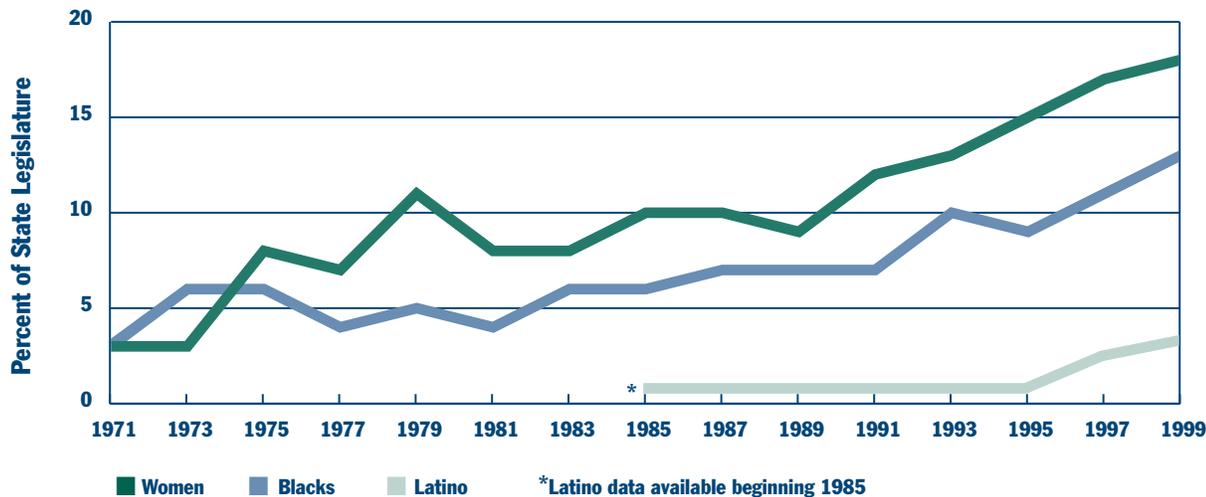
Knowledge gaps

Data for more minority groups, more consistently collected, is necessary. Current data do a poor job accounting for the differences in work within a particular job classification.

Legislators' Reflection of Population

Percent of women, blacks and Latinos serving in the 120-member State Legislature: Increasing

Legislators



Importance

Representation is one of our most basic rights, and one of our strongest tools for shaping the future. While an individual of any race or gender may serve well the interest of others, it is both fair and healthy for our democracy when our elected officials reflect the makeup of the population they serve. The number of female state legislators in New Jersey has grown significantly but still remains extremely low — fewer than 17 percent of our state legislators are female, earning New Jersey 39th place in national standings. The number of Latino state

legislators also remains smaller than our Latino population. One group has made significant progress in the past two decades: the proportion of African American state legislators today nearly corresponds to size of our black population.

Economic

Although our economy is based on free market principles, the government plays a role in correcting market failures that may wrongly discriminate against minorities.

Environmental

Many environmental decisions — such as where to locate undesirable waste facilities — are made by government. Environmental inequities can result when minorities and those who live in poor areas do not have equal representation and so receive more than their fair share of undesirable facilities.

Social

A legislature consisting of the full mosaic of cultures and ideas can better debate the full array of social biases and social problems than can a legislature primarily consisting of one group.

Things to think about

- Most of the minority members of the State Legislature are in the Assembly. The 40-member Senate continues to be composed overwhelmingly of white males. Because Assembly members traditionally move to the Senate, this disparity may lessen in the future.
- In the late 1800s and early 1900s, Americans fought successfully to remove “Jim Crow” laws that restricted the right of some citizens to vote and be represented. Despite this progress, we have moved only somewhat closer to representation that reflects our population.
- Confidence in government increases when people see “one of their own” in elected office.

Knowledge gaps

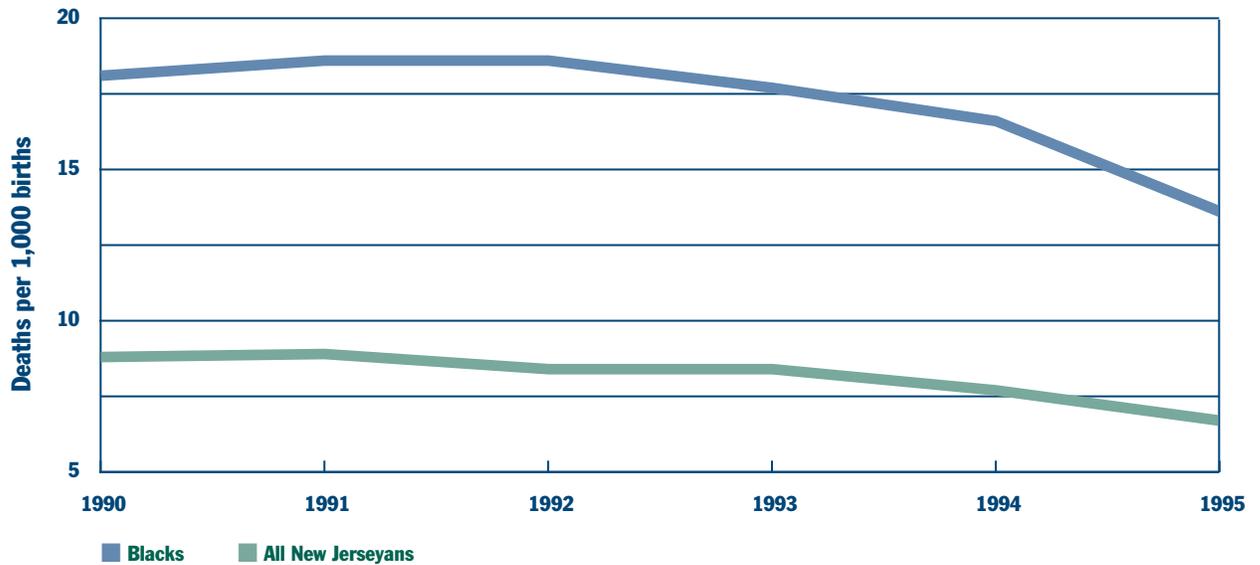
There are many other positions in the State that could also be examined to determine how representative public officials are of the population. However, there is no consistent analysis of these positions. Positions such as those on local school and planning boards can be particularly important for building a fairer future.

INDICATOR

9

Disparities in Infant Mortality

Disparities in infant mortality (deaths per 1,000 births) for the total population and the black population in New Jersey: Little change



Importance

Infant mortality is commonly used as a surrogate for the overall social development of a society. In New Jersey, the odds of survival for a baby depend, in part, on the baby's color. Overall, infant mortality rates are falling in our state, but the gap between the rate for blacks and the state average shows little change. Among black infants, mortality rates are generally about twice as high as the state average; the same is true nationally.

Economic

Our ability to provide for our children is governed, in part, by our access to economic opportunities. Infant mortality can be used as a proxy for other issues that are harder to measure, such as a lack of opportunities for jobs, lack of upward mobility and education, reduced access to general health care services and even a sense of frustration among those of us who receive fewer benefits of the state's economy.

Environmental

Impoverished areas have higher

infant mortality rates. Families who live in poorer areas are often exposed to more adverse environmental conditions, ranging from second-hand smoke to toxins, including conditions that can complicate pregnancies.

Social

The disparity in such a basic issue as the chance of our children surviving is a strong indicator that we are a divided society. A divided society will always have more difficulty acting to solve its problems than one that is unified.

Things to think about

- Infant mortality depends in large part on the education of the parents and the amount of pre-natal care the infant receives.
- Despite its wealth, the United States has one of the highest infant mortality rates in the industrialized world.
- After decades of progress in addressing the inequities among ethnic and social groups, many basic disparities remain.

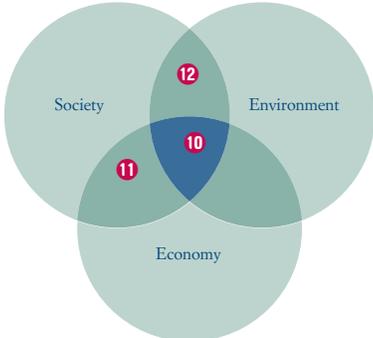
Knowledge gaps

We do not have historic and consistent data for races other than black and white. Our state is more diverse than a simple black-white comparison can illustrate.

Strong Community, Culture & Recreation

GOAL: Create or enhance within New Jersey communities a positive sense of local identity and individual belonging, which promotes respect among neighbors, increases everyone’s feelings of safety and security and provides abundant cultural and recreational opportunities.

Feeling good about where you live, feeling a connection to your neighbors and local institutions while surrounded by places to play and learn is an ideal that many people seek. New Jersey offers a vast array of communities and neighborhoods — cities, small towns, old and new suburbs, rural lands — and an equally vast array of recreation and cultural options, from cranberry festivals to opera, from bicycle races to ethnic celebrations. Our community bond is weakened when we don’t participate in community events, if we fear to walk some streets and when we can’t or don’t visit our cultural and recreational places.



What we know

- ⑩ Newspaper circulation decreasingpage 20
- ⑪ Crime rate decreasingpage 21
- ⑫ Open space available for public recreation increasingpage 22

What we don’t know

- How much New Jerseyans give back to their communities in the form of volunteer work with schools, Little League, community organizations and clubs.
- How much opportunity New Jerseyans have to enjoy the state’s cultural amenities, such as local fairs, theaters, sporting events and museums.
- The state of our civil society and how well we will be able to work together as a society to solve our collective problems.

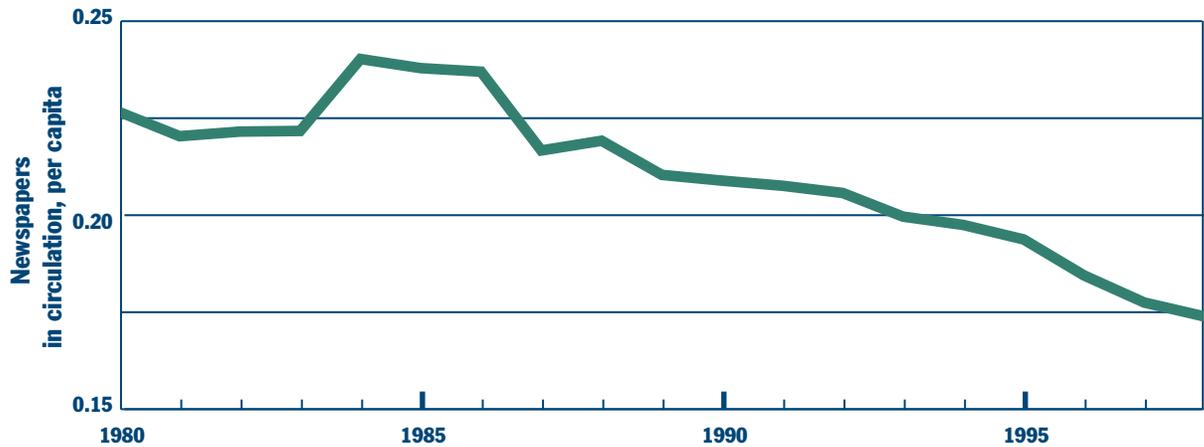
Newspaper Circulation

INDICATOR

10

Newspaper Circulation

The per capita circulation of New Jersey newspapers:
Decreasing



Importance

Without knowing the actions and reactions of our neighbors and leaders, we can do little to change them. Armed with knowledge, however, we have the ability to remake our state to suit our goals. Newspapers are particularly important to New Jerseyans because our major television and radio broadcasts come from New York and Philadelphia; they leave discussion of our values to our state newspapers. The number of people reading New Jersey newspapers is an indicator of how engaged we are with New Jersey issues.

Economic

Over the morning paper, we get a glimpse of demographic shifts that call for new products or job relocations. While reading on the bus, we find out about upcoming regulations that may change the way our families save, or our businesses operate. Behind the Sunday paper, we learn what our colleagues and competitors are working on. The daily newspaper is an important information tool for economic success.

Environmental

Newspapers are the only medium that covers local environmental decisions, especially regarding land use and where waste or energy pro-

duction facilities will be located. Newspapers tie the environmental problems that we feel locally to those happening nationally and globally, so that we can solve them together. These issues are covered in greater depth in newspapers than is possible in other media.

Social

Without newspaper exposure and in-depth coverage of social issues, we would live in the dark. We would not know where crimes are committed, where politicians are meeting, where schools are excelling or failing to meet their potential. Newspapers do not offer us a fully two-way dialog, but they do help foster responsibility and build communities.

Things to think about

- The existence of newspapers does not guarantee that we will learn all that we need. We also depend on many kinds of personal experiences that are not reflected in an indicator about newspaper readership.
- Newspapers report on the events of the moment, but they do not always cover incremental change — even though crucial issues, such as population growth and accumulation of pollutants, can sneak up on us slowly.

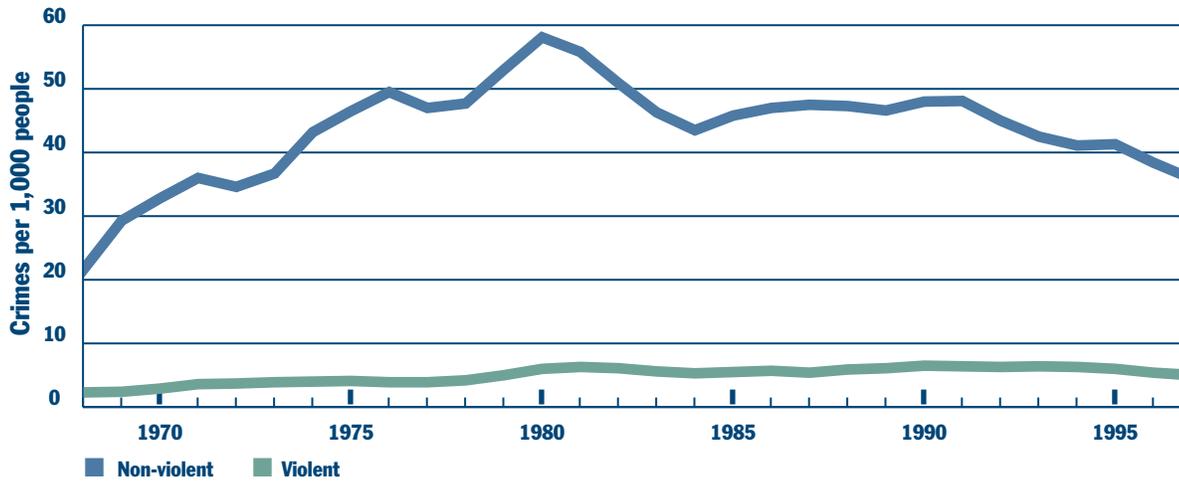
Knowledge gaps

This indicator does not account for the quality of the news stories reported, only their quantity. It also does not account for the growth of electronic news media including the Internet. We have yet to fully account for the impact of New York and Philadelphia newspapers on New Jersey issues and readers.

Crime Rate

Number of reported violent and non-violent crimes per 1,000 people in New Jersey: Decreasing

Crime Rate



Importance

What could be a more striking measure of a healthy society than the rate at which its citizens commit crimes against each other? Crime's impact does not stop with stolen property, lost health or fear — it encompasses the host of social issues that feed it, such as unemployment and poverty.

Fortunately, our crime rate has been falling. It is now at its lowest level since the mid-1970s.

Economic

Economic stagnation and desperation

contribute to high crime rates — and crime chases people away from inner city areas that could otherwise be home to productive businesses and families. It is a vicious circle that fights back against the people who try to break it. Meanwhile, people are forced to spend their money on alarm systems, law enforcement and prisons.

Environmental

When people abandon city centers they cause new sprawl in suburban and rural areas instead. "In fill" or redevelopment of existing cities would spare environmental resources, but crime discourages

people from undertaking this kind of renovation. Money and resources spent fighting crime divert resources away from protecting our environment.

Social

Crime is an indicator of other deep social and economic problems. It can reflect lack of opportunities, inadequate education and feelings of hopelessness. It is a strong, leading indicator of economic stagnation, a shortage of well-trained workers and other problems that may await us in the future.

Things to think about

- New Jersey crime rates vary greatly between communities.
- Crime, or a perceived lack of safety, is among the reasons cited by New Jerseyans for not wanting to live or do business in inner city areas.

Knowledge gaps

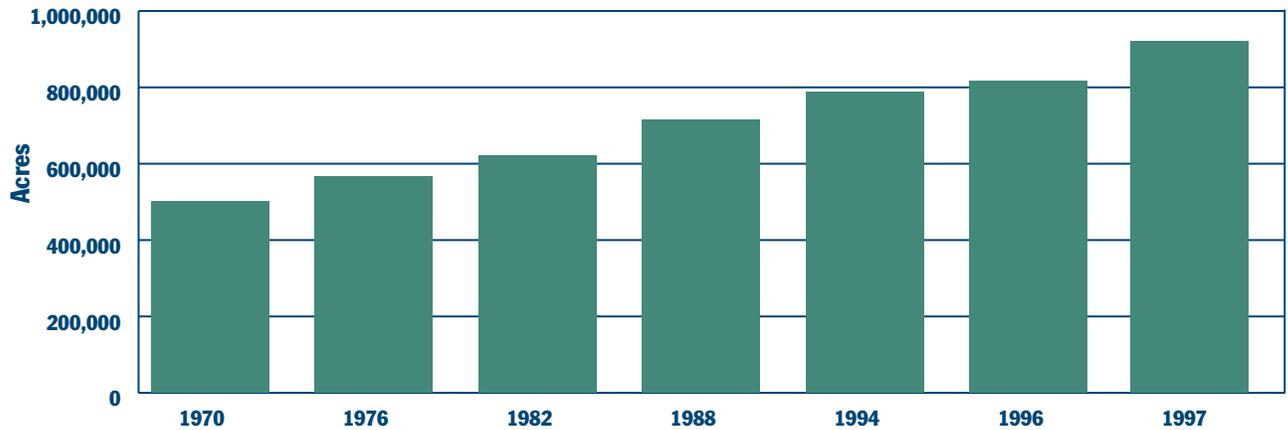
Data from the Uniform Crime Statistics capture only crimes that have been reported. If minor crimes become commonplace, or if people are scared or embarrassed to report crimes such as rape, then the reported crime rate could be misleading. It would be desirable to have information, perhaps survey data, on the percent of crimes that are reported.

INDICATOR

12

Open Space Available for Public Recreation

Acres of open space preserved for public recreation: Increasing



Importance

Both children and adults need places to congregate and play. These simple pleasures are fundamental to quality of life in New Jersey. As of 1996, a total of 816,000 acres had been preserved for public recreation. Unfortunately, the remaining unpreserved open space is being rapidly consumed by development. We benefit from public land in many ways: homes and businesses near parks are worth more than those in other places; we strengthen our communities when we socialize in these places; plants and animals have places to thrive; and green spaces clean our air and water.

