

Living with the Future in Mind



Goals and Indicators For New Jersey's Quality of Life



**First Annual Update
to the Sustainable State
Project Report 2000**

Prepared by: The Interagency Sustainability Working Group
Under the direction of Commissioner Robert C. Shinn, Jr.
New Jersey Department of Environmental Protection





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CHRISTINE TODD WHITMAN
Governor

December 2000

As Governor, my goal is to make New Jersey a better place in which to live, work, and raise a family. That is why I directed state agencies to focus on initiatives that would help New Jersey become a sustainable state: a state that uses natural, economic, and social resources without depleting them. Improving our quality of life should not degrade that of future generations.

In 1999 New Jersey Future produced its *Living with the Future in Mind* report, setting forth a vision of sustainability and identifying 11 sustainability goals and 41 indicators to measure efforts toward meeting those goals. The goals cover various sectors of the economy, society, and the environment, taking a broad-based view of our sustainability progress.

In May 1999 I signed Executive Order 96 directing state agencies to report annually on our progress toward meeting the sustainable state goals from *Living with the Future in Mind*. State agencies will update the 41 indicators and report on the initiatives that advance us toward sustainability. More important, the report will look at the linkages between economic vitality, environmental protection, and social progress and will therefore help guide our work to those areas that most need our attention.

I would like to thank all those responsible for producing this report. I am proud that New Jersey is a national leader in these efforts. I know this report will be valuable to the public, both as an information source and a tool for helping state government make New Jersey a truly sustainable state.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Christine Todd Whitman".

Christine Todd Whitman
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December 2000

Dear Fellow New Jerseyan:

Last year, New Jersey Future released the groundbreaking report *Living With the Future in Mind*, containing the first Sustainable State goals and indicators. A special strength of this report lies in the community of purpose that exists among the business leaders, environmentalists, scientists, and citizens of every stripe who participated in creating this vision for our State.

Together, this diverse group took a great step forward in bringing about an understanding of where New Jersey is, and where we need to be in the future. But the question of how best to achieve the goals of this report remained.

The answer will come in part from State government. This report, *Living with the Future in Mind: First Annual Update to the Sustainable State Project Report 2000*, maintains the use of these goals and indicators and reports on our State's performance on these indicators over the past year. It is with great anticipation that I await the Whitman administration's forthcoming implementation report, *Governing With the Future In Mind*. This report will highlight what State agencies and departments are doing and will do in the future to bring about the vision of New Jersey we all worked so hard to create.

However, these remain only the first steps on New Jersey's journey toward sustainable development. We must also look to maintain the spirit of cooperation between government, the private sector, interest groups, and citizens on which this project was built. We must reconvene to develop benchmarks (publicly accepted targets) for each indicator. We must ensure that the Sustainable State project has a permanent home where these goals, indicators and benchmarks will be nurtured, updated and implemented in a continuing spirit of cooperation between government, industry, citizens, and scientists.

New Jersey Future is especially thankful for the efforts of all the State government employees who contributed to this report. Without their buy-in and effort, we would never have come this far.

JJ 

Introduction

What kind of New Jersey are we passing on to future generations?

This question has increasingly shaped the thinking and activities of Governor Whitman, New Jersey Future, and business, environmental, academic, and civic groups.

In 1995, we began the multi-year Sustainable State Project, which culminated in a “report card” on the long-term trends that will enhance or degrade our quality of life and that of future generations. Originally released in 1999, *Living with the Future in Mind* articulates the vision of a sustainable New Jersey with an efficient and vibrant economy, a healthy environment, and a just society. This report is the 2000 update of *Living with the Future in Mind*.

The 11 goals offered in the report are the product of a creative community dialogue 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 goals were reviewed by citizens as part of our community dialogue.

The 41 indicators were selected – and in some cases, created – by economic, environmental, and social experts to measure specific progress toward our goals.

These are the ambitious goals the state must strive toward to achieve sustainability. The indicators gauge progress in achieving the goals.

Advancing the Sustainable State

Governor Whitman’s Executive Order 96, issued in May 1999, called for the preparation of this report and the upcoming companion report, *Governing with the Future in Mind*. In the pages that follow, the goals and indicators from the 1999 report are maintained. The 41 indicators have been updated as new data have become available. The descriptions of trends for the indicators have also been

updated.

For the first time, this report shows quantitative targets that have been adopted by state agencies through a public process. These targets serve as the point of departure for future deliberations on setting formal sustainability benchmarks for each indicator. Targets put the trends into context, providing a sense of where we think we need to be and what is reasonably achievable.

Indicator updates are the main feature of this report. Also included are brief descriptions of sample strategies that state agencies are pursuing to make sustainability a reality in New Jersey. These strategic initiatives are outlined in greater detail in *Governing with the Future in Mind*. While updating indicators of progress is very important, developing and presenting strategies and programs is essential. Together, these components form the nucleus of an action plan to attain sustainable development in New Jersey.

The Next Step

Living with the Future in Mind is the blueprint for building our sustainable “house.” This update ensures that the blueprint is as current as possible. *Governing with the Future in Mind* will assemble the boards, nails, and labor to build it. Much work remains, though, before we can move in.

We must continue filling gaps in our knowledge of trends shaping our future. Some quantitative targets have been set, but we need to establish meaningful benchmarks for each indicator, all within the context of sustainability. As we move forward, it is essential to continue the strong partnership between state, non-profit, and business entities created under the Sustainable State Project.

We have made a promising start. These reports, and the other efforts outlined here, show New Jersey’s steadily increasing momentum toward sustainability. Our ultimate success in achieving a sustainable state will require continual nurturing through our collective efforts. ■

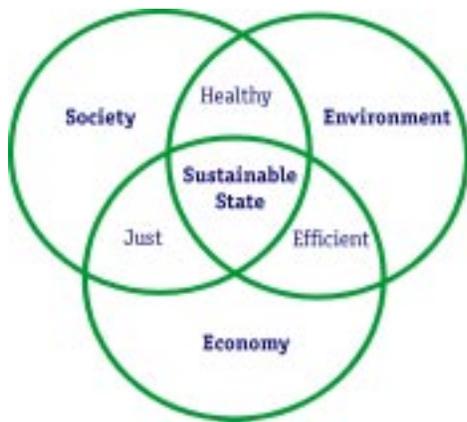
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What is Sustainable Development?

“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)



“Sustainability,” or “sustainable development,” means protecting the resources and systems that support us today so that they will be available to future generations. In short, it means preserving our civilization and the things we hold dear in perpetuity while enhancing our quality of life.

The symbol on this page represents 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 overlaps the other two. To be sustainable – that is, to have a dignified and prosperous human civilization in the future – each of these systems must be healthy and in balance. We cannot degrade any one of the systems that supports us without adversely affecting the other two.

This is the essence of sustainable living. Beautiful beaches mean little if you cannot afford to get there. A good job doesn't mean much if you have to worry about your safety on the walk home. A safe, friendly neighborhood isn't a haven if its air is not breathable.

Sacrificing the future to benefit the present is the opposite of sustainability. As shown in the

symbol to the left, when all three systems are healthy and in balance, our state and our civilization will be healthy, just, and efficient.

The terms “sustainability” and “sustainable development” were coined in the early 1980s to describe the goal of joining economic development and ecological health. In its 1987 report, *Our Common Future*, the United Nations World Commission on Environment and Development offered five key concepts that crystallized sustainability:

- 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.

The Sustainable State Project

While the concept of sustainability received significant international attention as early as the 1980s, its importance has only more recently been acknowledged in the United States. In fact, New Jersey's Sustainable State Project is the first of its kind in the United States.