Economic

New Jersey's second largest industry is tourism — a measure, in part, of the state's natural charm and attraction. Other industries understand the importance of open space to the quality of life enjoyed by their employees and consider this when deciding where to locate or expand. One Colorado study found the market value of properties adjacent to greenways was 32 percent higher than those only half a mile away.

Environmental

We think of parks and open spaces as places to play and relax. But to the state's flora and fauna they are home. This double utility of parks allows us to have fun while also preserving species.

Natural areas also absorb some of the pollution from our cars and factories and filter our water. Parks are a triple benefit.

Social

Green spaces are part of self-perception. When we think of our nicest neighborhoods, we see tree-lined streets, baseball diamonds and benches in the grass. When we think of our nicest vacations, we see ocean beaches, the Appalachian Mountains, the Pine Barrens and the outdoors. We can gather in green spaces and socialize. They are part of who we are.

Things to think about

- Despite the fact that the amount of open space available for public use has increased, the view from the road — seemingly endless strip malls and subdivisions — continues to show that we are losing our forests and farms at an alarming rate.
- Most of the acres preserved since 1970 have been acquired through the Department of Environmental Protection's Green Acres program.

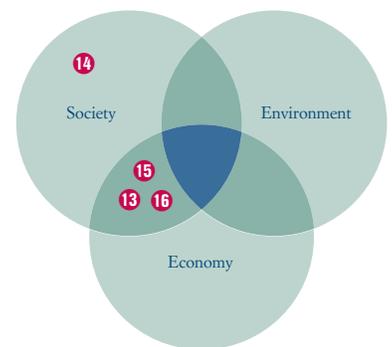
Knowledge gaps

We still do not have consistent data on the total amount of open space lost annually in New Jersey. The data we have do not tell us whether our open lands have been logged recently, whether they suffer from pollution or other degradation, or about the general quality of nature there. These data also do not say how accessible these places are to our people, especially those without cars.

Quality Education

GOAL: A quality, lifelong education equally accessible to all New Jerseyans, whereby individuals learn to be critical thinkers and engaged citizens with an understanding of and respect for the systems that support civilization (social, economic and environmental); and which provides students the knowledge and skills necessary for employment and personal fulfillment.

New Jersey spends more money per pupil in elementary and secondary school education than any other state except Alaska. Our students score among the nation's top in standardized testing; we are at the national forefront of new educational initiatives, such as charter schools. Yet there has been little change in the number of students meeting minimum high school proficiency standards and we have spent years arguing in the courts about the disparities that exist between our rich and poor districts. Such issues aren't critical only to those with children. An educated citizenry is essential to a productive economy and a fully functional society. New Jersey produces fewer higher education degrees relative to population size than many other states.



What we know

- 13 Graduation rates increasingpage 24
- 14 Little change in student/teacher ratio.....page 25
- 15 Little change in number of students meeting minimum high school proficiencypage 26
- 16 Access to higher education shows little recent changepage 27

What we don't know

- We can test students on reading, writing and arithmetic. We do not have information on characteristics that are harder to test for including the ability to work with others, to think in innovative ways and whether students care about being productive members of society.
- We have no consistently available measures on disparities in the education received by children from rich and poor families, by genders, or from different ethnic groups.
- To sustain our quality of life, it is imperative that our children are taught to understand the basic systems that support us: the economy, environment, government and society. We currently have no way to measure how well our children are taught what they need to know to manage these systems.
- There is currently no comprehensive means of tracking lifelong education. Given the quickening pace of economic change as we enter the next century, it appears that continuing education long past traditional graduations will become more important.

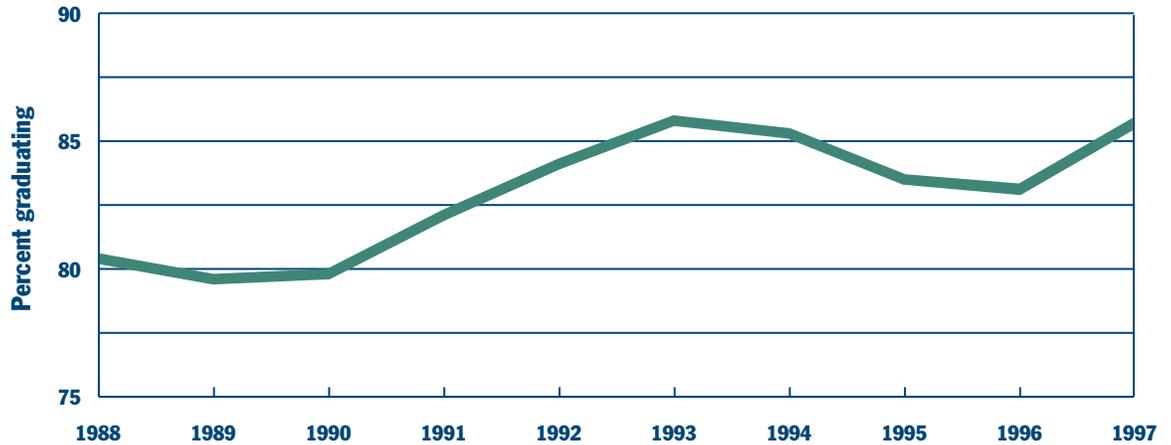
Graduation Rates

INDICATOR

13

Graduation Rates

Percentage of New Jersey's students who graduate within four years of entering high school: Increasing



Importance

Education correlates strongly with future economic and social well-being for everyone. It is also a critical way that we transmit our values, culture and shared experience. A high school diploma is a passport to the benefits of American society.

Economic

Without a degree, young people face a difficult battle in today's marketplace for workers and lack opportunities for advancement tomorrow. Education makes people employable and competitive. It also makes them rich in knowledge and experience. For economic

development to take place, we need capable, educated workers who are also rounded people.

Environmental

Environmental education helps us make scientifically informed decisions, rather than choices based on emotion. Such learning is the foundation of decisions in the future that will conserve our resources and allow us to live well. Tomorrow's graduates will soon face the task of reducing the burden that we put on nature today.

Social

Education is central to developing future leaders and effective participants in our state's civil society. People who drop out of school are not eligible for many important kinds of work or future opportunities, and they are in less of a position to lead us toward the kind of future we want. This is especially worrisome in urban areas with the highest dropout rates, because this is where strong leadership and strong communities are most needed.

Things to think about

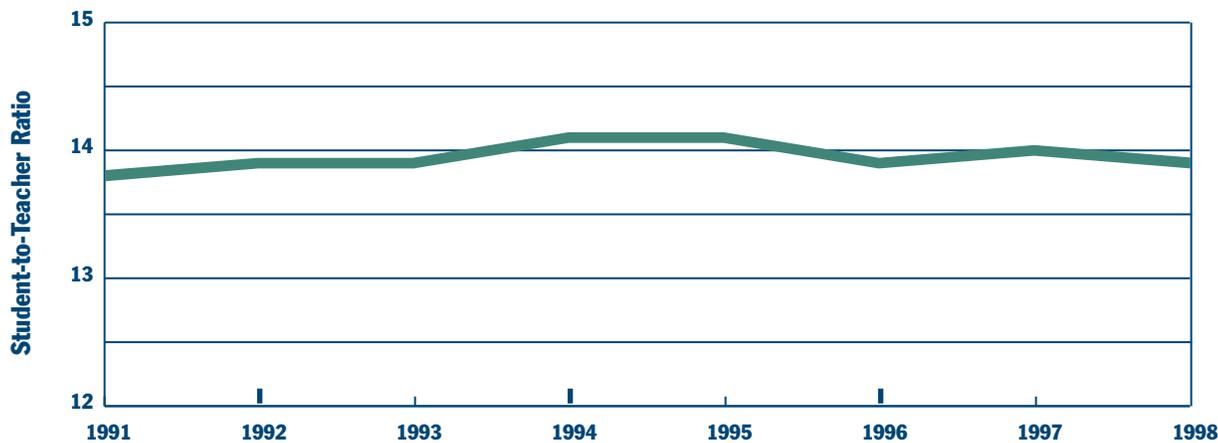
- High school graduates have a significantly lower unemployment rate than non-graduates.

Knowledge gaps

Graduation rates do not tell us how good an education each student received. Furthermore, graduation rates do not tell us whether these young people are responsible citizens, are healthy, or have a fundamental understanding of important issues and of how the world works.

Student/Teacher Ratio

Average number of students per full-time classroom teacher at NJ public schools: Little change



Importance

One of the most effective forms of education is student-teacher interaction. The student-to-teacher ratio for New Jersey schools has recently hovered around 14 students per teacher, as compared with the national average of 17. Our state may be stronger in the future as a result.

Economic

Businesses invest in machinery, advertising and the materials that they use. Through their taxes, they invest indirectly in an even more critical resource: educated employees, the products of our public

schools. An investment in well-educated people means far more to our economy than the purchase of any machine, or the building of any infrastructure.

Environmental

Education is often necessary to illuminate the connections between our actions and the consequences for the environment and our society in general. "Thinking skills" are crucial to fostering environmental awareness. Teachers are the people who build such kinds of thinking. A quality education instills values of environmental stewardship.

Social

In addition to teaching skills and critical thinking, an education teaches children how to behave in social settings. Self discipline, respect for others and other key social values can be instilled through classroom experience. Adequate attention from teachers is a critical component of this learning experience.

Things to think about

- The work of teachers can only reach its highest potential when it is complemented with the teaching done by parents.

Knowledge gaps

This indicator does not take into account the quality of teaching, nor teacher qualifications. It also does not illuminate the curricula that are taught to our children. This indicator does not adequately account for different types of teachers, such as special education and counseling, that are more prevalent in some schools.

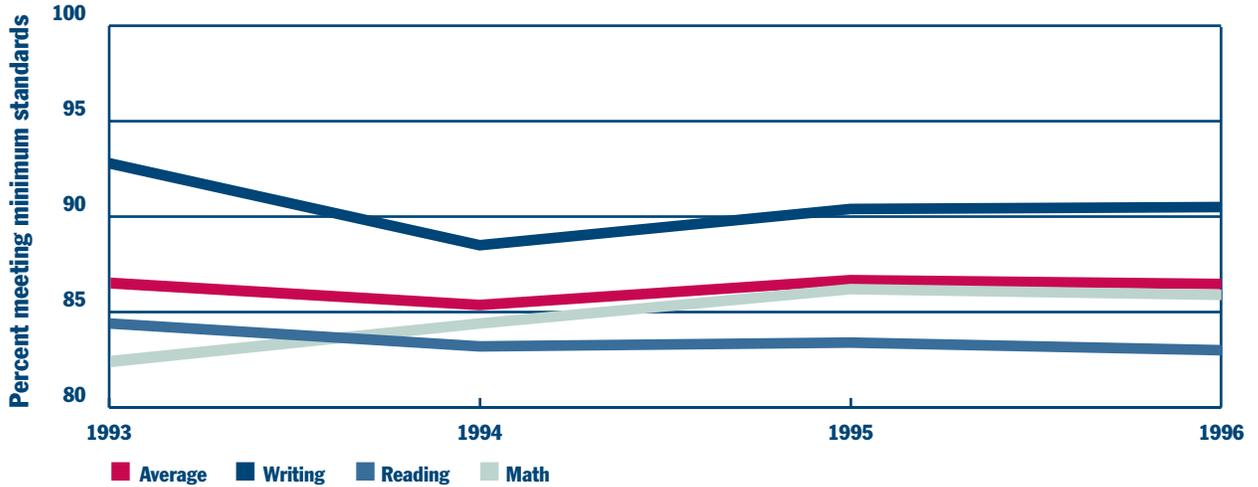
Standardized Test Scores

INDICATOR

15

Standardized Test Scores

Percent of students meeting the minimum high school proficiency mandated by the state: Little change



Importance

Imagine trying to get through a day — or a career — without knowing how to read well. Imagine trying to buy a house and secure a mortgage without knowing basic mathematics. A steady number of us in New Jersey face these difficulties. As with many issues in our state, a large but diminishing gap exists in this indicator among those of us from different races.

Economic

Employers depend on capable workers who know their basic skills, including reading, writing and math. If our school system does not instill such proficiency into us, then industry will suffer and incomes will decline.

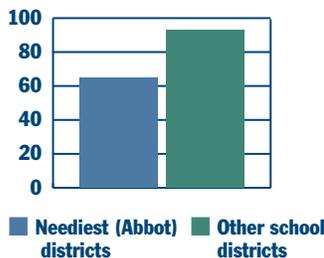
Environmental

Those of us who benefit from an effective high school education are better able to create opportunities to protect and enhance our environment.

Social

Those of us who do not learn to read and write well at an early age are at a disadvantage through the rest of our lives and this disadvantage stands at the root of a cycle of other social disadvantages. Problems such as unequal life expectancies, unequal wages and high unemployment all stem in part from unequal opportunities for education. Unequal test results serve as a good proxy for these other important issues.

Percent Passing the 1997 High School Proficiency Test



Things to think about

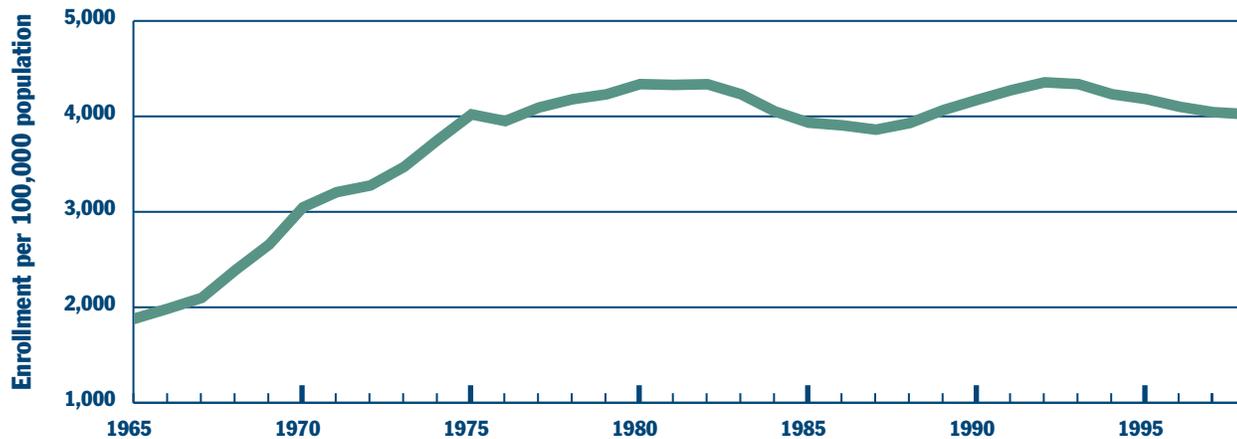
- Public school tests cover basic skills — but not such crucial attributes as the ability to work with others, the wisdom to make responsible choices for our future and our environment, or the desire to work hard.
- Some studies have shown that the value of education, literacy and other attributes measured by test scores are more important to our economy than the value of the machines, assembly lines and financial capital used by our businesses.

Knowledge gaps

No one test has been given consistently to public school students in our state and so comparisons of results are not possible. Also, the data represented here will be outdated soon because the state is getting ready to implement testing of a new set of “Core Curriculum Content Standards.” Once the data from the new standards are collected regularly, they will provide some of the information we need to make consistent comparisons.

Access to Higher Education

Undergraduate enrollment in New Jersey colleges and universities: Little recent change



Importance

College education increases our earnings, expands our horizons, generates more opportunities and supplies our industries and governments with more capable workers. Some of us take it for granted that we and our children will go to a college or university; but others see this opportunity as beyond reach. This indicator measures our state's capacity to accept new students for higher education. College enrollment per capita has risen in New Jersey since 1970, but fell somewhat during the 1990s.

Economic

New Jerseyans who have been to college earn more than those of us who have not. They also have a wider range of job opportunities and more job security. Some of our most dynamic industries, such as high technology and pharmaceuticals, depend very heavily on workers who have a college education — and even advanced degrees. They choose to locate in places where the market offers such workers.

who make advances in science, economics, management and other areas with the help of a college education. College also expands our horizons and helps us to see issues and connections, such as those between economic, social and environmental issues.

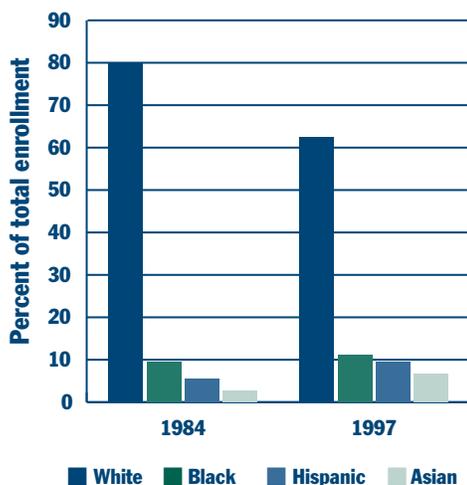
Social

College can provide thinking and evaluation skills that can help us make the best decisions for our communities and ourselves. To live and work effectively we need to be as knowledgeable as possible about our economy, society and environment.

Environmental

Some of the solutions to our environmental problems will come from knowledgeable innovators

NJ Colleges Enrollment by Race



Things to think about

- New Jersey has some of the preeminent universities in the world. Two of them, Rutgers and Princeton, predate the state of New Jersey.
- Many New Jersey students go to college outside New Jersey.
- There is a shortage of lawyers, doctors and other highly educated people choosing to work in the public sector for lower salaries. This is due in part to the high cost of their education.

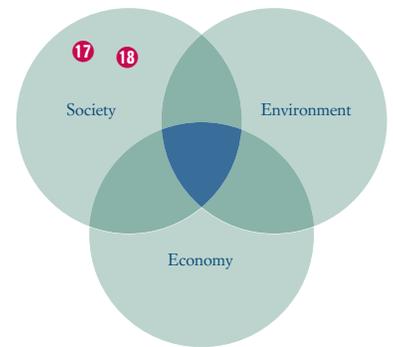
Knowledge gaps

Enrollment does not tell us how many opportunities exist for New Jerseyans to go to college. Opportunities are created through access to a good grade school education and through resources given to institutions of higher education. Knowing how many of us enroll in college does not tell us about the quality of the education that we receive.

Good Government

GOAL: A statewide system of governing that is efficient, effective, trustworthy and responsive to citizens and their needs; and which actively promotes good citizenship and effective participation in decision-making.

New Jerseyans played a prominent role in shaping the initial documents and direction of American democracy. Our state continues to shape democracy's direction today, with landmark laws regarding sexual offenders, banning assault weapons and better land-use planning. Even so, our research shows that most New Jerseyans cannot name either of our two U.S. senators, and half of us do not know which party controls the legislature. If our knowledge of key public affairs and issues is as weak, then our tradition of democracy could be imperiled. Indeed, our state's voter turnout is declining. With today's pace of rapid change and increasingly complex issues, we need more than ever a set of representatives we can work with and trust. Our lack of knowledge about and participation in politics works against our need for an efficient, effective, trustworthy and responsive government.



What we know

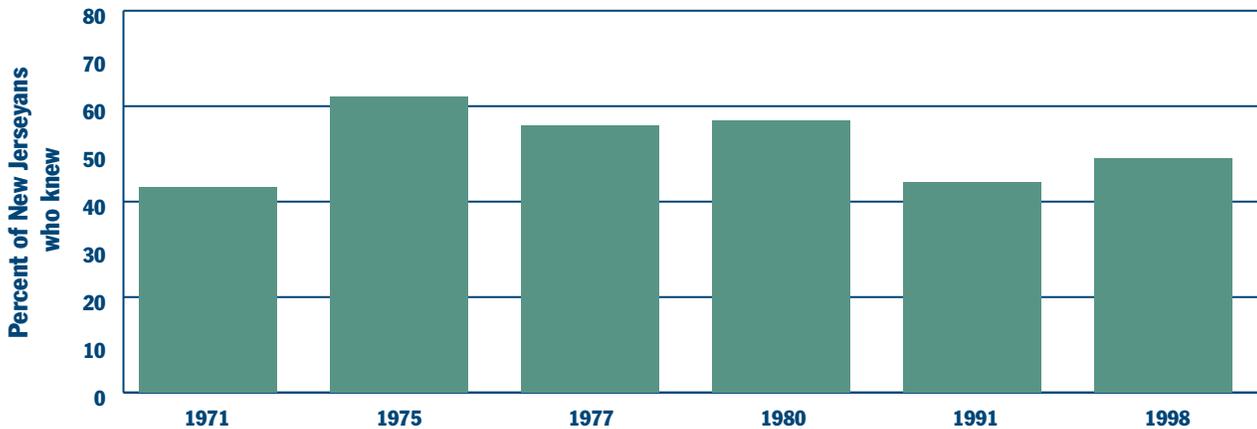
- 17 Knowledge of government increasingpage 29
- 18 Voter turnout decreasingpage 30

What we don't know

- Although we do know that we have the highest density of local governments in the nation with 566 municipalities, 618 school districts, 21 counties and numerous local authorities, we do not have good measures of the efficiency and cost effectiveness of state and local government.
- To be valuable, public participation in government must be informed and effective. We have no way to measure how good we are as citizens in getting our voices heard in government.
- The level of government action (local, state, federal) should meet the level of the problem (local, regional, national). We have no way to measure the right balance between governmental activity at the local, state and federal level.

Knowledge of Government

Percent of survey respondents who knew which party was in control of the State Legislature: Increasing



Importance

While the numbers have slightly increased, in 1998 only half of us knew which party controlled the State Legislature, a significant drop from 62 percent in 1975. Such knowledge is an indicator of the vibrancy and health of our democracy. When we vote, our opinions on all of the pressing issues of the state are boiled down to choosing one party or another. How can we hold government responsible, and have a basis for our voting decisions, if we do not even know who is in power?

Economic

Our government has a profound impact on the functioning of our

economy, as demonstrated by daily news coverage of what government is doing to regulate industries and spur economic health. However, if a majority of citizens lack the knowledge to express themselves within our government, we can not be certain that government actions within the economy will serve our best interests.

Environmental

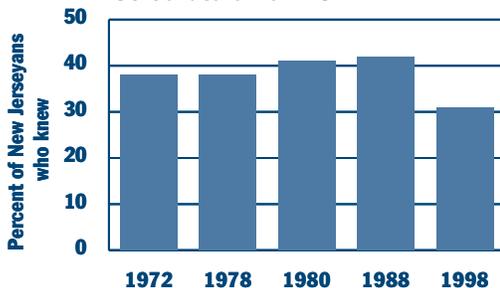
The stakes are high when our government makes laws on how much pollution can be released, on where development can take place, on energy policy and on other environmental issues. We can make these decisions reflect what's best

for our environment and ourselves, but only if we are knowledgeable about the issues and familiar with our representatives.

Social

Our social structure is based upon an open and democratic dialogue between citizens and leaders. Those of us who are unaware of the political party in power will find it difficult to take part in democratic dialogue and hold government accountable for its actions. Without this kind of interaction we are hindered as a society in our ability to respond to New Jersey's many pressing problems.

Do you know the names of the US Senators from NJ?



Things to think about

- U.S. Senators are among the most visible and media-recognized of our elected leaders.
- In a two-party system such as ours, decisions on all public issues are boiled down generally to voting for a candidate representing one party or the other.

Knowledge gaps

The ability to name the governing party or Senators only represents one form of citizen engagement. Important measures we do not have include knowledge of other state and local government leaders, and of current public issues. These survey data are not collected regularly.

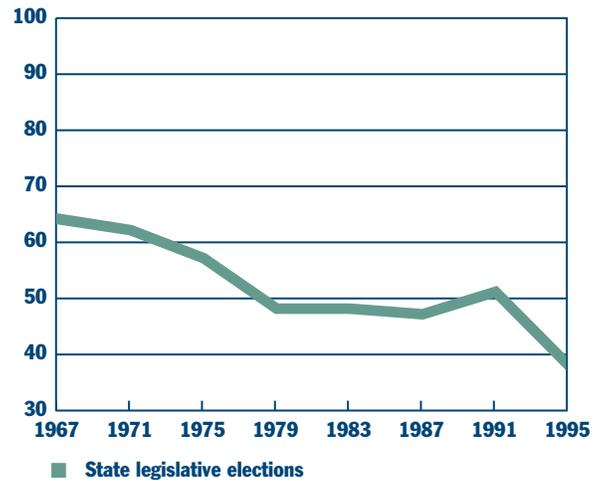
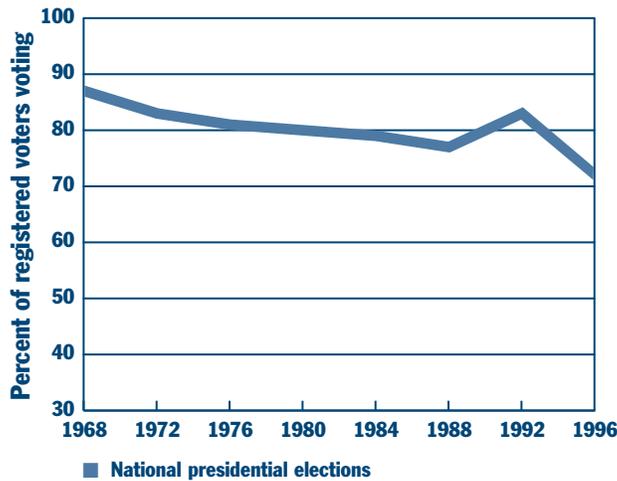
Voter Turnout

INDICATOR

18

Voter Turnout

Percent of registered voters casting ballots in statewide general elections: Decreasing



Importance

Voting is the fundamental way we exercise our right to self-governance. Voter turnout is the basic measure of how many of us are exercising this right. Through voting, we can express our desires and speak our priorities for less poverty, more jobs, a cleaner environment, less crime and better education. When we vote, we fulfill an opportunity that few people have had throughout history, and for which people in this country and others have fought and died. Turnout for national (and gubernatorial) elections has declined only slightly. However, turnout for legislative/ local elections has declined dramatically, reaching a

record low turnout of just 38 percent of registered voters in 1995.

Economic

Voting is about economics. It puts into government the decision-makers who will promote job growth, fight for our social values and commit themselves to ensuring that our economy is the foundation of our social and environmental health.

Environmental

Not voting leaves decisions about our water, air, parks, forests, wetlands, open spaces and hazardous materials in the hands of other people, often those who have a vested or financial interest in the out-

come. By voting, we can act to ensure that decisions about the environment are in the best interest of all New Jerseyans, instead of a vocal or wealthy minority.

Social

When we vote, we exercise our most fundamental right as citizens in a democracy. A decline in voting may signal an ominous change in how invested we are as citizens of a common state or country, and how much of ourselves we are willing to give to build a common future. By voting, we participate in a public dialogue about New Jersey that brings us together and makes us a more unified society.

Things to think about

- In countries where voting has only recently become a privilege, voter turnouts are very high: 92 percent in Uzbekistan and 91 percent in Kazakstan, for example.
- Voter turnout varies substantially depending on what offices are being elected. In elections where candidates are on TV and widely known, such as for governor or president, voter turnout has been fair to good. However in elections for local office, the elections which can at times affect us the most, voter turnout is dismal — 1995 saw the lowest voter turnout in recent history.

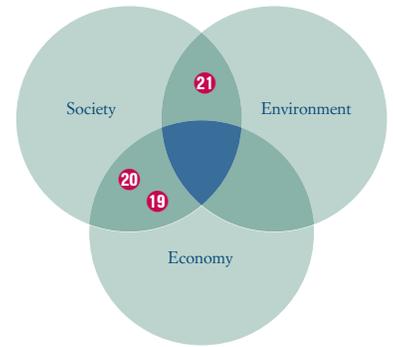
Knowledge gaps

This indicator only measures the percent of registered voters. It does not take into account people who are eligible but not registered. It does not take into account the significance of recent increases in the number of voters due to automatic voter registration initiatives, such as the program run by the Division of Motor Vehicles. We interact with our government in many other ways besides voting, including campaign contributions, letters to newspapers and through direct conversations. In the future, it would be worthwhile to create measures of these interactions as well.

Decent Housing

GOAL: A variety of desirable housing options for all New Jerseyans, at every income level.

Sandwiched between two major cities in neighboring states, New Jersey has long provided an opportunity for home ownership not available to city dwellers. As a result we have become a state where the majority of people live in suburbs. Sprawling ever outward, we are losing our diversity of housing types. New housing options in New Jersey are largely limited to “cookie cutter” subdivisions. There is good news: The number of us who can afford to rent is increasing. Median incomes have risen more than housing prices in recent years, suggesting that some of us who could not afford to buy homes in the past are now beginning to be able to do so.



What we know

- 19 Increasing number of New Jerseyans can afford to rentpage 32
- 20 Median income increasing faster than housing prices.....page 33
- 21 Little change in housing choice.....page 34

What we don't know

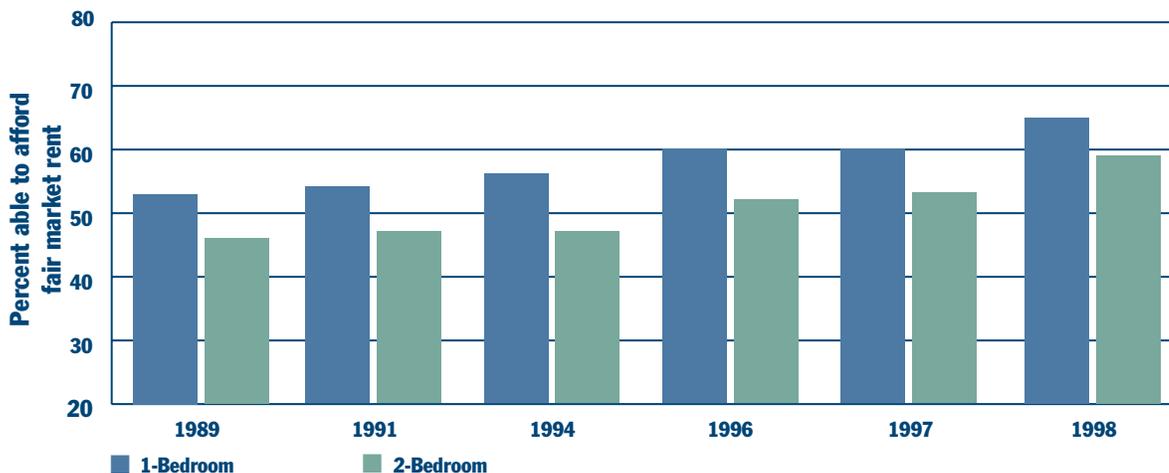
- We do not have consistent data to describe the quality and state of repair of these homes.
- We do not have data that describe the neighborhoods these homes are located in; whether children who live in these homes have other children to play with nearby; whether these homes are located in safe neighborhoods; or whether these homes are located near amenities such as parks, shopping and entertainment.
- These data do not adequately tell us how much financial difficulty New Jerseyans have in meeting their housing needs.

INDICATOR

19

Rent Affordability

Percent of New Jersey renters able to afford the fair market rent with 30 percent of their income: Increasing



Importance

Housing is a fundamental need of all people. Families who struggle to find affordable housing have to use their energy and resources for meeting this basic need, rather than for other necessities like food and medical care, or discretionary spending including further education. At the end of the 1980s, about half of us who rent were able to afford market rates using 30 percent of our income. That percentage is slowly rising. Still, affordable rent eludes many.

Things to think about

- To be considered affordable, rent must be 30 percent or less of income.

Economic

Affordable housing is essential to the economic well-being of our citizens — and the economic success of the state. Businesses have difficulty maintaining a workforce without adequate places for workers to live. Our economy is dragged down when significant numbers of us have little money to spend and invest due to the high cost of housing.

Environmental

Housing is part of the human environment. Living in shabby or unaffordable housing makes it difficult

for us to feel connected to our environment and take responsibility for its well-being.

Social

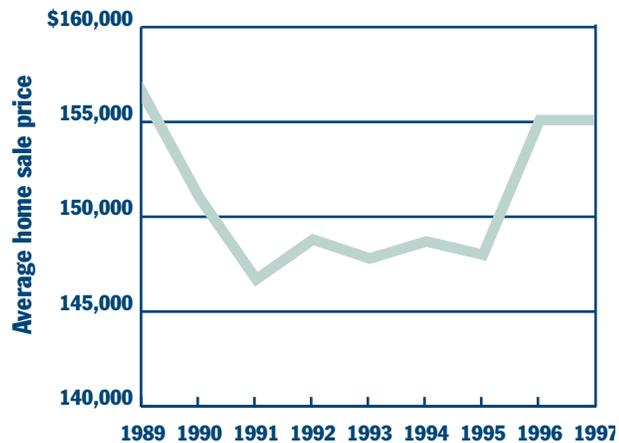
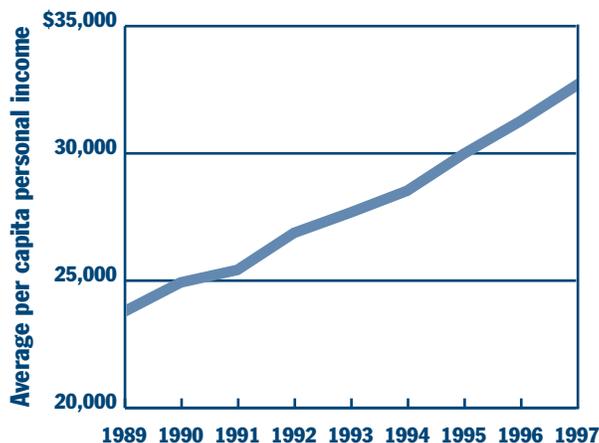
Housing is the backbone of a community. If housing is too expensive or of poor quality, it is harder for residents to become connected to that community and develop a sense of belonging. In many of our poorer areas, little money is left over after the rent is paid, so few resources are available to pay for quality education and social programs that can aid in breaking the cycle of poverty.

Knowledge gaps

The definition of “fair market rent” has changed during the period in which data were collected; this definition should be standardized. We do not have data to ascertain whether some people might prefer different thresholds of affordability. Also, these data cover the entire state and so cover up the considerable regional variations in both incomes and rental prices.

Home Prices vs. Income

The relationship between average per capita annual income for a four-person family and median home sale prices:
Income increasing faster than home prices



Importance

Home ownership helps build financial equity for New Jerseyans and establishes us as long-term stakeholders in our communities. It also builds pride in the places where we live and gives children and families a stable place to grow. The ratio between home price and income has narrowed since 1988. This suggests that more of us are able to buy a home.

Economic

One of the biggest economic goals of many New Jerseyans is to own a home. For most people, their home will be their largest investment. We store our savings

in our homes as “equity.” We also store our most valuable assets at home — our safety, our families, our peace of mind. The availability of desirable housing for employees is a major consideration for businesses in deciding where to locate.

Environmental

How and where we build our homes may be the single most important factor in how much we impact our environment. Depending on where and how they are built, homes use and generate different amounts of land, traffic, energy and pollution. The most valuable homes are often those with tree-lined

streets, near pristine environments and parks. Conversely, those near waste dumps, polluted rivers or environmentally damaged sites are worth the least.

Social

Homes give people a reason to care. Homeowners are key stakeholders who tend to take a long-term interest in community matters such as promoting education and fighting crime. Desirable homes help shape close communities where children play safely, where parents can visit together in nearby parks and where housing values rise along with the well-being of the community.

Things to think about

- Although average income is rising, income inequality, or the gap between the rich and poor, appears to be widening in the state. We don't know if housing inequality is widening as well.
- Homebuilding technology exists to significantly reduce environmental impacts such as energy use. Despite the fact that this technology has proven to save homeowners substantial amounts of money in the long term (the duration of a mortgage, for instance), it has not been widely incorporated into the housing market.

Knowledge gaps

The data do not tell us the locations of the homes involved. Therefore, we can not tell how safe the homes are, the quality of the school districts that serve them, the levels of racial segregation in the regions where they are located, their environmental impact, or how close the homes are to neighbors, key services and jobs.

Housing Choice

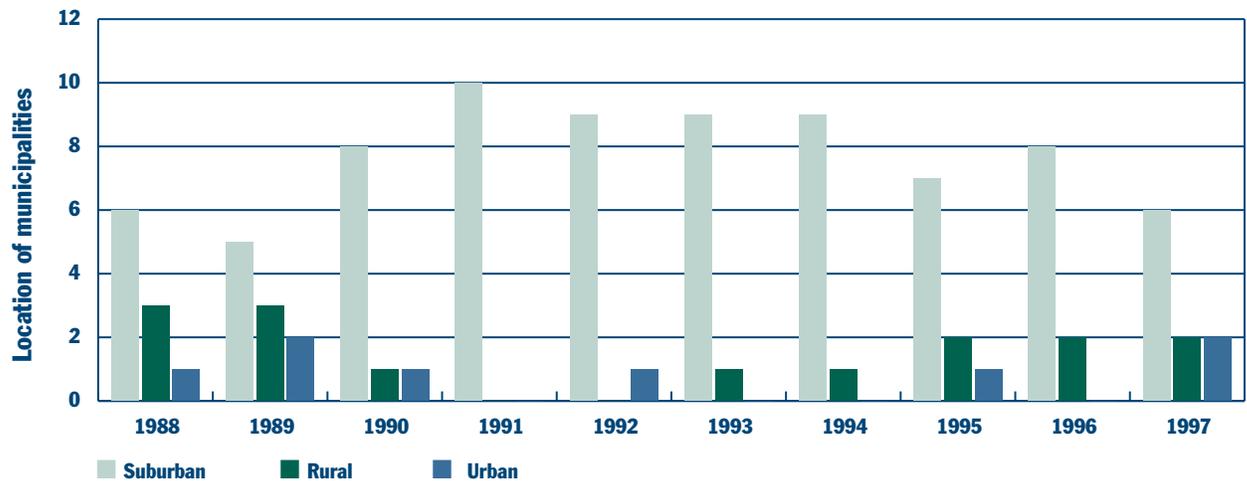
INDICATOR

21

Housing Choice

The 10 fastest-growing residential areas in New Jersey according to their location in urban, suburban, or rural settings:

Little change



Importance

Although housing choice has improved slightly in recent years, the vast majority of our new housing continues to be built in suburbs. For the most part, this leaves homebuyers with little housing or community choice. Some years, urban places don't even show up in this "top 10" indicator. This historical trend has changed our state from one of close-knit towns to one of dispersed sprawling places without centers. It has multiplied the number of cars that we drive, caused the paving of large expanses of farmland and forest, aided in the stagnation and decay of our cities, increased the pollution we emit and the energy we use, changed our relationships with

our neighbors and generally restructured our society.