Our first steps toward sustainability began with a trip to the Netherlands in 1994. There, New Jersey policy makers got their first look at sustainable development efforts in action. In particular, they saw the Netherlands' success in building consensus around goals, and involving business and private citizens in the realization of those goals.

The desire to take steps to create a Sustainable New Jersey was then articulated at the first Sustainable State Leadership Conference in 1995, co-hosted by the State of New Jersey and New Jersey Future 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 the goals and indicators outlined in *Living with the Future in Mind*. These goals and indicators received extensive public review in statewide conferences, regional workshops, and countless small working sessions before they were officially accepted.

Living with the Future in Mind outlines what is necessary to achieve sustainability and lays out a clear way to track our progress. It has created a starting point for discussions about achieving a Sustainable State.

Sustainable New Jersey: A Year of Action

Over the past year, the effort to make New Jersey a Sustainable State has steadily gained momentum. *Living with the Future in Mind* provides a conceptual basis for New Jersey to become a Sustainable State, a picture of what it will look like when we get there. Government and private partners are no longer treating sustainability as simply the “buzzword of the day,” but are developing real, implementable strategies to make it happen.

Sustainability Executive Order

On May 20, 1999, at the New Jersey Future Sustainable State Conference, Governor Whitman signed Executive Order No. 96. E.O. 96 endorsed *Living with the Future in Mind's* 11 goals and 41 indicators, noting that they “offer valuable practical guidance to the State of New Jersey in our efforts to achieve long-term sustainability for the benefit of current and future generations.” The Governor’s Executive Order directed state departments to:

a. Pursue, as appropriate, policies which comport with the 11 sustainability goals outlined in New Jersey Future’s *Living With the Future in Mind* report.

- b. Collaborate in the exchange of information among departments and agencies, and establish institutional mechanisms to encourage and facilitate achievement of these goals.
- c. Report to the Governor on June 1, 2000, and every year thereafter, on their progress toward goal attainment.

Sustainable State Working Group

To move forward with Executive Order No. 96, an Interagency Sustainable State Working Group, composed of representatives from all Cabinet departments, other commissions and agencies, and New Jersey Future, was created. Governor Whitman asked Department of Environmental Protection Commissioner Robert C. Shinn, Jr. to lead the efforts of this Interagency Group.

This updated report and the forthcoming companion report, *Governing with the Future in Mind*, are the products of the Interagency Group’s effort. The original Sustainable State Review Committee, including representatives from business, environmental, and civic groups, also contributed to this report. The Interagency Group will continue its work of coordinating policies and strategies developed to achieve sustainability.

Sustainable Business Conference

Over 300 business leaders from large and small firms attended the first annual New Jersey Sustainable Business Conference on April 18, 2000. This conference highlighted successful business efforts in the area of sustainable development and laid the groundwork for future initiatives. Many conference participants walked away with a newfound awareness that it is possible for business to be socially responsible, to go beyond strict compliance with environmental law, and to be highly profitable at the same time.

Goal-based Agency Strategic Plans

Several state agencies, acting in accordance with the concept of comprehensive goal-based planning, have adopted their own strategic plans. These plans often contain goals that are identical to or that support the Sustainable State Project goals. They also contain indicators of progress toward goals that were developed with considerable public input. Examples of comprehensive goal-based plans are the

Department of Environmental Protection's *Strategic Plan and 1999/2000 National Environmental Performance Partnership System* (NEPPS) plan; the Department of Transportation's Statewide Long-Range Transportation Plan, *Transportation Choices 2020*; and the 2000 edition of the Department of Health and Senior Services' *Healthy New Jersey 2010*. Many of the quantitative targets provided for the indicators in this Sustainable State report were made available through these agency strategic plans.

Governing with the Future in Mind

Governor Whitman's Executive Order No. 96 requires state agencies to develop and implement strategies – or in some cases refine existing strategies – to support sustainability.

The creation of a Sustainable State will not happen overnight, nor will one strategy, action, or decision be the magic elixir. Rather, it will be a long-term process involving sets of interconnected strategies and actions. The involved stakeholders will make continual corrections and adjustments. The important point is that all parties communicate and cooperate.

A number of State agencies are pursuing various strategies that specifically support New Jersey Sustainable State efforts. Through these strategies, statewide improvements in one or more of the three spheres – environment, economy, and society – will be attained. To succeed, most of these strategies will require both interagency coordination and partnerships with other levels of government and private and nonprofit entities.

These strategies will be outlined in *Governing with the Future in Mind*. This report will be the product of the State's first attempt to develop cross-agency strategies for achieving sustainability goals. A substantial interagency effort will be required for its development and publication. The report is expected to be released in March 2001.

The primary focus of *Governing with the Future in Mind* will be the initiatives undertaken by state agencies in the quest for sustainability, and it will include:

- Discussions of comprehensive sustainability efforts and projects that will affect nearly every goal and involve a number of agencies. (For example: the State Development and Redevelopment Plan.)

- Descriptions on a goal-by-goal basis of broad-based state agency strategies that will contribute to the realization of sustainability and affect other Sustainable State Project goals in the process. (For example, a particular strategy may be primarily designed to advance Economic Vitality but may also have a significant effect on Equity.)
- Recommendations on the institutionalization of the Sustainable State Goals and Indicators in New Jersey.
- Recommendations for changes and additions to the list of indicators in *Living with the Future in Mind*.

Examples of some of the broad-based strategies that are currently or projected to significantly affect sustainability follow.

Land Use Management Initiatives

In *Living with the Future in Mind*, it was noted that “a sustainable state cannot be achieved without tackling land use.” Efforts in this area over the past year include:

- Enacting the “Garden State Preservation Trust Act” to establish a stable source of funding and the procedural framework for open space preservation.
- Implementing various aspects of the State Development and Redevelopment Plan (State Plan) including:
 - Establishing State Agency Implementation Teams to coordinate agency programs and initiatives with the goals and objectives of the State Plan;
 - Awarding \$2.4 million in 21 Smart Growth Planning Grants to assist 92 municipalities and seven counties in devising strategies to curb sprawl;
 - Aligning state regulations, including the Coastal Area Facility Review Act (CAFRA), regulations, with the goals and objectives of the State Plan;
 - Establishing the Sustainable Development/Affordable Housing Pilot Program, designed

to promote affordable, energy-efficient housing;

- Introducing the Transit Village Program to create development centered around passenger rail and bus stations and to help communities to leverage more private-sector investment;
- Promoting community design strategies that incorporate compact, mixed use development, through publications such as *Designing New Jersey*.

Greenhouse Gas Sustainability Action Plan

This plan commits the State to pursue energy conservation, pollution prevention, innovative technologies, recycling, solid waste management, and natural resource protection strategies to reduce greenhouse gas emissions by 3.5 percent below 1990 levels (about 20 million tons annual reduction) by the year 2005 across all sectors. This plan, the first of its kind in the nation, was unveiled in April 2000.

Energy Deregulation

“The Electric Discount and Energy Competition Act” (EDECA) of 1999 promotes the use of energy efficiency and renewable energy technologies such as photovoltaics, wind energy, and fuel cells to reduce greenhouse gas emissions. The Act established a new Energy Efficiency and Renewable Energy Fund for energy efficiency programs and renewable energy technologies over and above the current programs.

Greening the Economy

The New Jersey Office of Sustainable Business, created in 1997, is the first such office in the country. The Office administers a multi-million dollar Sustainable Development Loan Fund to assist firms in the green sector of the economy. The Office is also developing policies to encourage state government to purchase more sustainable products and services. In April 2000, the Office released *Greening the Garden State*, which profiles 300 firms with green products and services in New Jersey’s energy, remanufacturing, agriculture, and chemical sectors.