Economic

We once lived near the factories and farms where we worked, as well as the shopping we needed. Today, though, we commute long distances through congested traffic. This requires expanded investments in road construction, maintenance, cars and transit. The AAA estimates it costs us 46 cents for every mile we drive. Rutgers University found that building in and around existing communities would save New Jersey taxpayers \$400 million annually by not having to service sprawl.

Environmental

Sprawling suburbs put concrete over large areas of land, destroy habitat for wildlife and change our water systems. The auto driving that is required to move among suburbs is a major source of greenhouse gases and other air pollution. Our choice to live mostly in suburbs converts forests, wetlands and many diverse ecosystems into fairly uniform housing developments.

Social

Suburban developments, when done incorrectly, leave little opportunity for walking and talking with neighbors and developing the community so many of us seek.

Things to think about

- Many of us spend our vacations traveling to places that have quaint towns or densely packed cities because we like the character and lifestyle of such places. Yet we have moved New Jersey in the opposite direction during the past 50 years.
- Many people now say that most parts of our state, and even our country, have started to look the same. The trend toward the type of suburbs we have been building is a major source of this uniformity.

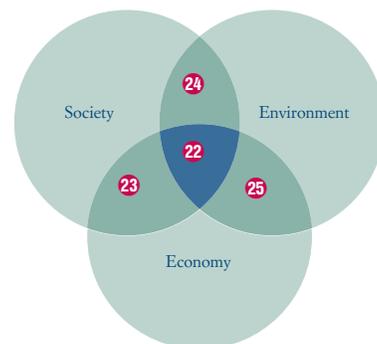
Knowledge gaps

This indicator only analyzes the 10 fastest-growing towns, and so is not a full description of land use and housing trends in New Jersey. It also does not tell us about such issues as how many people live in each unit, or how many people live in apartments, condominiums or houses.

Healthy People

GOAL: The highest opportunity for all New Jerseyans to be healthy, with equal access to high-quality health care and minimized exposure to health risks.

New Jersey could be called the health-knowledge capital of the world. We are the home of some of world's largest healthcare and pharmaceutical companies. Health service is our largest private-sector industry, providing more than 300,000 jobs. Some of the foremost health research in the world takes place here. At the same time, New Jersey has more hazardous and contaminated (Super fund) sites qualifying for federal aid than any other state.



What we know

- 22 Life expectancy increasingpage 36
- 23 Mixed rate of occurrence for infectious diseasespage 37
- 24 Little change in the number of hospitalizations for asthma.....page 38
- 25 Workplace fatalities decreasingpage 39

What we don't know

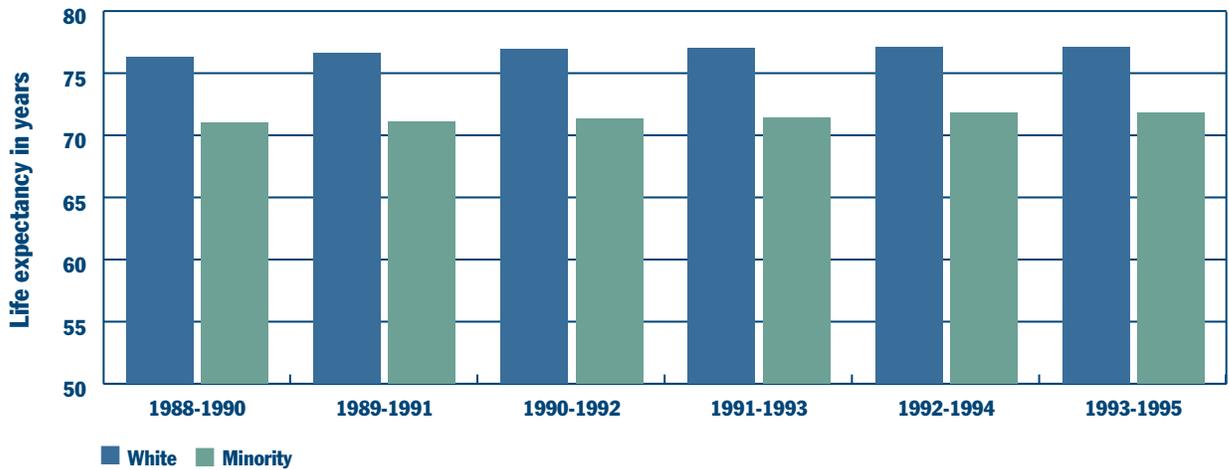
- How large a role environmental contaminants play in the cause of illness.
- How well our health care system is meeting the needs of New Jersey.
- Whether people who are living longer continue to enjoy a high quality of life.

INDICATOR

22

Life Expectancy

Average number of years of life for New Jerseyans: Increasing



Importance

Life expectancy is an important measure in its own right and can be a proxy measure for many other issues, such as healthcare, wealth, opportunities and education. Inequities in life expectancy may signal inequities through this range of other issues. In New Jersey, those of us from some races live longer than those from others — a remarkable inequity in its own right and one that also indicates many other imbalances. Even with inequities, life expectancy has been increasing for everyone.

Things to think about

- Up until the 1830s, even in wealthy industrial countries, people died on average by the age of 40. Today, we in New Jersey live some of the longest lives in the world.

Economic

As we live longer, we are able to prolong our contributions to society and lead more active lives. We are able to earn more money. In fact, senior citizens are among the wealthiest of us. Our increased life span comes at a price, as the medical care prolonging our lives is costly.

Environmental

Some of us remember the “dust bowl” of the Great Depression; even more of us can mourn the loss of natural places and wild animals known in our childhood. Longer life spans offer the opportu-

nity to apply the environmental lessons of our past. It also means that each of us imposes a larger cumulative burden on the planet, increasing our individual responsibility for making environmentally sound decisions.

Social

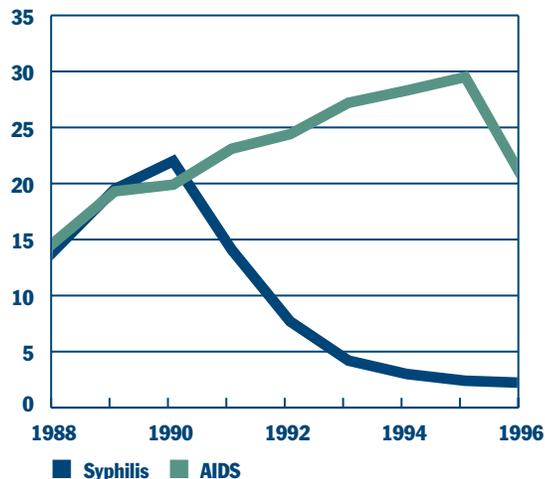
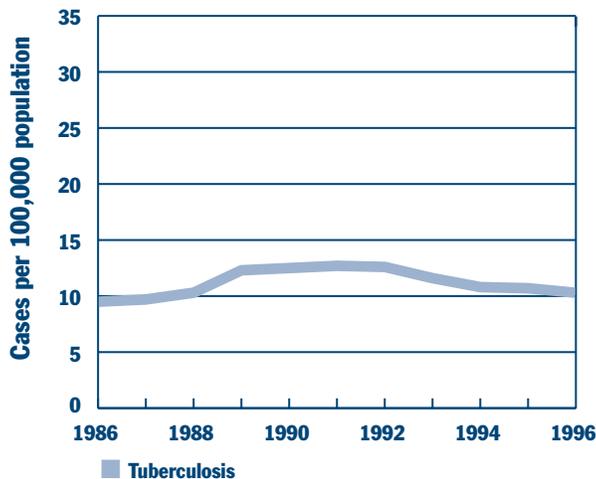
Lost years of life are perhaps the largest social loss. When family and loved ones are gone, we lose the knowledge and culture they held. When those losses come disproportionately to some races, they help perpetuate other inequities between races and weaken our whole social fabric.

Knowledge gaps

Even though we live longer, some of us are uncomfortable, or in pain, during our later years. This indicator does not address the quality of life that we enjoy at older ages.

Infectious Diseases

The rate of occurrence of newly reported cases of tuberculosis, AIDS and syphilis in New Jersey: Mixed



Importance

The re-emergence of tuberculosis has raised concerns about this disease as a major threat to public health. At the same time, much of the infectious disease that we face in New Jersey is preventable. With better education about sex and other safety and hygiene measures, and with access to basic health care for more of us, we can reduce the rate of sexually transmitted disease and most other infectious disease.

Economic

These illnesses are expensive in every way. They cost our health care budgets directly. They also lead to lost earnings and lowered productivity. They put a burden on our social and familial relationships, which are themselves building blocks of our economy.

Environmental

Environmental and health indicators often move in tandem. Healthy people and successful societies are part of positive, self-perpetuating cycles that improve most

social, environmental and economic indicators. In other places, though, high illness rates and other problems build vicious cycles that worsen a range of indicators, from environment to health.

Social

The illness rates of this indicator are also indicative of a number of other diseases and health-related issues. The likelihood of getting any one of these illnesses is related to education and socioeconomic status.

Things to think about

- The most effective and inexpensive way to fight sexually transmitted diseases such as chlamydia, gonorrhea and AIDS is not through treatment after exposure, but rather through prevention.
- Chlamydia had been rare in our state, but has been rising lately.
- Gonorrhea was on the decline until the middle of the decade, but we lost that downward momentum and rates have risen since.

Knowledge gaps

We need data for other infectious diseases as well. It would also be useful to have measures that illuminate the differences in harm done by various diseases, so as to distinguish, for example, between deadly diseases such as HIV and less deadly ones such as chlamydia. It is also necessary to have consistently collected data on the underlying social, economic and environmental conditions that promote the spread of all infectious disease.

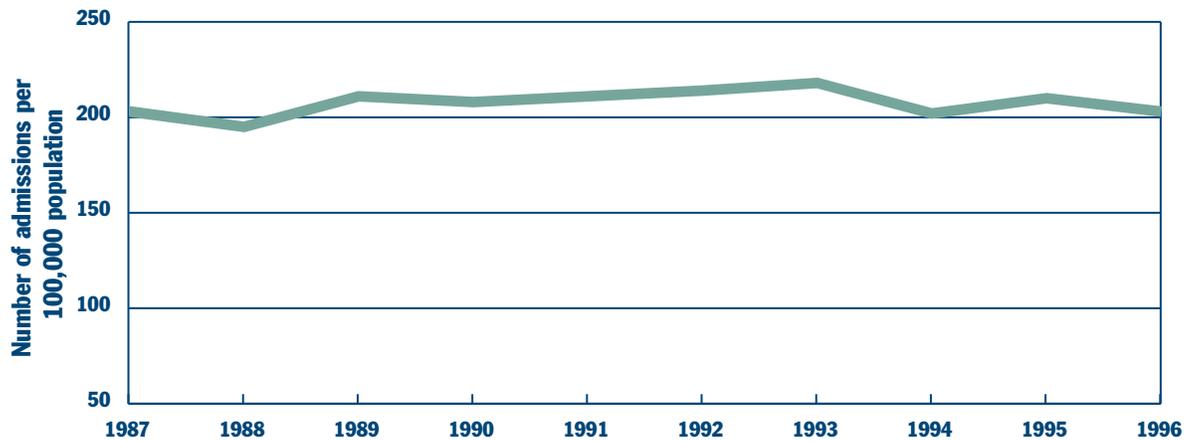
Asthma

INDICATOR

24

Asthma

Number of reported hospital admissions for asthma per 100,000 people: Little change



Importance

Asthma is believed caused in part by poor air quality. Moreover, asthma is an indicator of environmental conditions that can cause a host of other serious respiratory ailments. It is a leading indicator of health care costs and reduced economic productivity, as well as of human suffering. At a time when our state is becoming wealthier, this indicator reminds us that economic growth can come at an undesirable cost.

Economic

Elevated asthma rates increase health care costs. When their symp-

toms become severe, asthmatics are also sometimes unable to work, and so part of their productivity is lost as well.

Environmental

The amount of suffering from asthma is a proxy measurement for local air quality conditions, and those conditions can trigger other respiratory ailments. Air quality is an interesting indicator because it is caused by many environmental problems such as automobile emissions, electricity generation, open space destruction and pollution from manufacturing. These connections

tie public health to related issues such as environmental quality, vehicle miles traveled, ridership of mass transit and economic productivity.

Social

The simple ability to go out and play, or walk around and be neighborly, is a pillar of our civil lives. But asthma keeps some of us inside, especially on hot summer days when air quality is poor.

Things to think about

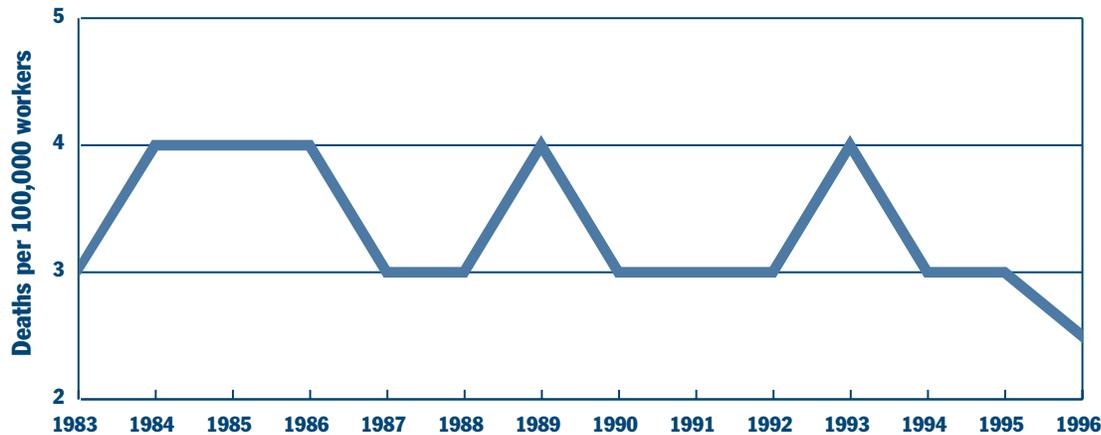
- Children sometimes miss days of school because of asthma.
- Asthma threatens our children, the elderly and those of us who already have other respiratory illnesses more than other New Jerseyans.

Knowledge gaps

We do not fully understand the triggers of asthma. To combat the disease it is essential to know the interactions between the host of potential causes.

Workplace Fatalities

Job fatalities per 100,000 workers: Decreasing



Importance

One measure of a successful economy is its ability to care for its workers. Since the beginning of the industrial revolution we have fought for and won significant rights for workers, including the right to a safe working environment. As a result, we have seen the rate of worker injuries and deaths drop significantly in the past 150 years. Accidents cannot be eliminated entirely, but many current causes of occupational injury and illness are avoidable. Lead is but one example of a contaminant that causes illness

through occupational exposure.

Economic

Occupational injuries destroy careers and undercut family livelihoods. They also raise the rates that we pay for insurance, the cost of doing business and the cost we pay for products and services. And the risk of injuries makes some jobs undesirable to workers.

Environmental

Environmental contaminants are among the causes of occupational harm. The contaminants list is long and includes many chemicals

never heard of by most of us. We can also infer that a company that does not care for its workers is not caring for the environment.

Social

The devastating social effects of injuries have been dramatized successfully in movies and novels. The language of public policy and economics does not capture the emotional loss and the harm to families, communities and incomes that come when one of a household's breadwinners is hurt or killed.

Workplace Fatalities

Total Workers with Lead Exposure



Things to think about

- In most types of work in New Jersey, it is safer to do the job than to drive on our highways to that job.
- Early in America's industrial revolution, child exploitation, 18-hour workdays, low pay and hazardous conditions were common. We have come a long way.
- Job-related injuries have changed as our economy has shifted from manufacturing to services, as evidenced by the increase in such "white collar" disabilities as carpal tunnel syndrome.
- Although we have improved conditions for our workers, many of the products we buy are imported from countries that have lower safety and environmental standards.

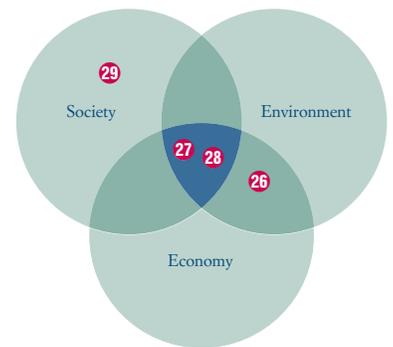
Knowledge gaps

Lead poisonings and fatalities are only two of the various hazards that a worker can be exposed to on the job. Better indicators, which integrate worker health and safety statistics, are needed.

Efficient Transportation and Land Use

GOAL: A choice of efficient, convenient, safe and affordable transportation and land use options, providing access to jobs, shopping, recreational centers, schools, airports and rail centers.

New Jersey is a state of transportation “firsts”: the first stagecoach, the first balloon flight, the first airport, first steam locomotive. But despite this promising “multi-modal” start, mobility in our state depends on cars and highways. The number of miles we drive in a year has risen steadily, as has the amount of time we spend sitting in cars. The amount of land we pave for roads and subdivisions has risen correspondingly, as has the congestion we endure. Our late 20th century pattern, to build new homes rather than renovate existing towns, perpetuates our car culture — when we do require services or recreation, most of us have little choice but to drive. The lack of choice in transportation and land use is likely to be an increasing problem as the population ages and becomes less able to live in auto-dependent locations.