Water Resource Protection and Smart Growth

In June 2000, the Department of Environmental Protection proposed water quality and watershed management rules linking enhanced protection of water quality and quantity to smart growth and sustainable development.

Quality Education for All Students

A number of fundamental reforms to public education in New Jersey are being implemented. These include statewide implementation of the Core Curriculum Content and Cross-Content Workplace Readiness Standards and development of an assessment system aligned to the new standards for the fourth and eighth grade tests in Language Arts Literacy and Science. In addition, Whole School Reform has been implemented in the Abbott Districts. Also, effective September 2000, all licensed teachers must obtain 100 hours of professional development over five years.

Crime Reduction Efforts

Initiatives have been implemented to improve the safety of New Jersey residents. One strategy builds upon and institutionalizes community-based anti-crime programs that invite the participation of citizens and make use of “problem solving” policing strategies. The pilot Drug Court Initiative Program enables drug and alcohol-dependent offenders to participate in treatment programs aiming to reduce recidivism.

The various initiatives described above demonstrate the momentum in New Jersey toward sustainability.

Challenges and Opportunities

It is always a challenge to ensure that strategies designed to implement a plan remain faithful to that plan’s guiding vision. This is especially true for a plan as complex and far-reaching as the Sustainable State Project, which requires the participation and coordination of many parties, including state and local governments, private businesses, and non-profit organizations. Indeed, its success demands the participation and input of all New Jersey residents.

Measuring our progress towards sustainability is

a major challenge. Proper and adequate data collection, assessment, and management are essential. In addition, each of the 41 indicators in *Living with the Future in Mind* has limitations and associated knowledge gaps. A lack of quality information can substantially inhibit the utility of this approach.

A significant number of the knowledge gaps in *Living with the Future in Mind* still remain and have been carried through to this report. As we learn more about what is required for us to be a Sustainable State, we will need to better track and assess the trends that will measure the progress of New Jersey's sustainability efforts.

Another challenge lies in maintaining the strength of the public-private partnership that this report represents. The ongoing participation of state and local government agencies, private businesses, and nonprofit organizations will be necessary. It is clear that controversial decisions will be made that will not please everyone. As we move forward, we must ensure that the goals and indicators are created and debated in an open, public, and fair process. Such a process provides the best opportunities for fostering creative ideas and finding "win-win" solutions.

Because sustainability is a constantly evolving concept, new ideas and strategies will be proposed. As we gain a better knowledge of the most effective strategies to achieve sustainability, it will often be necessary to make corrections. The challenge is to remain flexible, monitor results, change strategies as necessary, and then move forward.

Proceeding in this manner offers not only challenges and opportunities, but allows new ideas to flourish. For example, in the past, environmental protection often called for a rigid command and control regulatory structure. However, a new results-based paradigm uses the Sustainable State Goals to allow more flexibility. Known in New Jersey as the Flexible Track Regulatory Program (or the "Silver" and "Gold" Tracks), this program combines strong enforcement with flexibility for those in the regulated community who display continued evidence of compliance, and provides additional flexibility for those willing to go beyond compliance. This approach promises to be even more protective of the environment and at the same time more economically efficient.

The pursuit of sustainability, in many cases, will provide opportunities to "think outside the box."

It will offer a forum for new ideas that otherwise might not be considered. During the process, as state agencies and others pursue strategies necessary to achieve sustainability, New Jersey residents will enjoy an improved quality of life. ■

Readers interested in further understanding the subject of sustainable development may wish to refer to <http://www.eeeee.net/sd03000.htm> for an extensive list of websites.

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 and our ability to reach these goals. Taken together, these goals and indicators enable us to clearly see these trends and how they affect our progress toward achieving sustainability in New Jersey.

The purpose of the indicators is 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. For example, some of the indicator pages highlight quantitative targets that have been adopted by state agencies to guide actions in achieving the goals. In the future, we will need formal Sustainable State Project benchmarks for each indicator.

The goals and indicators also provide the basis for the upcoming companion report, *Governing with the Future in Mind*.

General knowledge about the trends that shape the future is certain to have some effect on our behavior. However, achieving the long-term prosperity toward 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, the goals and especially the indicators provide a 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, and 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 mean-

ingful, 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 see clearly 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 that the market and individual companies can play within it. The 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 their decisions will affect society as a whole, for better or worse.

Education. The indicators help to educate students about sustainability and promote an understanding of the systems that support us. The indicators and the associated knowledge gaps can also serve as a basis for needed research projects, such as devising a set of institutional indicators. The indicators can provide the context for applying lessons in every subject to everyday issues 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.

A technical appendix containing the data for each indicator, the data sources, and methodology will be available from the Department of Environmental Protection this winter at 609-984-6071 or www.state.nj.us/dep/dsr.

How we chose and refined the indicators

Indicators chosen for the 1999 *Living with the Future in Mind* report represent the best collection of data available today for measuring our quality of life as we move toward sustainability. We particularly sought indicators that would highlight the interdependence of social, economic, and environmental systems.

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

- **be available on a statewide basis;**
- **measure significant trends that affect our progress toward the sustainable state goals;**
- **receive regular updates;**
- **offer historic trends; and**
- **be clearly and readily understood.**

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, in some cases, the creation of new indicators specifically designed to measure our progress toward sustainability.

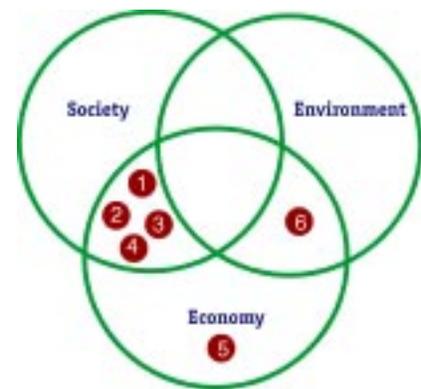
The indicators, as they are presented in this current report, have been reviewed and updated by the Interagency Sustainable State Working Group with the most recent data available. For some, the language contained in the 1999 report has been refined and clarified. In some cases, additional data have resulted in a revised description of the trend for that particular indicator (Example: a trend that may have been depicted as “Increasing” last year may have flattened out somewhat so that the description is now “Little recent change”). In addition, wherever a quantitative target with a specific time frame has been adopted through a public process by a state agency for a particular indicator, that target is reflected. Due to a variety of reasons, including availability of funding, a number of indicators’ data have not been collected at regular intervals and therefore their graphs are unchanged. For data collected at irregular intervals, the results are depicted in bar rather than line graph format. Unless otherwise noted, those years that do not have a bar should be interpreted to indicate that data were neither collected nor available, and should not be read as “zero.”

Finally, if there is any major change in a particular indicator compared with the 1999 report (such as a change in methodology on how the data are presented), that change is also highlighted at the bottom of the page.

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” that drives almost everything else that happens in the state. It shapes our environment and enriches our social and cultural offerings. Our state’s economy underwent a major transition in the latter half of the 20th century, moving away from dependence on manufacturing and toward a more varied mix of advanced technology and service industries. While New Jersey ranks ninth among the states in population and 45th in size, we outperform those ranks in several key categories: we have the seventh largest number of Fortune 500 companies, the second highest average income in the nation, and we place fifth in the number of patents received. Amid this abundance of wealth and productivity, we also have significant disparities between our rich and poor citizens.