What we know

- 26 Need for road and bridge repairs increasingpage 41
- 27 Vehicle miles traveled increasingpage 42
- 28 Workplace transportation options increasingly auto-dependentpage 43
- 29 Traffic fatalities decreasingpage 44

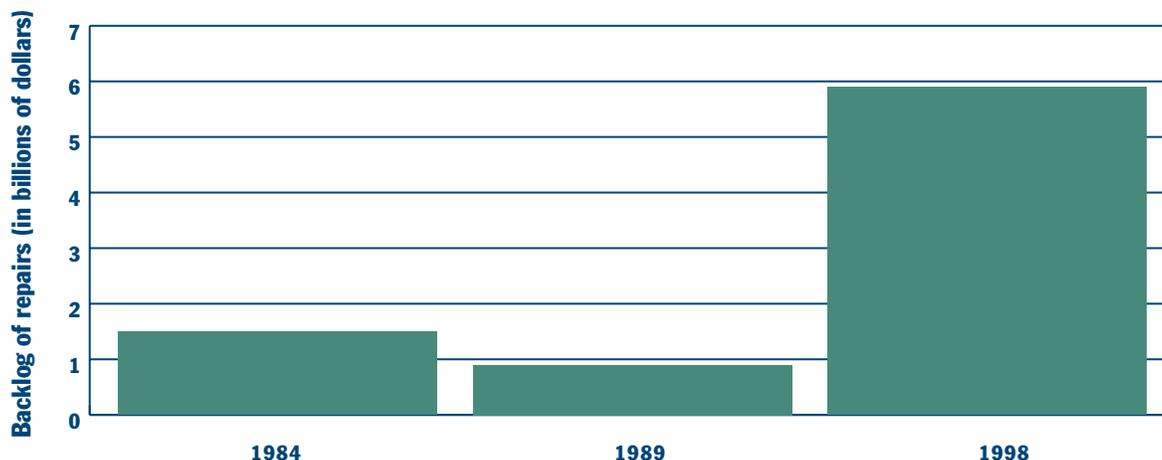
What we don't know

- The lifestyle and public health costs of our increased auto-dependency, including time spent in traffic instead of walking, biking or exercising.
- The full environmental impacts of auto-dependency, in areas such as habitat loss, air and water quality and global warming.
- How many of us have transportation options aside from driving for doing the things that we want to do, including eating, shopping and socializing.

Need for Road and Bridge Repairs

The accumulated cost of repair work necessary to bring New Jersey's roads and bridges up to standard: Increasing

Need for Repairs



Importance

Our daily lives take place within New Jersey's vast transportation infrastructure. Without proper maintenance, our options and opportunities — economic and social — would deteriorate along with our roads, bridges, railways and ports. The backlog of repairs on our existing bridges and roads stands at an all-time high. We have also strained our transportation resources to build costly and inefficient new infrastructure to accommodate sprawl-type development in more rural areas, rather than for upkeep of infrastructure in older suburbs, towns and cities.

Economic

An efficient and dependable transport system is a basic and neces-

sary ingredient for any kind of economic success. Transportation is especially important to our economy, as New Jersey is an international shipping and transportation hub for cars, trucks, ships, airplanes and trains. Maintenance costs are just part of the price of doing business. However, as with all business expenses, we can be dragged down by the cost if our transportation and land use systems are not planned and do not operate efficiently. New Jersey has a special economic burden as a corridor state with much "pass through" traffic that doesn't contribute to our economy.

Environmental

The environmental impact of a deficit in infrastructure repair

depends on the reasons for the deficit and the actions New Jerseyans take in response. When the repair backlog exists because new roads and bridges are being built at the expense of the old, there are environmental consequences. Development will move to the new roads, create new demand in new areas, trigger need for more roads and speed the pace of paving over New Jersey's remaining farms and forests.

Social

Some of our most pressing social problems — urban decay and poverty — may be caused in part by a declining infrastructure of housing, streets and neighborhoods in urban areas.

Things to think about

- A significant portion of New Jersey's road-building dollars go toward building new roads, which often promote suburban sprawl, rather than toward repair of existing infrastructure in cities and suburbs.
- The 1950s and 60s saw a number of major roads built in New Jersey. Some 40 years later, these roads and bridges need significant repair.
- Transportation decision-making is fragmented among federal, state, local and regional agencies. Central authority is weak.

Knowledge gaps

This indicator does not report on the backlog of repair work for non-road infrastructure, such as trains or sidewalks. It does not take into account many of New Jersey's smaller roads.

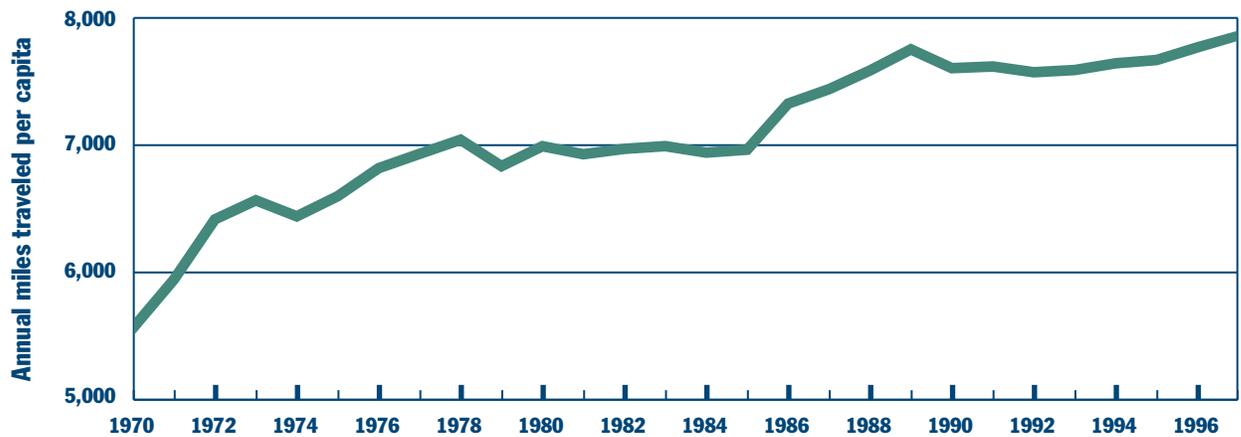
Vehicle Miles Traveled

INDICATOR

27

Vehicle Miles Traveled

Annual vehicle miles traveled (VMT) on New Jersey's road system per capita: Increasing



Importance

Vehicle miles traveled and ridership on public transit are both measures of mobility — a highly prized asset at the end of the 20th century. Our jobs, schools, shopping and recreation sites are frequently spread out and far from our homes. Further, much development — office, retail center, housing — is designed for optimal auto access at the expense, often elimination, of other transportation options. Increasing the transit share of our travel would mean that we have planned our “built environment” better, do not need to travel as much and that we will have less traffic congestion and pollution.

Economic

The more we drive, the more we are delayed. This irony is the essence of congestion. As our VMT rise, our transport efficiency declines in the resulting traffic jams. As our transit ridership rises, however, congestion is reduced and energy efficiency is increased. This efficiency translates into a competitive economy as workers, consumers and goods get where they need to go with minimum time and cost.

Environmental

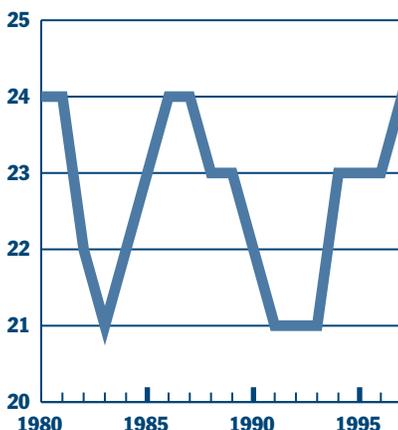
Motor vehicles and roads may be the largest source of air and water pollution in New Jersey. Roads also

fragment wildlife habitat making it unsuitable for some species. Approximately 25 percent of all energy consumed in our state is used for transportation. As VMT increase, our pollution increases.

Social

Traditional, centralized towns and cities are more amenable to transit use and harbor a greater sense of community identity than sprawling townships and corporate campuses. Automobile dependence tends to isolate people in their cars, inhibiting interaction and community coherence; while transit brings them together in stations, towns and in larger vehicles.

Annual Transit Trips per Capita



Things to think about

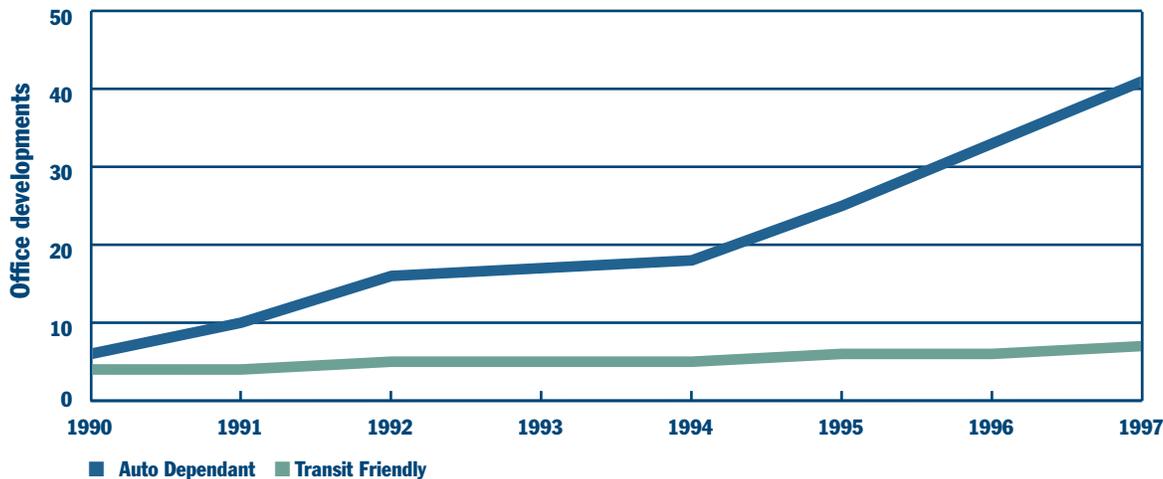
- In many new communities, it is impossible to get a candy bar, gallon of milk or a newspaper, or to go to school or church, without using a car. Many new subdivisions don't even have sidewalks.
- Most of our existing rail lines are well patronized. For ridership to increase significantly, more capacity and new lines will have to be added.

Knowledge gaps

We need data about the locations of our jobs, homes, recreation and shopping districts, so that they can be analyzed for proximity to each other and to existing transportation services. Consistently collected land use data, surprisingly, remain unavailable. It is by understanding the layout of our daily activities that we can really address the issues of why and how much we have to travel. These data do not include the very important ridership of numerous privately operated mass-transit companies, especially bus lines.

Workplace Transportation Options

Cumulative number of transit-friendly and auto-dependent large office developments built since 1990: Auto-dependent developments increasing faster



Importance

This indicator rates the largest new office buildings according to the transportation options available to those who will work there. When a major new office development is built, it re-shapes all of the areas that surround it. New roads, homes and shopping often follow. If we can come and go only by car, we clog surrounding roads, pollute the air and waste tens of thousands of hours every year. The location and design of office buildings count perhaps more than any other development decisions we make.

Economic

The AAA estimates that it costs the average driver \$6,893 in 1998 to own one mid-sized (Taurus-type) car; even more if you commute

greater than the average distance of 288 miles per week. Automobile-centered development means we pay extra too, for pollution, accidents and construction of new roads. If we wish, we can save by avoiding such development — and the side benefits will include improved energy efficiency, lower taxes, more competitive businesses, better air and more options for getting around.

Environmental

Pollution and land consumption from sprawling new development is perhaps the greatest environmental threat we face. The auto travel required to reach scattered suburban office buildings pollutes our air. When you look down on a typical suburban office building from the air, the building is dwarfed by the park-

ing lots surrounding it. The rainwater that runs off these parking lots is called “non-point source” pollution, and has at least as large an impact as pollution from sewers and factories (point sources). We have done a good job in New Jersey of cleaning up our point sources, but non-point sources continue to grow as a problem, degrading our waterways.

Social

Isolated, single-use developments do not foster a sense of place or of community. A lack of community, in turn, can exacerbate such problems as high crime rates and lack of political participation. Mixed office, retail and service developments, on the other hand, help build diverse communities of people who live and work nearby.

Things to think about

- Isolated office buildings discourage the development of public transport systems because no single fixed point can serve as a central station.
- The construction of large, isolated office buildings contributes to the decline of city centers.
- Not only do many of us have to drive to work, but also to the grocery store, to our friends' homes, to schools and in some cases, to every place we go.

Knowledge gaps

The trends observed in the state's largest developments might not reflect trends in different regions of the state, where smaller office buildings prevail. They also may not reflect the automobile dependence of people who work in smaller office buildings, or in other sectors of the economy.

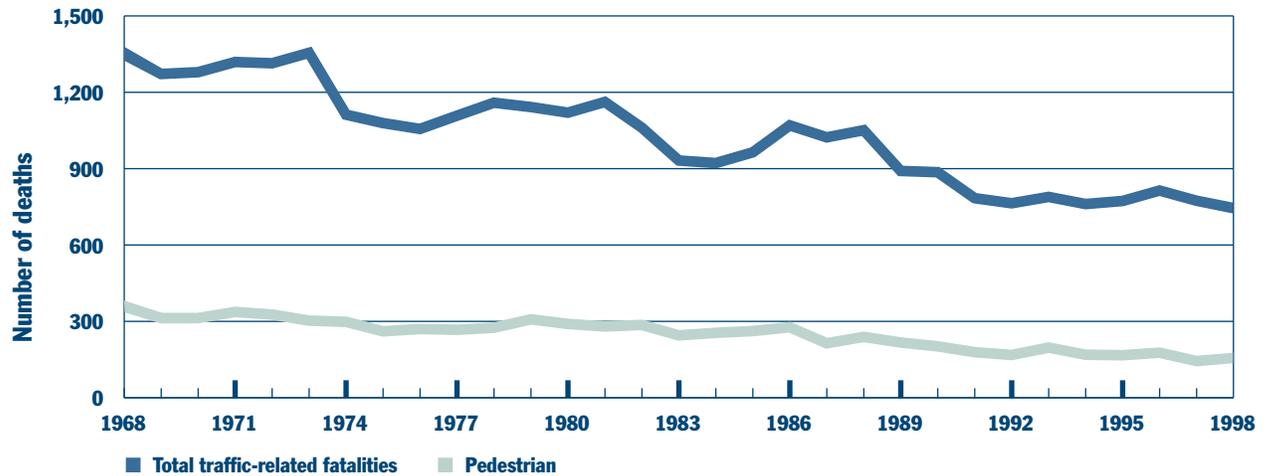
Traffic Fatalities

INDICATOR

29

Traffic Fatalities

Annual number of reported deaths from traffic accidents involving motorists or pedestrians: Decreasing



Importance

Traffic fatalities are avoidable. They are also partially a byproduct of sprawling development and the long hours we spend driving. In the short term, however, we can reduce the number of accidents with such devices as traffic calming measures that slow speeds in crowded or residential neighborhoods.

Economic

New Jersey has some of the highest auto insurance rates in the nation. This is due, in part, to the amount of driving we do and the number of accidents that result. We pay also for medical service, automobile repairs and lost productive activity. If this money went instead to education or investment in capital assets for business growth, then we would receive returns on those investments far into the future. Instead, we pay high financial and emotional prices.

Environmental

High pedestrian fatalities in urban areas may provide motivation for people to leave cities, which can contribute to suburban sprawl.

Social

In traffic fatalities, we lose mothers and fathers. We lose doctors and teachers, and so on. This is a remarkable social cost and one with repercussions that last for decades when some of our most-needed people are lost.

Things to think about

- Car accidents took nearly as many American lives last year alone as the Vietnam War did throughout a decade.
- In the United States, or any country that is free of war, traffic fatalities are the largest cause of violent death.
- Safe driving can save more years of life than many medical procedures, including some cancer and heart disease treatments.

Knowledge gaps

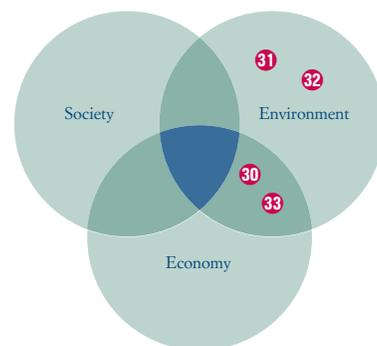
Young people have more car accidents than almost any other age group, so traffic mishaps take an especially high toll when measured in lost years of life — but the indicator does not measure lost years and so this important distinction is not revealed. At almost all ages, men are much more prone to car accidents than are women and this discrepancy also does not show up in the indicator.

Natural and Ecological Integrity

GOAL: Preserve and restore New Jersey’s ecosystems and the full complement of species that share the state with us.

Few states have as many types of habitat and ecosystems as New Jersey: bears and bald eagles populate our mountains, crabs and egrets home in our salt marshes, dolphins frolic off our shore, wild orchids bloom in our Pine Barrens. Unfortunately, we are losing much of this natural heritage. Some work is addressing these losses by preserving land, conserving wetlands and the birds and other species that depend on them, and reducing pollution in rivers and coastal areas. Yet despite the efforts of many New Jerseyans, we face escalating threats to our biodiversity, primarily due to habitat loss.

Reduced biodiversity has economic as well as environmental consequences — for example, a healthy and biologically diverse watershed cleanses water naturally, saving millions in water treatment.



What we know

- 30 Fresh water wetland losses decreasingpage 46
- 31 Nesting water bird populations decreasing.....page 47
- 32 River health increasing.....page 48
- 33 Marine water quality increasing.....page 49

What we don't know

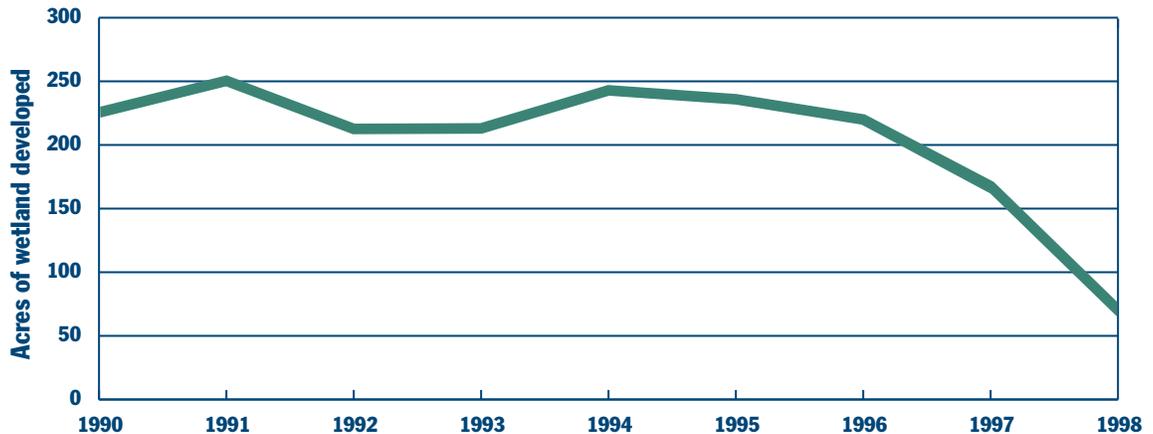
- We do not have essential basic indicators of the health of New Jersey’s ecosystems and the diversity of the plants and animals that live in them. This includes the amount of habitat left for each species.
- We do not know the thresholds beyond which the loss of species and habitat lead to the unraveling of ecosystems in ways that also undercut the stability of all life on earth.
- When species like birds and fish decline, we do not know how much of that loss is due to changes in the ecology of our own state and how much of it is due to ecological changes in other places where these animals spend part of the year, including South America and other parts of the United States.

INDICATOR

30

Fresh Water Wetland Losses

The acres of fresh water wetlands lost to permitted development each year: Decreasing



Importance

Wetlands, or bogs and marshes — including the Meadowlands around Giants Stadium — are a particularly critical ecosystem. They filter water, protect us from floods and provide habitat for a wide range of species. They are incubators supplying our sport and commercial fisheries. They are way stations for migrating birds. According to the most conservative estimates, we have lost more than 20 percent of our wetlands since 1900; and as much as 50 percent since colonial times. Fortunately, our annual loss of wetlands has declined impressively in the last two years. We now permit development of fewer than 100 wetland acres a year, from the

approximately 300,000 acres of wetlands remaining in our state.

Economic

Wetlands act as a natural filter for our ground water supply, reducing the need for expensive investments in water purification. Wetlands also mitigate floods by absorbing water and releasing it slowly, which reduces costs that we might otherwise pay for insurance and clean up. As habitat for a rich variety of wildlife, wetlands attract tourists and bird watchers to our growing “eco-tourism” industry.

Environmental

Wetlands support a high density and diversity of native and migra-

tory animal, plant and insect species. Many oceanic species rely on wetlands for some portion of their lives. Wetlands are one of the state’s largest repositories of biological capital. Wetlands are also among the habitats most sensitive to disturbance.

Social

Wetlands enhance our quality of life by contributing to our recreational opportunities — hunting, fishing, bird watching — activities dependent upon clean water and habitat. Birds and other species that rely on wetlands for habitat enhance our daily relationship with the natural environment.

Things to think about

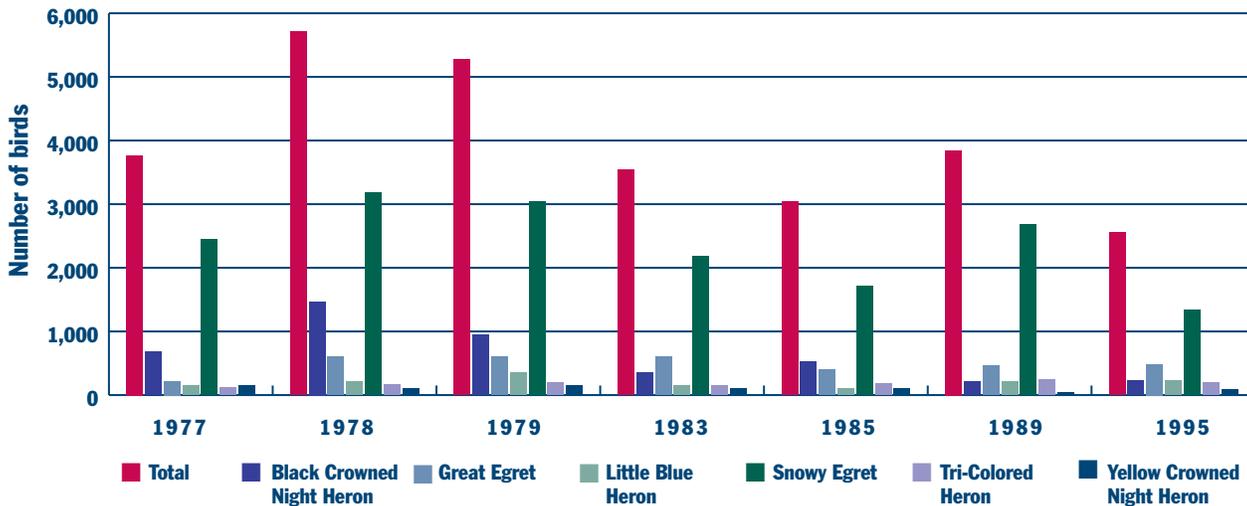
- Although our drinking water has remained relatively clean, the amount of work necessary to make it clean has increased over the years as nature’s services of cleaning the water have declined with the loss of wetlands and other ecosystems.

Knowledge gaps

These data are based on permits to legally alter and fill-in fresh water wetlands. Many small wetland developments fall outside of the regulatory process and are not reflected in the data. Some wetlands are filled illegally and are also not counted. Many developed wetlands are replaced with mitigated or man-made wetlands. Over time, mitigation may produce additional functioning wetlands; however mitigated wetlands are not included in this indicator. We do not know how many acres of wetlands are needed to perform critical functions such as flood protection and water filtration; or to provide habitat; or exactly how our water and wildlife will be affected when we lose more wetlands.

Nesting Water Bird Populations

Population of nesting colonies of water birds: Decreasing



Importance

Our populations of Great Blue Herons, American Egrets and other water birds are declining. Water birds are at the top of the food chain, and so their well-being can serve as an indicator of the general health of the ecosystem on which they rely; in this case, our wetlands and shore. If water birds are declining, we can also infer the species that they eat, such as fish, amphibians and insects are also in trouble. This decline is due in part to the over-development of shoreline areas and wetlands.

Economic

Bird watching is the fastest-growing outdoor sport in the United States. This indicator is important to watch not only for the direct contribution of bird watchers to our economy, but because the habitat that water birds prefer is also the habitat preferred by vacationers seeking refuge from a busy world. If this habitat is lost, it will have other economic impacts, such as additional flooding, water supply degradation and weakened fisheries.

Environmental

Water birds react to many changes in the environment, and so their

decline tells us about many environmental problems, from pollution to habitat loss. As a result, they are a “plural indicator species.” Declining populations of indicator species can indicate an ecological unraveling which threatens our state’s natural capital as well as the clean air and water provided to us “for free” by nature.

Social

Birds, like all of New Jersey’s wildlife, are part of our heritage and our memories. They are part of what it means to explore the beaches of our state and to participate in the tradition of experiencing nature.

Things to think about:

- Water birds like herons and egrets were once almost wiped out by the millinery trade, but made a great comeback once laws were put into place to protect them from hunting and trapping. Their current decline stems from habitat loss that may not be possible to reverse.
- Water birds nest in large colonies, and so need large undisturbed areas for nesting and breeding.

Knowledge gaps

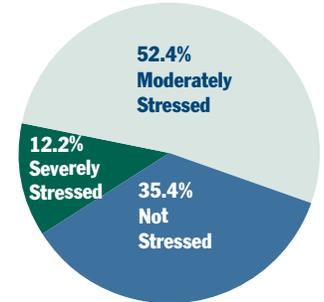
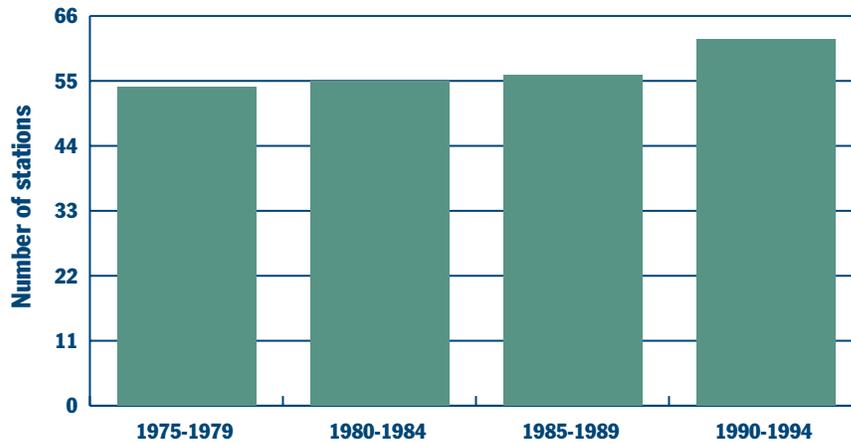
These data account for a small number of species in a small section of New Jersey. We also need population data for many other species of birds and animals for each of New Jersey’s many habitats and ecosystems. Since water birds are migratory, data are necessary to account for what happens to them after they leave New Jersey.

INDICATOR

32

River Health/Dissolved Oxygen

Number of testing stations (total of 66) reporting adequate dissolved oxygen 90 percent or more of the time: Increasing



Biological conditions in NJ rivers

Importance

Our river ecosystems survive only if they have enough dissolved oxygen. When large quantities of fertilizers and other pollution run off from our farms, cities and roads, then algae and bacteria grow quickly in our rivers and use up the oxygen. This process is known as “eutrophication.” It kills many fish and other species and changes the ecological balance of the rivers.

Economic

Our rivers are part of the state’s water system from which we draw

much of our drinking water. Our state has significant industries that depend on healthy rivers for tourism and for fishing. Some of the ocean fish harvested by New Jersey businesses are spawned and hatched in our rivers. Property values are high adjacent to healthy bodies of water.

Environmental

Rivers are particularly important ecosystems. They matter not only to a wide range of freshwater fish and aquatic species, but also to many birds and insects and to ocean fish that spend parts of their

lives in freshwater. River, or riparian, habitat is also among the most sensitive and the first to show damage from pollution and disturbance.

Social

Healthy rivers provide valuable recreation to those who have access. They bring charm and pride to the communities they run through. Sadly, the poorest and most neglected communities also have the most polluted rivers.

Things to think about

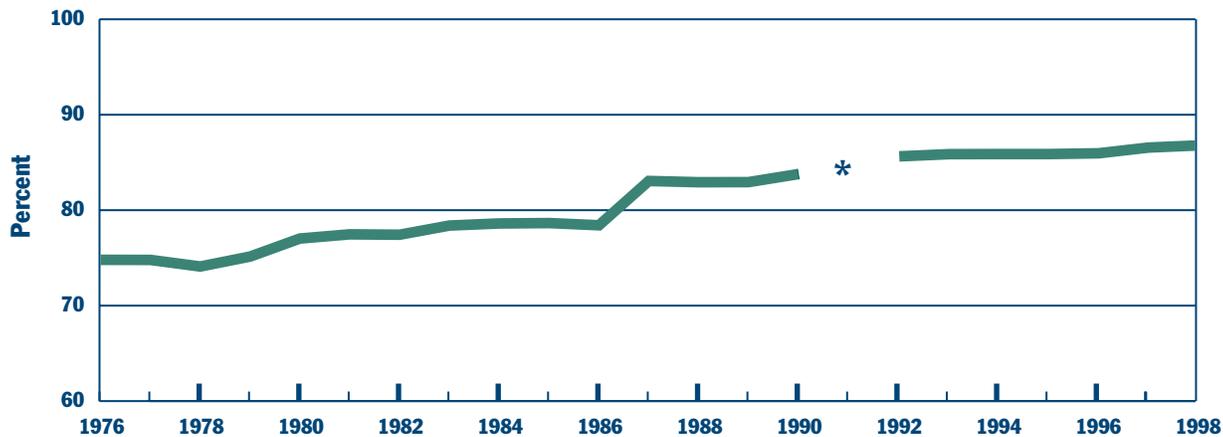
- New Jersey’s great cities, including Paterson, Newark, Camden, Jersey City and New Brunswick, were located intentionally on rivers. Each of these distressed cities has a distressed river running through it. Many of the best revitalization efforts are focusing on riverfront restoration.
- Rivers are habitat to a large number of organisms on our endangered species lists and eutrophication, or lack of oxygen, is one of the leading reasons for those species to decline.
- The pollution that causes eutrophication is usually not toxic pollution. Ordinary nutrients are among the substances that feed the algae and bacteria that use up the dissolved oxygen. This means that excessive quantities of otherwise harmless substances also constitute a kind of pollution that harms our environment.

Knowledge gaps

This indicator does not tell us everything about river quality. It covers only the amount of dissolved oxygen. In addition, small relatively insignificant changes in the amount of oxygen can cause a station to be in “exceedance.” It is necessary to have consistently collected, and better analyzed and weighted, data on river health.

Marine Water Quality

Percent of shellfish habitat safe for harvesting: Increasing



* NJ DEPARTMENT OF ENVIRONMENTAL PROTECTION DOES NOT HAVE DATA FOR 1991.

Importance

Shellfish eat by filtering whatever is floating in the ocean. As a result, our ability to eat shellfish — or our need to declare them off limits — is an important indicator of water quality and ecosystem health. As our water quality has improved, we have been able to open up more acres of shellfish for harvest. Since the time when the first shell fisheries were closed, New Jersey has had a strong record of improving coastal waters.

Economic

As a coastal state, marine resources are important to New Jersey's econ-

omy. We have a vibrant commercial fishing industry, of which shellfish are part. The commercial and sport fishing industries rely on clean water just as much as the shellfish industry. Water quality, and perhaps a fresh oyster or two, are important to tourism which is the second largest industry in the state.

Environmental

Maintaining marine water quality and habitat is essential to protecting the diversity of life in the ocean. As bottom dwellers and filter feeders, shellfish are good indicator species for the quality of the

water and the health of the marine ecosystem. Moreover, clean coastal waters reduce public health problems when we eat fish — and when we swim and play in this water.

Social

Clean beaches and water provide safe opportunities for recreation and tourism in our coastal communities. Trips to the shore, and the opportunity to eat fresh seafood, are timeless leisure activities for many of us. Maintaining them means keeping an important part of our heritage.

Things to think about

- New Jersey is one of only five states that have been able to increase its number of harvestible estuarine acres since 1990.
- Suburban and urban runoff is one of the biggest remaining uncontrolled pollution sources contributing to harvest limitations.

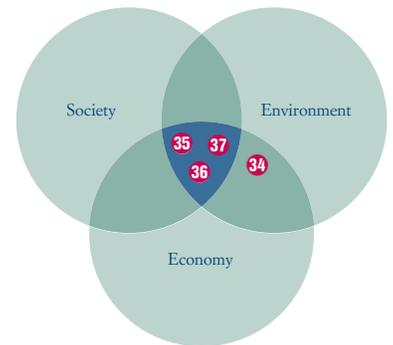
Knowledge gaps

In general, our information concerning the health of marine ecosystems is very poor. We still know little about ocean ecosystems, and about our many effects on them. Fish-kills, red tides, marine mammal strandings and unexplained shorebird deaths all offer clues to the stresses being inflicted on the marine ecosystem, but we will need a great deal more scientific study before we understand those ecosystems in a meaningful way.

Protected Natural Resources

GOAL: Maintain New Jersey’s natural resource base.

Our state is rich in natural resources. The Pine Barrens supplied the Revolution with timber and iron. Our farmland and the aquifers that fill our streams, rivers and lakes are among the richest in the world. But our farmland has dropped, from 2 million acres in 1950 to fewer than 1 million acres. In recent times, we’ve begun to protect our dwindling natural resources with mixed results: we’ve altered 50 percent of the state’s colonial wetlands, yet have improved our protection of the state’s coastline from pollution. There’s much left to do.



What we know

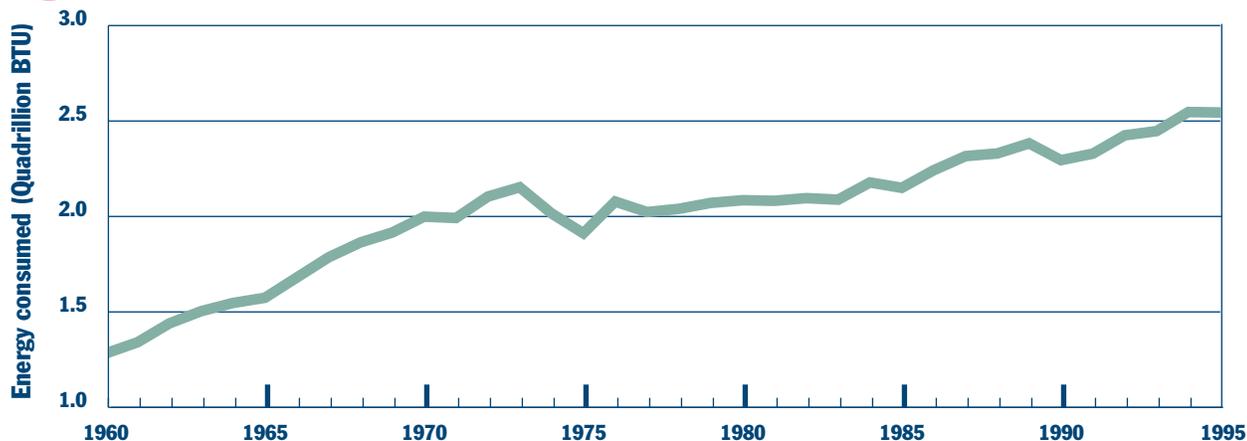
- 34 Energy consumption increasing.....page 51
- 35 Farmland decreasing.....page 52
- 36 Beach and bay closings decreasing.....page 53
- 37 Preserved and developed land both increasingpage 54

What we don’t know

- The economic value of the services provided to us, for free, by our natural resources, such as clean water, air and recreation.
- The amount of forested and undeveloped land that is consumed in New Jersey each year.
- The actual quality and quantity of our natural water supply.
- The amount of energy we use, and that it is possible to make, from sustainable, renewable sources.
- What natural resources we consume in New Jersey that are imported from other states and countries.

Energy Consumption

Annual energy consumption: Increasing



Importance

Our lifestyle and economy are dependent on the use of large quantities of energy to run our cars, appliances, factories and homes. The vast majority of this energy production creates pollution, whether in the form of greenhouse gases, toxins or radioactive waste. In fact, most air pollution comes, directly or indirectly, from the creating and consuming of energy. Perhaps the most troublesome aspect of our energy dependence is that most of our energy comes from burning fossil fuels like coal and oil that are finite and non-renewable.

Economic

Increases in energy prices translate quickly into higher prices for

goods and services at every level. Energy shortages have the power to plunge an economy into recession. With so much of our energy usage dependent on foreign oil sources, our economy is not as secure as it could be. Technologies that use energy more efficiently can cut our risks and expenses impressively — but most companies, homes and government agencies do not use them.

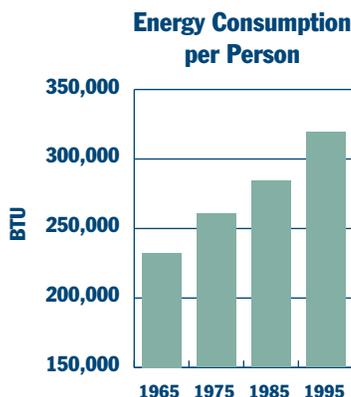
Environmental

Power plants that burn coal, oil or natural gas emit greenhouse gases that contribute to global warming. In addition, mining for these sources of energy tears open the earth and sometimes leads to oil spills in the ocean or accidents at power plants. Most air pollution is

the result of some kind of energy production or consumption. There is not yet a long-term solution for radioactive waste from nuclear power plants.