What we know

① Income increasing	page 14
② Unemployment cyclical.....	page 15
③ Productivity increasing.....	page 16
④ Poverty cyclical	page 17
⑤ Gross State Product (GSP) increasing	page 18
⑥ Energy efficiency increasing.....	page 19

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 buying them 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

INDICATOR
1

Income

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



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 remains significant in New Jersey, as it does nationally.

Economic

Our economy is only really strong in the long term if it is sustainable - that is, if it combines high incomes with a diminishing gap between the richest and poorest of us, and clean and environmentally sound production processes and products we want to buy.

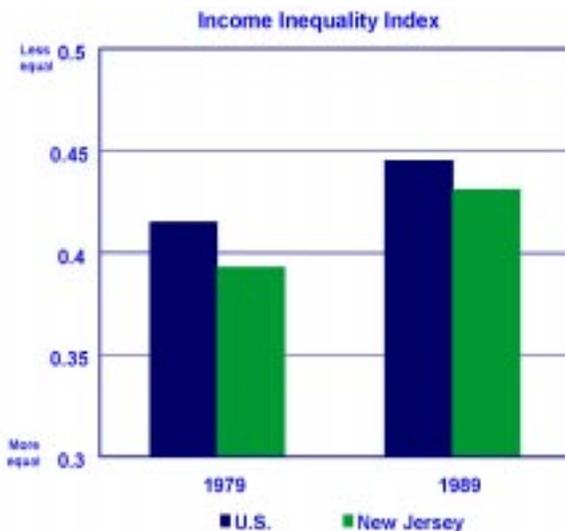
Environmental

Sometimes what we call economic growth is really the conversion of our natural wealth, such as woodlands, into cash. This is not a net creation of wealth

if it consumes non-renewable resources or consumes renewable resources faster than they can replace themselves. We may wind up missing the resources that we deplete, especially in the long term.

Social

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



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 much, we will not have time to enjoy these things.
- We often spend part of our income to remedy social and environmental problems, such 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 factors as the cost of living, how much free time remains after our work is done, and job satisfaction.

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

DATA SOURCES: US DEPARTMENT OF COMMERCE, BUREAU OF ECONOMIC ANALYSIS, US BUREAU OF THE CENSUS, AND NJ DEPARTMENT OF LABOR

Unemployment

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



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 that it is a 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 goods and services, 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 causes less harm to the environment.

Social

Communities with high unemployment often suffer from 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 may work more effectively than other efforts by police, counselors, and professionals 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. With financial crises in East Asia and other regions, many countries have unemployment rates higher than 20 percent. The U.S. unemployment rate averaged 4.2 percent in 1999.
- Teenagers and other young people often have a harder time finding work than people of other ages, yet it is often during our younger years that 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 that the tight labor market and the risk of increased inflation have the potential to send the economy into recession.

Knowledge gaps

This indicator does not measure underemployment, a situation in which 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, or who have chosen not to work for family or education reasons.

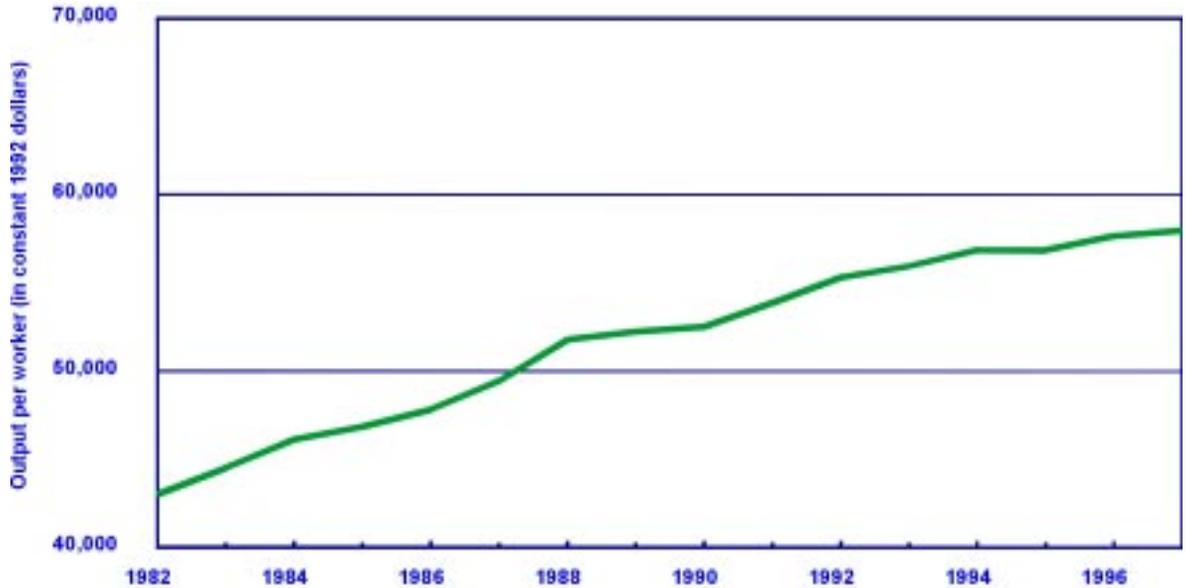
Productivity

INDICATOR

3

Productivity

The amount of Gross State Product produced per worker: Increasing



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 to 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

A measure of productivity that currently is 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 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 could 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 workers into a single well-paying job.
- The more that 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 and would account for the fact that not all productivity gains are beneficial.

Note: See the Technical Appendix for information on use of a different data source than the source used in the 1999 Sustainable State Project Report.

Poverty

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



Importance

We live in the second wealthiest state in the world's wealthiest nation - but over 9 percent of us live in poverty. During some years, more than one-quarter of us who are black or Latino live below the poverty line. Despite these statistics, we have also made progress in reducing child poverty. Child poverty decreased by 33.3 percent from 1993 to 1998, nearly twice the national rate decrease of 17.1 percent. 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 economic growth, particularly in impoverished communities. 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 and Latinos living in poverty is at least double the percentage of other New Jerseyans living in poverty.
- Many of us are among the "working poor" who are employed but living below the poverty threshold. The percent of working poor in New Jersey was 3.7 in 1997-1998.
- 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 some working people are unable to make ends meet.

Knowledge gaps

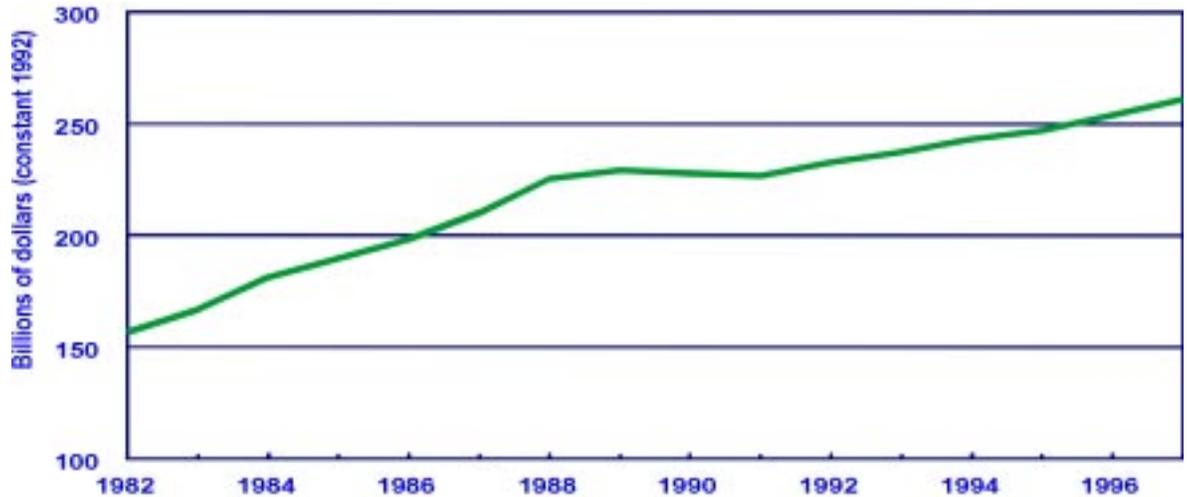
The poverty rate is considered by many to be based on antiquated calculations of the cost of living. Many people who are above the formal poverty line are struggling economically.

Note: Each year's data point is a two year rolling average value.

DATA SOURCE: US BUREAU OF THE CENSUS, AND NATIONAL CENTER FOR CHILDREN IN POVERTY

Gross State Product (GSP)

In dollars per year: Increasing



Importance

The Gross State Product (GSP) measures the goods and services that our economy produces. New Jersey's GSP has increased sharply since the mid-1970s, even after adjusting for inflation. GSP has long been considered by many to be 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. In fact, this boom was caused 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 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 we were 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 vanished, the pollution that has entered our rivers and coastal areas, or the animals that have disappeared. Depending on the reason for the change in GSP, the environmental impact could be positive or negative.

Social

GSP shows that our state has become richer, but it does not tell who among us has received that wealth. It is possible for GSP to paint a rosy picture of our state even during times when the crime rate is rising, when poverty is spreading, and when many people have no health insurance.

Things to think about

- New Jerseyans produce more than \$260 billion in goods and services a year. This is usually much more than many countries, including Denmark, Thailand, Turkey, Argentina, South Africa, Greece, Austria, and many others.

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 between the positive and negative contents of the GSP.

Energy Efficiency

Economic output per unit of energy consumed: Increasing



Importance

This indicator measures how many dollars our economy produces for each unit of energy consumed. 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 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 increase disposable income for individuals.

Environmental

The production of most energy is very harmful to the environment, as evidenced by pollution, strip mining, radioactive waste, and landscapes changed radically by

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 are available to us from technologies such as 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 CFLs are 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, such as driving in bigger cars and living in bigger homes.
- The recently enacted energy restructuring law seeks to promote energy efficiency programs that are economically and environmentally sound. This law allocates over \$100 million annually for energy efficiency and renewable energy programs.
- With deregulation of the electric industry, most New Jersey residents are now able to choose where their electricity comes from and how it is made. Consumers can now choose electricity that is produced from renewable resources rather than by fossil fuel combustion or nuclear energy.

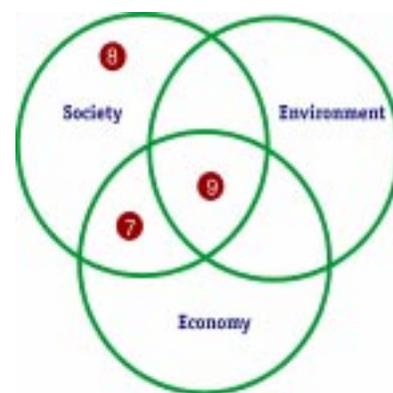
Knowledge gaps

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 do not yet have widely released, assessed, or accepted data on the percentage of our energy that comes from renewable, clean, or sustainable sources. As a result of energy deregulation, new data are becoming available through a new reporting requirement that provides consumers with a standard set of information about the environmental characteristics of energy they purchase.

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, quality education, governmental decision-making, economic opportunity, and natural and 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. Anecdotal evidence suggests that noisy and polluting facilities may be more likely to be located in poor and minority neighborhoods.



What we know

- 7 Little change in equal pay page 21
- 8 Legislators increasingly reflecting population page 22
- 9 Disparities in infant mortality show little recent change page 23

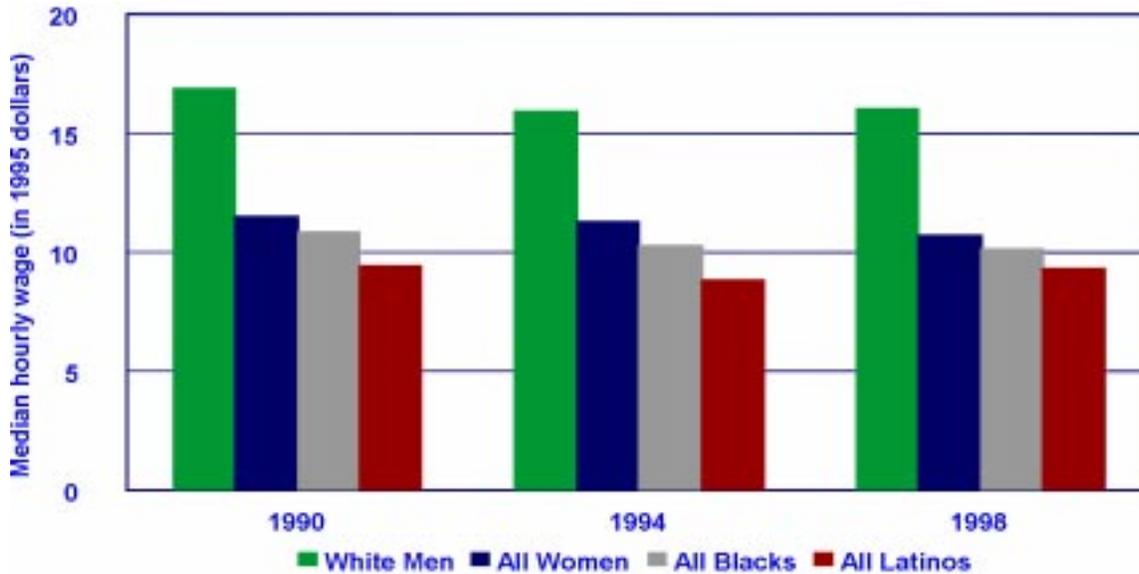
What we don't know

- Data have historically been and in some cases continue to be 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 yet know the full extent of recent and historical data on inequality in education, access to health care, and responsiveness of government, and the usefulness of this information for describing equity in New Jersey.
- We do not know the fairness or full effects of our actions today on the ability of future generations to meet their own needs.

Equal Pay

Median hourly wages by gender and race: Little change

Equal Pay



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 1990 and 1998, wages for women and minorities remained stagnant relative to those of their white male counterparts. Not only are these differences unfair, but they could inhibit our ability to work together as a society to solve our problems and build a unified, cohesive future.

Economic

A free market economy, when working well, should provide the same compensation for the same work. Rewarding people fairly 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. Only when a rising tide moves all boats will a majority of people be motivated to participate in the economy.

Environmental

Economic power often translates into political power, which can mean greater environmental protection for some at the expense of others.

Social

Unequal wages divide the state's citizens. In 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 cooperatively 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, be likely to earn lower pay.
- The number of women and minorities working in New Jersey has increased since 1990, and these two groups now account for a greater share of total employment.

Knowledge gaps

Data for more minority groups, collected more consistently, are necessary. Current data are inadequate for explaining the differences in work within a particular job classification.

Note: See the Technical Appendix for information on use of a different data source than the source used in the 1999 Sustainable State Project Report.

DATA SOURCE: US BUREAU OF LABOR STATISTICS

INDICATOR

8

Legislators' Reflection of Population

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



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 the interests of others well, 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 16 percent of our state legislators are female, earning New Jersey 39th place in national standings. The percentage of Latino state legislators also remains proportionately smaller than our Latino population. One

group has made significant progress in the past two decades: the number of African American state legislators today is nearly proportional to the size of our black population.