Social

New Jersey is a major recipient of — and contributor to — air pollution. The pollution we emit angers our neighbors when it crosses into their states and countries, just as pollution from upwind neighbors angers us. To voluntarily reduce the energy we consume will require cooperation among neighbors who carpool, families who remember to turn off lights and consumers who buy efficient appliances and cars. Ending our energy dependence will require the efforts of our entire society.



Things to think about

- Approximately 25 percent of the energy we consume is used for transportation.
- New and renewable sources of energy, such as wind and solar power, offer impressive potential to pollute less while still living in whatever ways we choose — but to reap those benefits we have to invest in developing new technology.
- More efficient automobiles, refrigerators, light bulbs, manufacturing processes and machines of many kinds can cut our energy use and save money, without changing the ways that we live — but we have to choose to use these efficient technologies.

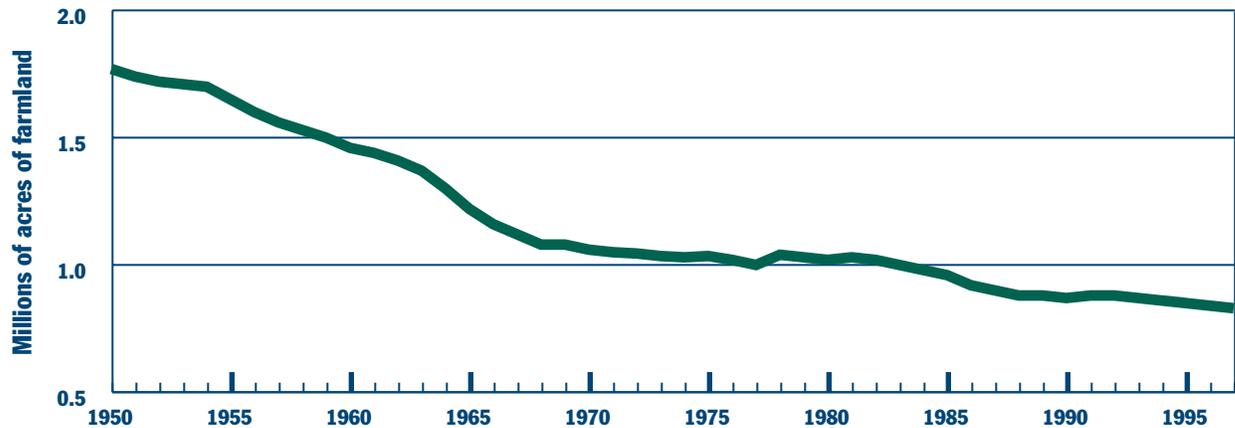
Knowledge gaps

We do not have data on the percent of our energy that comes from renewable, clean or sustainable sources.

INDICATOR
35

Farmland

Total acres of farmland in New Jersey: Decreasing



Importance

New Jersey is called the Garden State because its soil and climate make it one of the most productive farming areas in the world. Our farms provide fresh local produce and beautiful vistas and recharge our groundwater. Because farmland brings in more revenue than it costs in local services, it helps keep property taxes low. New Jersey's farmland is diminishing. Far from yielding to forests or parks, though, in many cases this former farmland has been paved and replaced by strip malls and tract housing.

Economic

Agriculture is the third largest industry in New Jersey. To keep farming econom-

ically viable requires that farm sizes become relatively large. New development often changes the character of rural areas and threatens to drive remaining farmers out of business. The loss of farmland to new residences frequently heralds property tax increases. As we compete nationally and internationally to attract top workers and businesses, we must prevail over competitors based in part on the quality of life that our surroundings offer. A state of strip malls stands at a disadvantage.

Environmental

Crops and farmland offer habitat to birds, other wildlife and a host of insects and small creatures that perform functions like pollination and decompo-

sition. Farmlands, when worked responsibly, filter pollutants from the water and air and even play a role in moderating the absorption of rains and preventing floods. Eating fresh local produce is healthy and reduces the energy required for long-haul transportation.

Social

Attractive vistas and open spaces are associated with our state's farming tradition. The Garden State is becoming less and less of an apt description of New Jersey. Instead, sprawling and homogeneous developments are driving the state's unique rural communities into extinction. Preserving our farmland preserves our heritage.

Things to think about

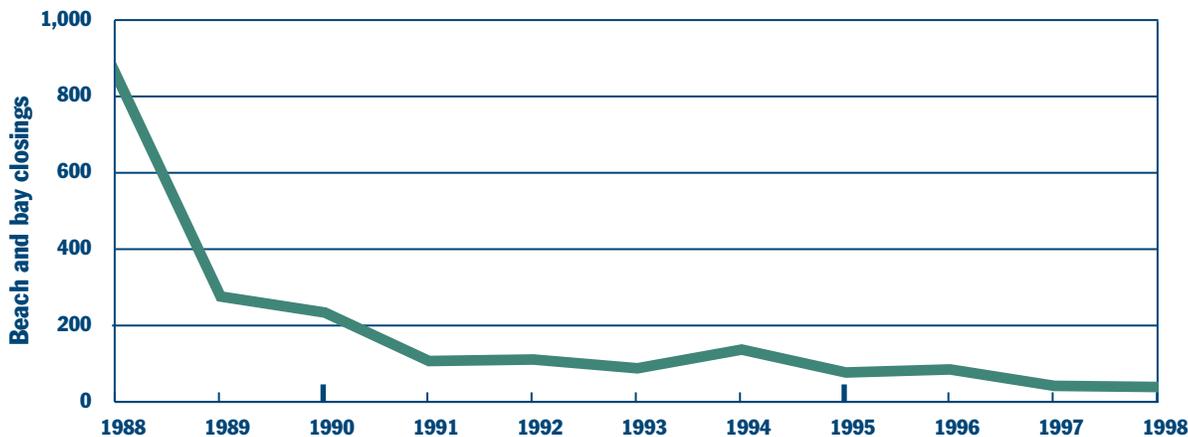
- As of 1997, only 5 percent of the state's farmland had been preserved from development. The other 95 percent remains open to future development.
- Attractive alternatives are needed for landowners who often face financial pressure to sell their farmland to commercial developers. They should have incentives to sell it instead to other farmers, the state or to preservation groups.
- The sprawl created by subdivisions in former farming areas contributes to traffic congestion, long drives and air pollution.
- New Jersey voters in November 1998 passed a referendum to spend \$3 billion to preserve half of the state's remaining open space.

Knowledge gaps

This indicator shows the amount of farmland, but not tract size or economic viability. We also have no data on the percent of our local and total food production that comes from unsustainable and fossil-fuel dependent methods of farming.

Beach and Bay Closings

Number of times per year a New Jersey beach or bay has been closed to the public due to hazardous conditions: Decreasing



Importance

Millions of people visit our beaches every year. The Jersey Shore is a key element of quality of life in our state, and a major tourist draw that contributes significantly to the state economy. Generally, beach closings are caused by pollution, typically due to sewage, medical waste, industrial pollution and runoff from streets and lawns.

Economic

Beach closings are highly visible events that can drive away poten-

tial visitors and reduce the large revenues that are otherwise generated by coastal tourism. They are also related to losses in our shellfish and other fishing industries. They tarnish the general reputation of our state, hurting our chances to attract new jobs and businesses.

Environmental

Beach closings represent serious incidents of pollution. The conditions that provoke a beach closing are hazardous not only to humans but also to many types of ocean plants and animals. Some closings,

such as those for red tides or fish kills, may be indicative of major ecological imbalances in the marine ecosystem.

Social

Many families have gone to the beach every summer for generations. The beach provides recreation for people of all ages. Beach closures ruin this pastime and limit our options for summer outings. Trips to the shore are an important part of New Jersey's quality of life.

Things to think about

- Through great efforts in controlling pollution, especially sewage, beach and bay closings have been dramatically reduced.
- New Jersey not only has fewer beach closings than other shoreline states, but also achieves this with higher standards and more stringent monitoring than most.
- Most of us can still remember a time when we took it for granted that we could go to the beach and swim in the water without health worries.
- People once believed incorrectly that the ocean was so vast that it could absorb any amount of pollution.
- Our beaches continue to face new threats from off our shores, such as New York City's proposal to increase its use of garbage barges.

Knowledge gaps

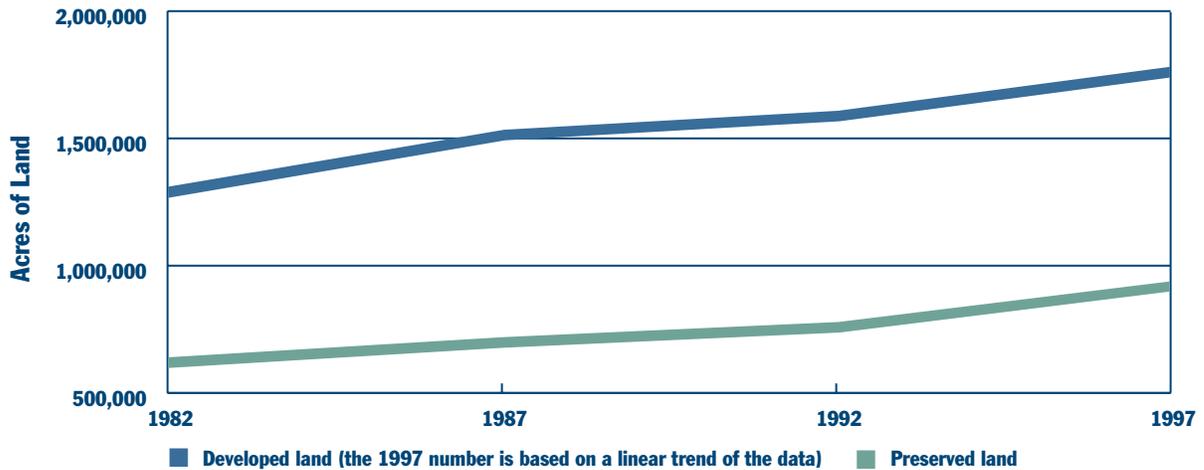
Pollution levels may be just short of the level at which a closing is required for many days a year, but that would not show up in this indicator. And our waters also contain pollutants other than the ones that we monitor and which cause our beaches to be closed. Ecosystems can be affected by lower levels of pollution and by factors that are not threats to human health.

INDICATOR

37

Preserved and Developed Land

Number of acres preserved or developed: Both increasing



Importance

Once land has been built upon, it is very difficult to return it to its natural state. At the same time, the acres of land preserved from development have also increased. This struggle to preserve what is left has been described as the “open space race.” The way we develop our remaining land, whether we practice “smart growth” or continue the current sprawl trend, will impact every aspect of life in New Jersey, from air and water pollution to wildlife, economic prosperity, recreation, urban renewal and taxes.

Economic

Open space, and the quality of life it provides, is a critical asset as we

compete internationally to attract businesses and jobs. Economic studies have shown that property values increase when in proximity to well-maintained public open space. Higher property values translate into higher property taxes and municipalities prosper. The quality of life that comes with proximity to open space is emerging as a major factor in the competition for new businesses and jobs.

Environmental

Land is our most precious natural resource. New roads, parking lots, houses and malls strain our ground water supplies, the cleanliness of our air and our ability to escape from traffic and noise. Preserved

land, on the other hand, offers a refuge for people, cleans our air and water for free and provides habitat to a wealth of species.

Social

How do you value a place where a child has space to throw a ball or to fly a kite? One way is to look at the change that occurs in a neighborhood that has a new park. Crime fell in one Philadelphia precinct by 90 percent after the police helped the neighborhood clean up vacant lots and plant gardens. Parks not only give children a place to play but adults a place in which to invest their pride.

Things to think about

- New Jersey has received national attention for its land preservation agenda — a politically viable effort to slow suburban sprawl.
- In the 1998 election, New Jersey voters overwhelmingly passed a referendum to spend \$3 billion to preserve one million acres of the state’s remaining open space.
- As our population grows and undeveloped land becomes more scarce, future generations may place a higher value on preserving open space than we do currently. Their options for preserving land will be fewer than ours, however, and the prices they will have to pay will be higher because less land will be available.

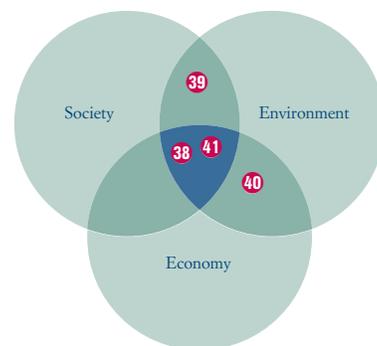
Knowledge gaps

This indicator does not tell us about the ecological richness and value of the land that is preserved. We also cannot see whether we have preserved a full cross-section of New Jersey’s native habitats and ecosystems.

Minimal Pollution and Waste

GOAL: Minimize the generation and accumulation of pollution and waste; maximize the use of efficient, clean and sustainable energy sources; and increase consumer choices for ecologically friendly products.

The name “New Jersey” once connoted pollution in many people’s minds. We’ve made progress: New Jersey once had among the most polluted beaches in the country; we now have some of the cleanest. Our most innovative companies have proven that pollution prevention is often inexpensive and can improve the efficiency of our economy. New Jersey still has more federally designated “Super fund” waste sites than any other state. Although we have made substantial progress, our air quality remains bad enough that the federal government has limited New Jersey’s ability to build new roads and launch other transportation projects. Pollution has driven investment away from our inner cities, and throughout the state has contributed to illness and rising health care costs.



What we know

- 38 New Jersey’s greenhouse gas releases backsliding.....page 56
- 39 Drinking water quality increasing.....page 57
- 40 Total solid waste production increasingpage 58
- 41 Air pollution decreasingpage 59

What we don’t know

- The actual costs in health care, clean up and lost resources that we pay due to pollution.
- Although we know how many pounds of hazardous chemicals are emitted every year, we do not know the actual health risk that they cause or whether that health risk is increasing or decreasing.
- How much of the global warming problem is due to our activities and how much we need to change.
- How much business and government could save in operating costs by reducing pollution and waste.

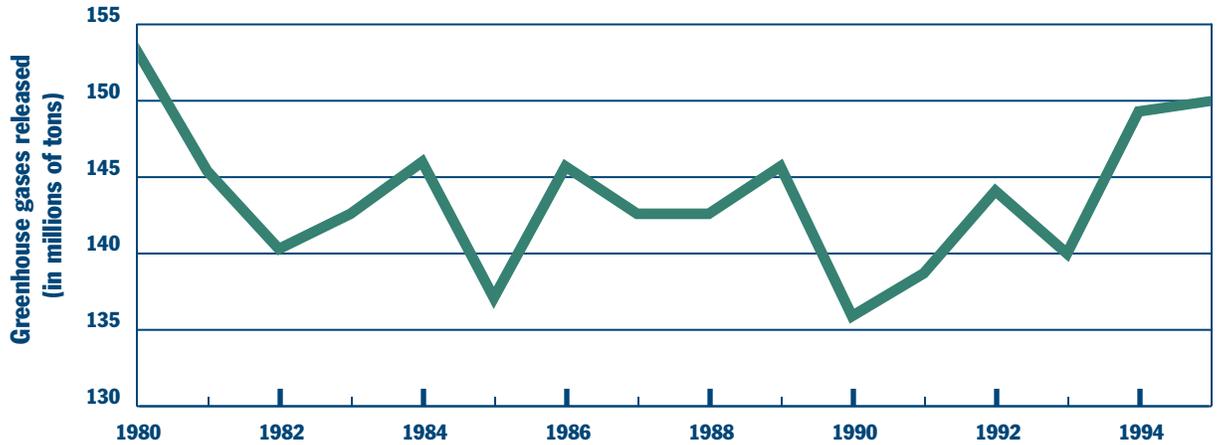
Greenhouse Gas Releases

INDICATOR

38

Greenhouse Gas Releases

Millions of tons of greenhouse gases released into the atmosphere annually (expressed as carbon dioxide equivalent weight): Backsliding



Importance

Global warming is considered by many to be the greatest threat to the stability of modern civilization. It is caused when gases released by human activities, including burning oil and coal, build up in the atmosphere and trap the sun's heat — much the way the glass of a greenhouse traps heat. Most climate scientists believe that as a result of this warming of the earth, sea levels are going to rise; weather patterns will shift; hurricanes, tropical pests and diseases will travel farther north; and differing rainfalls will alter crop patterns. We in New Jersey are active participants in changing the climate of our state and of our world.

Economic

Unchecked climate change could impose serious burdens on our economy. A rise in sea level that inundates the Shore could cause billions of dollars in property damage. Changing rainfall patterns could cause major crop losses. New Jersey could become more vulnerable to hurricanes, floods, new pests and diseases migrating north from warmer places. Addressing global warming before the full effects are felt presents economic challenges and opportunities.

Environmental

If main stream predictions are correct, global warming could trigger a wave of massive environmental transformations, causing whole ecosystems to radically change in an

attempt to adapt to new conditions. This can lead to invasions of exotic species that will displace native wildlife and become vectors for new diseases. Species extinction may result and entire habitats could disappear forever. The full consequences of such upheaval are unknown.

Social

It is only through cooperation, from the local to the international level, that we can address this problem. We in New Jersey and the United States are the largest emitters of greenhouse gases in the world. Other countries have begun to express significant anger toward our country because our emissions cause problems that they will have to deal with.

Things to think about

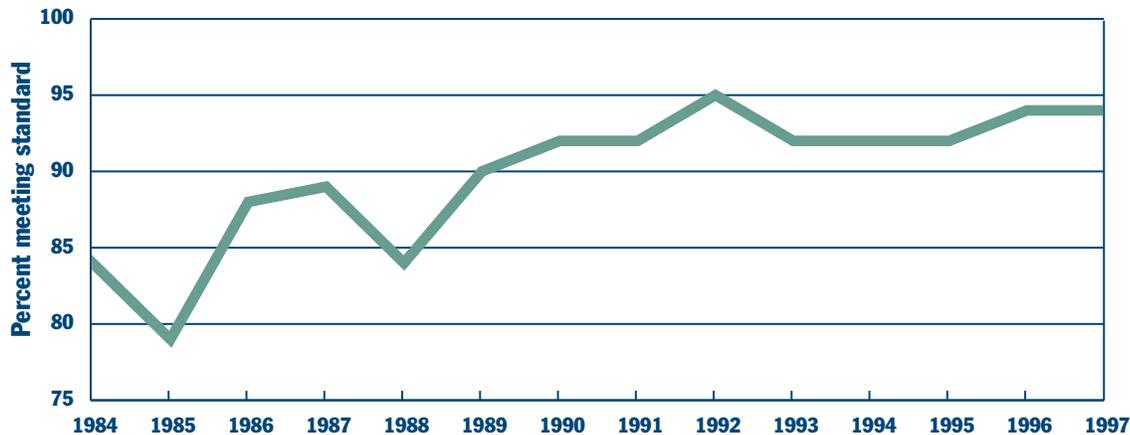
- Attempts to correct climate change will be very difficult and costly — or impossible — if we wait until our atmosphere is thick with greenhouse gases. Prevention, as always, is the least expensive solution.
- The majority of land in our state is not very high above sea level. Most of South Jersey is low-lying coastal plain.
- Climate change can be reduced, or maybe even prevented, by energy conservation. Efficient technologies, from cars that get more miles per gallon to compact fluorescent light bulbs that save electricity are available now to help us save energy.