Economic

Although our economy is based on free market principles, the government plays a role in ensuring that the economy provides equal opportunities for minorities.

Environmental

Many environmental decisions, such as where to locate undesirable waste facilities, are made by government.

Government can also play a role in restoring brownfields, protecting against lead poisoning, and creating parkland. Environmental inequities can result when minorities and those who live in poor areas do not have equal representation. They may receive more than their fair share of undesirable facilities.

Social

A legislature consisting of the full mosaic of cultures and ideas may be better able to incorporate diverse ideas and debate the full array of social problems than a legislature consisting primarily of one group.

Things to think about

- Most of the minority representatives in the State Legislature are in the 80-member General Assembly. The 40-member Senate is still composed overwhelmingly of white males. Because General Assembly members are often elected to the Senate later in their careers, this disparity may lessen in the future.
- Americans fought successfully to remove “Jim Crow” laws instituted after the Civil War, which 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.

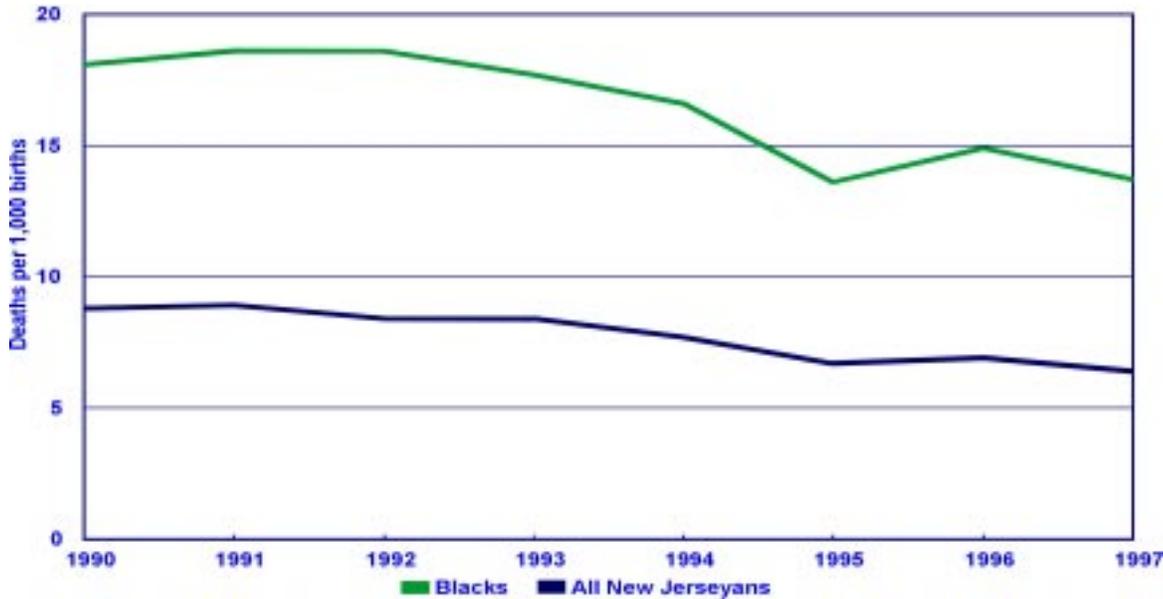
Knowledge gaps

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 readily available analysis of these positions. Positions such as those on local school and planning boards can be particularly important for building a fairer future.

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 recent change



Infant Mortality

Importance

Infant mortality is commonly used as a surrogate for the overall social development of a society. In New Jersey, as in the rest of the country, the odds of survival for a baby depend in part on the baby's color. 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 opportunity. Infant mortality can be used as a proxy for other issues that are harder to measure, such as a lack of job opportunities, lack of upward mobility and education, reduced access to general health care services, and even for the frustration among those of us who receive fewer benefits from the state's economy.

Environmental

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

Social

Disparities in infant mortality may be 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

- According to the 1996 Blue Ribbon Panel on Black Infant Mortality Reduction, black infant mortality is not caused by any one factor. Even when variables such as income, education, maternal age, and marital status are similar, black women still deliver babies who die before age one twice as often as white women.
- 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.

TARGETS:

(from *Healthy New Jersey 2010*)
 By 2010, reduce the number of infant deaths per 1,000 live births to:
 All New Jerseyans 4.3 (Current level: 6.4)
 Blacks 8.0 (Current level: 13.7)

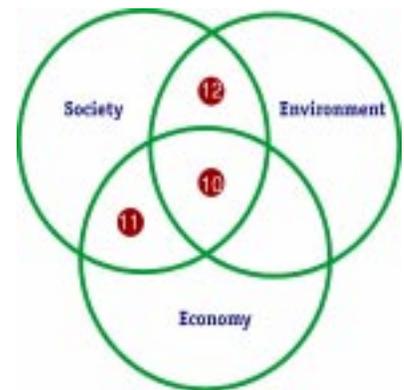
Knowledge gaps

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, when 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 25
- 11 Crime rate recently decreasingpage 26
- 12 Open space available for public enjoyment increasing.....page 27

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.

INDICATOR

10

Newspaper Circulation

The per capita circulation of New Jersey newspapers: Decreasing



Newspaper Circulation

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 for local information. Our major television and radio broadcasts come from New York and Philadelphia and 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 regularly covers local environmental decisions, especially regarding land use and the location

of waste and energy production facilities. 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 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 full 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.
- We are increasingly obtaining from the Internet information that was previously obtained from newspapers.

Knowledge gaps

This indicator does not consider 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 assess fully the impact of New York and Philadelphia newspapers on New Jersey issues and readers. Additional data are needed for this indicator, as this survey has not been conducted since 1998.

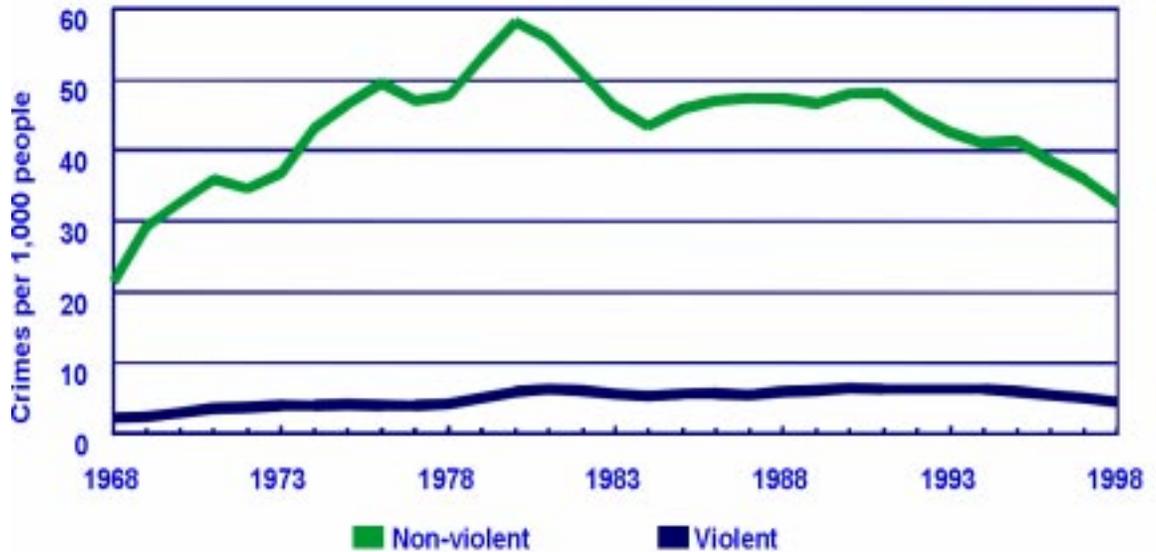
Crime Rate

INDICATOR

11

Crime Rate

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



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 that

chase people from inner city neighborhoods that might otherwise be home to productive businesses and families. It is a vicious cycle 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. "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 other priorities such as 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, 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.

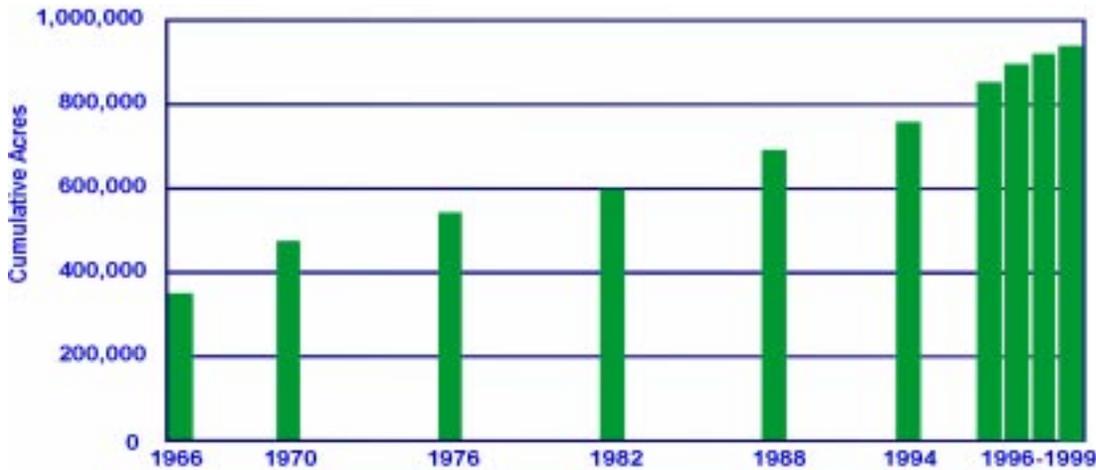
INDICATOR

12

Open Space Available for Public Enjoyment

Acres of open space preserved for public enjoyment:
Increasing

Open Space



Importance

Both children and adults need places to congregate and play. These simple pleasures are fundamental to the quality of life in New Jersey. As of 1999, more than 938,000 acres of open space had been permanently preserved, much of which is available for public recreation. Unfortunately, the remaining unpreserved land 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 promote tourism and clean our air and water.

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. In 1998, New Jersey voters voted to establish the Garden State Preservation Trust, which builds on the efforts of the Green Acres Program. In particular, it provides a stable source of funding for the next ten years to preserve one million acres of the state's remaining open space and farmland.

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 and recreational opportunities to the quality of life enjoyed by their employees and consider this when deciding where to locate or expand. One Colorado study found that the market value of properties adjacent to greenways was 32 percent higher than the value of those only half a mile away.

Environmental

We think of parks and open spaces as places to play, relax, and enjoy the beauty of nature. But to the state's flora

and fauna they are home. This double utility of parks allows us to have fun while protecting species. Natural areas also absorb some of the pollution from our cars and factories, and filter our water. Parks and open spaces are a triple play.

Social

Green spaces are part of our identity. 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.

TARGET

(based on Governor Whitman's 2nd Inaugural Address, January 1998):

By 2002, preserve an additional 150,000 acres of open space (for a total of 1,004,000 acres) and by 2010* an additional 500,000 acres (for a total of 1,354,000 acres).

Baseline = 854,000 acres in 1997.

Current level: 992,630 acres

* While all open space funding will be allocated by 2009, given the lag time between appropriation of funds and actual closings, acquisitions and easement purchases are not expected to be finalized until 2010. See the Technical Appendix for a more detailed explanation.

Knowledge gaps

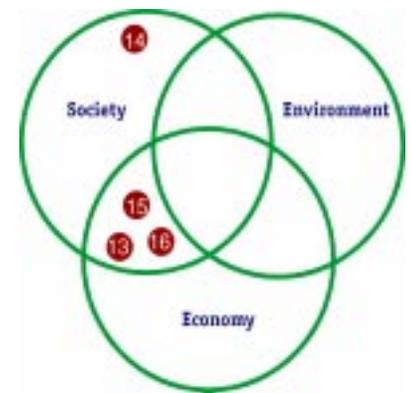
We still do not have consistent data on the total amount of open space lost annually in New Jersey. The data we have do not tell us whether our open lands have been logged recently, whether they suffer from pollution or other degradation, or about the general quality of nature there. These data also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

Note: See the Technical Appendix for information about the adjustment in the data and a change in the description of this indicator since the 1999 Sustainable State Project Report.

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 with the knowledge and skills necessary for employment and personal fulfillment.

New Jersey spent more money per pupil on elementary and secondary school education than any other state in 1999. We are at the national forefront of new educational initiatives, such as charter schools and standards-based reform. New Jersey also ranks among the best states across all categories in a recent study on higher education.* 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 are critical not only to parents. An educated citizenry is the foundation of a productive economy and a fully functional society. New Jersey produces fewer higher education degrees relative to population size than many other states, although we have one of the highest percentages of college-educated adults.



What we know

13	Graduation rates recently decreasing	page 29
14	Little change in student/teacher ratio	page 30
15	Little change in number of 11 th grade students meeting minimum high school proficiency.....	page 31
16	Access to higher education shows little recent change	page 32

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 of disparities in the education received by students from rich and poor families, of different genders, and 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, the 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, it appears that continuing education long past traditional graduations will become more important.

* DATA SOURCE: NATIONAL CENTER FOR PUBLIC POLICY AND HIGHER EDUCATION
See the Technical Appendix for more information.

INDICATOR

13

Graduation Rates

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

Graduation Rates



Importance

Education correlates strongly with future economic and social well-being for everyone. The higher the education level of the state's population, the more robust the state's economy and the greater the economic opportunities for residents. Education 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 the labor

market today 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.

Environmental

Environmental education helps us to make scientifically informed decisions, rather than choices based solely on emotion. Such learning is the foundation of future decisions 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 qualified for many important kinds of work or future opportunities, and they are less capable of leading us toward the kind of future we want. This is especially worrisome in urban areas with the highest dropout rates. This is where thoughtful leadership and strong communities are most needed.

Things to think about

- High school graduates have a significantly lower unemployment rate than non-graduates.
- Districts such as Trenton and Newark have been offering special night high school programs to help students achieve the credits required for graduation or to prepare them for taking the Graduate Equivalency Degree (GED).
- In 1999, over 5,000 people completed the requirements for a GED.

Knowledge gaps

Graduation rates do not tell us about the quality of the 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. The Department of Education is evaluating potential factors contributing to the recent decline in graduation rates. In particular, the Department is studying the correlation between the decline in graduation rates and the parallel reduction in the dropout rate, especially in the state's special needs districts. Schools are reporting that more students are staying in school through their senior year, but are failing to earn the credits necessary to graduate at the end of four years.