Knowledge gaps

A vast majority of scientists believe that global warming and climate change is happening. However, we do not know how serious the effects may be, or what reductions in greenhouse emissions are necessary to prevent global warming. These data are only estimates and will vary from actual emissions.

Drinking Water Quality

The percent of public drinking water systems which tested within allowable levels for all chemicals for which testing is conducted: Increasing



Importance

In New Jersey we are blessed with abundant water supplies and drinking water systems that protect us from most of the chemicals, bacteria, viruses and parasites that affect the health of people in other parts of the world. However, no water supply is totally safe and regular testing is necessary. This indicator tells us how often our water systems fail a test for one of the more common harmful chemicals. Since 1985, the number of water systems failing tests for chemicals has dropped from more than 20 percent to about 5 percent. However, such tests measure only a small fraction of known drinking water contaminants.

Economic

In communities with poor water, property values fall and economic potential declines. The most cost-effective way to avoid these losses is through pollution prevention. Once a water supply becomes seriously contaminated, treatment costs can easily run into the millions of dollars.

Environmental

Water deemed too polluted to meet safety standards for people may also contain chemicals that can harm ecosystems and sensitive wildlife such as frogs, whose populations have declined alarmingly in recent years. Clean water and a pollution-free environment is as vital to our ecosystems as it is to our health.

Social

A safe and stable water supply is the foundation of any civilization. Most of us are familiar with the sad sight of a dilapidated and abandoned older urban center. Now imagine a neighborhood in perfect condition, yet completely abandoned by its residents. This has happened in towns around the world where the water supply has become severely polluted. Although no New Jersey town suffers today from this fate, residents of many New Jersey towns have serious concerns about the health of their water systems.

Things to think about

- Access to potable water is the single biggest public health issue in the world.
- Bottled water often costs more per gallon than gasoline or milk.
- “Volatile organic compounds” contamination comes from industrial pollution of groundwater, urban and agricultural runoff and industrial discharges into surface water supplies.
- Studies suggest that the amount of chemicals we put in our water to keep it clean has been increasing because the quality of our natural water supply has gotten worse due to development and industry.

Knowledge gaps

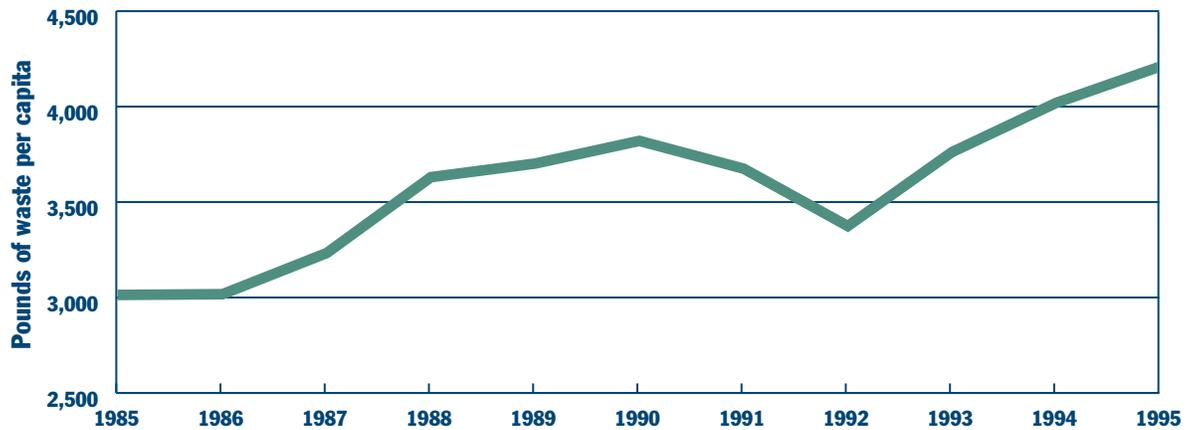
The 17 chemicals measured here are only a small fraction of the known drinking water contaminants suspected as detrimental to human health. Testing for more contaminants, and revised risk assessments for each, would allow us to develop a more meaningful drinking water indicator. The data do not include more than 4,000 non-community water systems in New Jersey.

INDICATOR

40

Total Solid Waste Production

Pounds of solid waste generated annually, per New Jersey resident: Increasing



Importance

New Jerseyans generate about two tons of garbage every year — per person. Throughout the United States, we produce nearly twice as much waste per citizen as any other country in the world. This is a costly situation. We pay to buy unneeded materials such as packaging, and pay again to dispose of them. Recycling helps, yet is still vastly more expensive in cost and resources than using less in the first place. The adage, “reduce, reuse, recycle” is even more relevant and necessary today than ever.

Economic

Waste is a misplaced resource. Disposing of waste is an economic burden and an expensive part of local services. The most successful firms and economies in the world are usually those that use the most efficient manufacturing processes. True efficiency means wasting little and avoiding purchase of costly materials and energy in the first place.

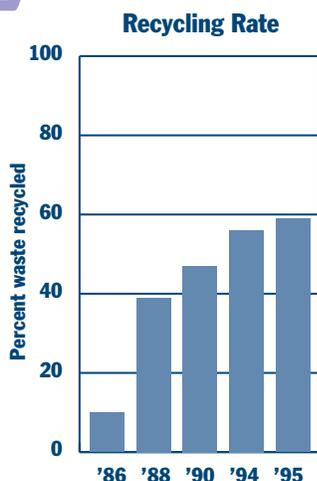
Environmental

We mostly get rid of our waste by burying it in landfills or burning it in incinerators. This results in groundwater pollution, poor air quality and many other forms of environmental degradation. Such

damage frequently pales in comparison to the damage we do in removing these materials from nature in the first place.

Social

Political and social battles over where to locate, and how to pay for, waste disposal facilities have become contentious and threaten to split our state along racial, economic and geographic lines. Concerns include odor, the traffic of heavy trucks, and the health risks of pollution from incinerators and landfills. Poor and minority communities may receive more than their fair share of these facilities.



Things to think about

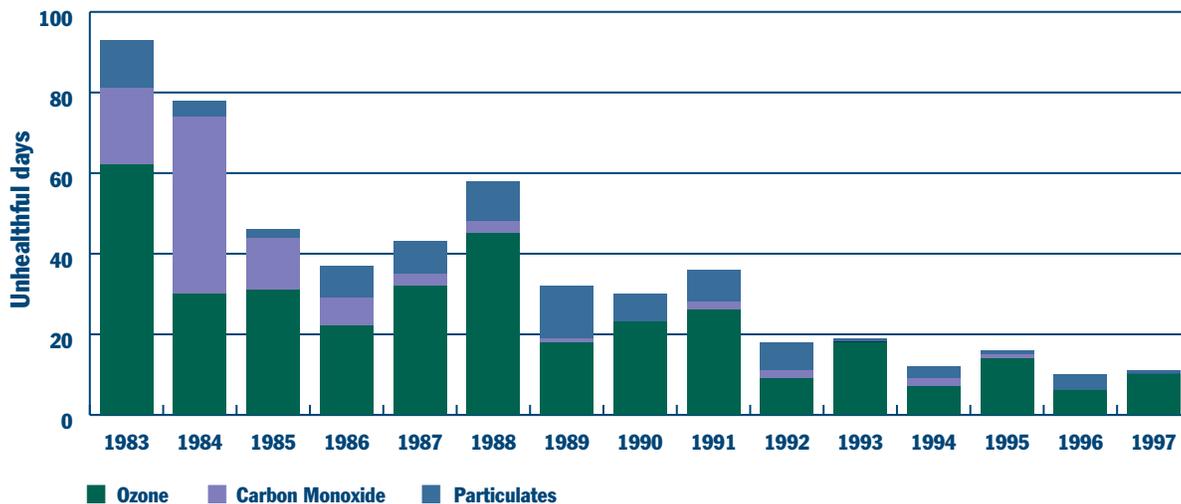
- With better technologies and knowledge of environmental issues, we could easily have reduced the amount of waste we produced during the 1980s and 90s. But instead, since 1985 each of us has increased our waste by more than 1,000 pounds, on average.
- Our increase in waste generation was until recently somewhat offset by dramatic increases in recycling, but this is not a complete solution and the state’s ultimate goal is to reduce the size of the total waste stream. This is called “source reduction.”

Knowledge gaps

This indicator does not reveal the composition of our trash. Since some materials, such as batteries, are more of a problem than others, it is important to know this. We also do not know how much damage was caused bringing these materials to New Jersey. In order to understand the true cost of the waste we produce, we need to do “life cycle analyses,” where we track the materials we use over time. Such information is mostly unavailable.

Air Pollution

Number of unhealthful days annually caused by ground-level ozone, particulate matter and carbon monoxide: Decreasing



Importance

Clean air to breathe is one of life's absolute necessities. Although New Jersey's air quality has improved significantly, it is still considered very bad and among the worst in the country for certain contaminants. Ground-level ozone is the main component of smog, a chronic air-quality problem with serious health effects in our state.

"Particulate matter" are tiny particles of pollution that can lodge in people's lungs and create respiratory problems. Carbon monoxide is a hazardous substance (deadly at high concentrations) produced when fossil fuels are burned for energy and especially when gasoline is burned in cars.

Economic

We pay for poor air quality in many ways. We pay to treat the illnesses it causes. Neighborhoods lose as property values fall in places where the air is bad. Workers and businesses lose when limits are imposed on new development because federal air quality standards are not met. Businesses lose also if shoppers and tourists are warned to stay indoors because of poor air quality.

Environmental

Poor air quality is a generally recognized public health threat. It is linked to significant long- and short-term respiratory illness. Air pollution can be detrimental to wildlife and ecosystems in the same

way. In addition, contaminants can work their way up the food chain in ever-higher concentrations and interfere with natural systems. We have a good understanding that many of the factors increasing air pollution, such as new roads and development, also have severe impacts on ecosystems due to habitat loss.

Social

Severe air quality problems force people to stay indoors, preventing recreation and social activities. Air pollution is often concentrated in low-income and minority areas, and so represents an inequity in our society. For years, New Jerseyans have suffered jokes about our state's poor air quality.

Things to think about

- A significant portion of New Jersey's air pollution is emitted in other states and blows into our state. Changes in those out-of-state emissions are not within the control of our citizens or our state government.
- Ozone levels are strongly affected by weather conditions. Hot, sunny, windless days tend to exacerbate the ozone problem. The relatively cool summer of 1996 kept ozone levels down, as reflected in the infrequent number of days where ozone levels exceeded the health standard. This does not, however, necessarily indicate that the presence of air pollutants declined in 1996.

Knowledge gaps

These data, based on the number of days health standards were exceeded, do not take into account changing air quality standards for particulates and other pollutants. This indicator does not measure all problem air pollutants.

Glossary

Agenda 21: The non-binding agreement signed by world nations at the 1992 United Nations Conference on Environment and Development (see Earth Summit). Agenda 21 sets out conditions and recommendations for achieving global sustainability.

Benchmark: A point of reference of a standard against which measurements can be compared; sometimes a goal or a target. Examples: record highs in the stock market, optimal water levels in wetlands, so-called “full employment” levels of acceptable unemployment. Often confused with Indicator.

Biodiversity: The variety of living organisms in an Ecosystem. (See also Diversity)

Brundtland Commission: Officially, the World Commission on Environment and Development, chartered by the United Nations and chaired by Norwegian Prime Minister Groe Harlem Brundtland. From 1984-87 it studied global environmental, economic and social trends and published its recommendations in the 1987 report, *Our Common Future*, which set a global agenda for Sustainability.

BTU: “British Thermal Unit,” a unit of measure for energy. Specifically, one BTU is the amount of energy required to raise the temperature of one pound of water one degree Fahrenheit, starting from 39.2 degrees. Metric equivalents: 1 BTU = 0.293 watt hours = 1055 Joules.

Culture: An integrated pattern of human beliefs, values, behaviors and institutions shared by a distinct group, the inhabitants of a region or the citizens of a nation. Used in some contexts as a synonym for the arts and other forms of social expression.

Development: “To evolve the possibilities of” (Webster’s New Collegiate Dictionary). A process of growth or change. Often used in the phrases “economic development,” connoting an expansion of economic opportunities and jobs, and “sustainable development,” referring to economic and social changes that promote human prosperity and quality of life without causing ecological or social damage. Sometimes confused with Growth.

Diversity: Difference and variety. Diversity is an essential

component of sustainable cultural, ecological and economic systems because it makes them more resilient and adaptable to changes.

Earth Summit: The United Nations Conference on Environment and Development or UNCED (the “Earth Summit”) held in Rio de Janeiro, Brazil in 1992. The Earth Summit was the largest gathering of heads of state in world history.

Economic Development: See Development.

Economy: Originally, the “management of a household.” More commonly today, the system of production, distribution and consumption of goods and services in the larger scale.

Ecosystem: An integrated system of living species, their habitat and the processes that affect them.

Efficiency: The most standard definition is the ratio of effective or useful output to the total input of any system, whether this is the energy delivered to run a machine or the natural resources consumed to produce products. Economists have taken a different tack, and define “efficiency” as socially optimal resource allocation.

Endangered species: Species whose populations and habitat have declined to the point where extinction is imminent, requiring significant human interventions to protection of habitat to preserve them (as defined by the Endangered Species Act). (See also Species.)

Environment: “The circumstances, objects or conditions by which one is surrounded” (Webster’s). Often used to refer only to natural Ecosystems apart from human settlement, Environment is more accurately understood to include other natural and human-made physical conditions.

Equity: The dictionary defines equity as fairness; freedom from bias or favoritism. However, one must keep in mind that a fair process can yield unequal results.

Global Forum: The 1992 meeting of non-governmental organizations (NGOs) in Rio de Janeiro, which ran parallel to the meeting of governments at the Earth Summit. NGO participants signed a set of “Citizen Treaties” that went far beyond the agreements made by governments in Agenda 21.

Growth: Increase or expansion. Used in the phrase “economic growth” to mean an expansion in production, jobs and revenue. Often confused with Development, which does not necessarily include the idea of physical increase in size.

Indicator: A measurement that reflects the status of a system. Examples: the Dow Jones Industrial Average, the number of spotted owls in a forest ecosystem, an oil pressure gauge on an engine.

Linkage: A direct or indirect causal relationship between two or more Systems, where changes in one affect the status of the other. Linkages among systems are often reflected in the Indicators that measure the health of those systems.

Non-renewable: Finite in quantity. Fossil fuels like gasoline are considered “non-renewable resources” because they exist only in limited amounts and their disappearance is essentially permanent. (See also Resources and Renewable)

Our Common Future: The report of the Brundtland Commission, which linked economic development to alleviate poverty with environmental protection to prevent ecological catastrophe. The report defined Sustainable Development as that which “meets the needs of the present without compromising the ability of future generations to meet their own needs.”

Per Capita: Latin for “by heads.” A measurement that is presented in terms of units per person, as opposed to a total or aggregate figure.

Renewable: Able to be continually replenished. Rainwater, solar and hydro-electricity and human creativity are all considered to be Renewable Resources. (See also Resources and Non-renewable)

Resources: “A source of supply or support; available means” (Webster’s). The energy and materials used to support an

Economy and fulfill human needs and desires. (See also Renewable and Nonrenewable)

Riparian: Refers to land adjacent to a river, watercourse or body of water.

Society: From a Latin root meaning “companion.” Society in the broadest sense refers to the entirety of a community, the whole web of living relationship among people, their Culture, and their Environment.

Species: A biological classification referring to a group of organisms who share similar traits and genetic codes and who are capable of interbreeding.

Sustainability: “Long-term health and vitality: economic, environmental and social” (New Jersey Future’s definition). Achieving and maintaining sustainability is the goal of every human society.

Sustainable: Able to endure over time. A sustainable society is one that is just, healthy, vital, resilient and able to creatively adapt to changing conditions over the long term. (See also Development and Our Common Future)

Sustainable Development: “Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” From the United Nations World Commission on Environment and Development (The Brundtland Commission, 1987)

System: A set of actors or entities bound together by a set of rules and relationship into a unified whole. A system’s health is dependent on the health of the whole pattern, which can sometimes be reflected (and thus measured) in the status of a key part of the system (see Indicator).

Watershed: A geographical area whose boundaries are determined by the flows of water following gravity to a principal tributary, river or body of water. Watersheds may be of many different scales, from relatively small to the very large. ■

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New Jersey Future is a non-profit, nonpartisan research and advocacy organization, dedicated to improving the quality of life in New Jersey.

New Jersey Future was created in the mid-1980s to respond to the simultaneous decline of New Jersey's major cities and the rapid spread of low-density suburban development, which were altering the geographic and social landscape of the state.

At its inception, New Jersey Future's mission was the adoption of the State Development and Redevelopment Plan. While support for the State Plan remains at the core of its mission, New Jersey Future's work has expanded to include advocating for planning, conservation and economic development policies that will lead to smart growth and sustainable development in New Jersey.

New Jersey Future has launched the nation's first Sustainable State process, partnering with the State of New Jersey to bring together a wide range of people and institutions to identify solutions to the most pressing challenges facing our state and work toward a common vision of what New Jersey should be. New Jersey Future also promotes open-space protections and smart-growth

policies contained in the State Plan, taking legal action when necessary to stop sprawl and protect open lands.

With the publication of this report, we mark a major milestone on the path toward sustainability. NJF will continue its work to identify and report on progress toward these goals, to regularly update these indicators and to create new indicators.

The next major task is to develop benchmarks, or numerical targets, for each indicator. Additional community dialog and scientific expertise will be required to ensure these benchmarks are meaningful.

Further activities will include working with state agencies to incorporate sustainability concepts in their planning and efforts; helping local communities identify local priorities and analyze policy options from a sustainability perspective; increasing the visibility of sustainability in public debates and major policy decisions; and developing tools and resources – from this report, to our internationally popular Sustainable State brochure – to increase the quality of our lives.

You can join those supporting this effort by visiting our web site: www.njfuture.org or by calling New Jersey Future at 609/393-0008. ■

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