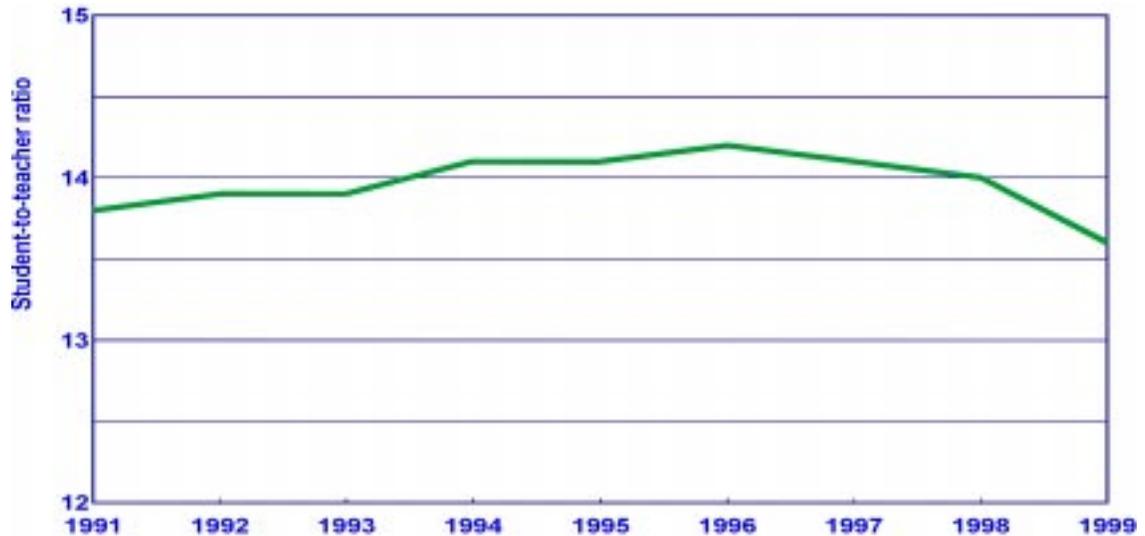
Student/Teacher Ratio

INDICATOR

14

Student/Teacher Ratio

Average number of students per full-time classroom teacher at New Jersey 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 public schools has recently hovered around 14 students per teacher, which places us second best among states. Our state may be stronger in the future as a result. These average class sizes reflect not only general education classes but also smaller classes, including special education and counseling.

Economic

Businesses invest in machinery, advertising, and materials. 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 illuminates the connections between our actions and the consequences for the environment and our society. "Thinking skills" are

crucial to fostering environmental awareness. Teachers cultivate such thinking. A quality education instills environmental stewardship values.

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 by the teaching done by parents.

Knowledge gaps

This indicator does not take into account the quality of teaching or teacher qualifications. It also does not account for the curricula that are taught to our children. The indicator includes classes that have different types of teachers, such as special education and counseling, which are more prevalent in some schools. A better indicator would account for these differences and represent typical general education class sizes.

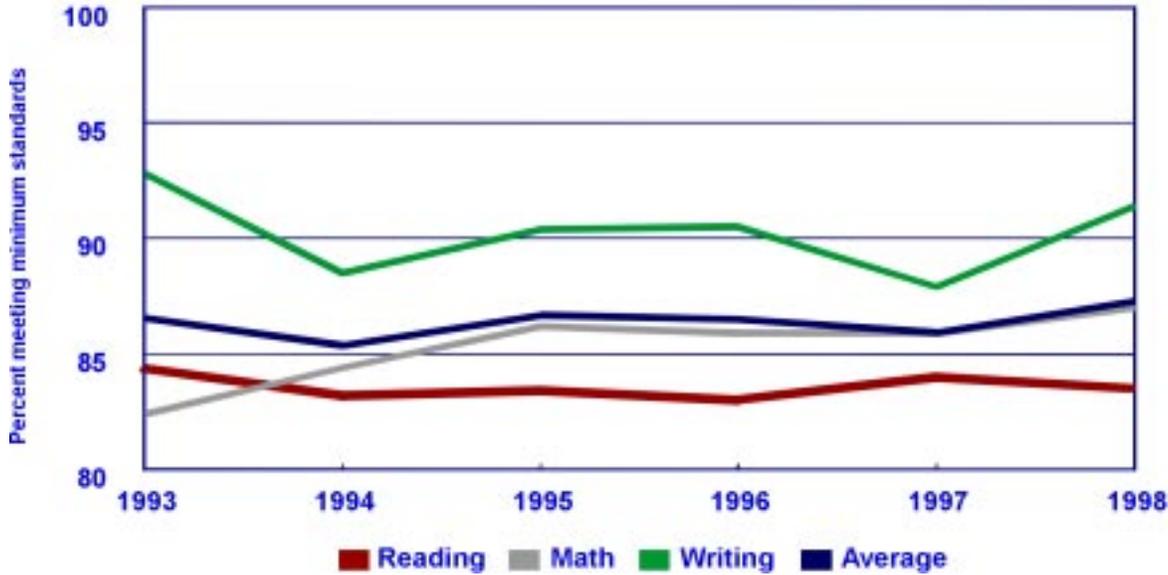
INDICATOR

15

Standardized Test Scores

Percent of 11th grade students meeting the minimum high school proficiency mandated by the state: Little change

Standardized Test Scores



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 large number of us in New Jersey face these difficulties. As with many issues in our state, there is a large but diminishing gap among those of us from different races.

Economic

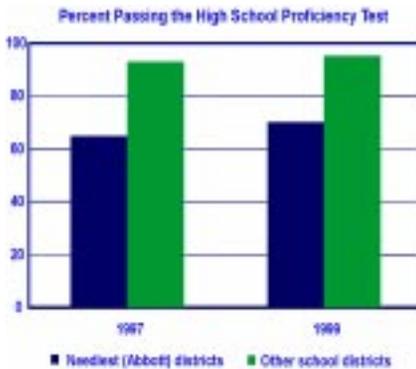
Employers depend on capable workers who know their basic skills, including reading, writing, and math. If our school system fails to instill such proficiency, industry suffers and incomes decline.

Environmental

Those of us with the benefit of 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 disadvantaged the rest of our lives. This disadvantage is the root of other social disadvantages, such as unequal life expectancies, unequal wages, and high unemployment. Unequal test results are a good proxy for these other important issues.



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

In the past 20 years during which New Jersey has conducted standardized testing, no one test has been given consistently to public school students in our state, making comparisons of results difficult. The state recently implemented testing of "Core Curriculum Content Standards," beginning with the fourth and eighth grades. Once the data from the new standards are collected regularly, they will provide information needed to make year-to-year comparisons.

Note: See the Technical Appendix for a change in the description of this indicator since the 1999 Sustainable State Project Report.

INDICATOR

16

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 government with more capable workers. Some of us take it for granted that we and our children will go to a college or university. Others see this opportunity as beyond reach. This indicator reflects our state's capacity to accept new students for higher education. College enrollment per capita has risen in New Jersey since 1965, but has remained relatively stable since 1975.

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. These companies choose to locate in places where the market offers such workers.

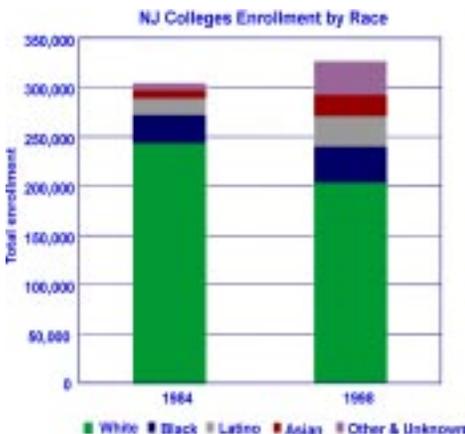
edgeable innovators who make advances in science, economics, management, and other areas with the help of a college education. College expands our horizons and helps us to see issues and connections, such as those between economic, social, and environmental issues.

Social

College can provide thinking and evaluation skills that 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

Solutions to our environmental problems will come from knowl-



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.
- More than 1/3 of New Jersey first-time freshman go to college outside New Jersey. We are the highest net exporter of students.
- 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.

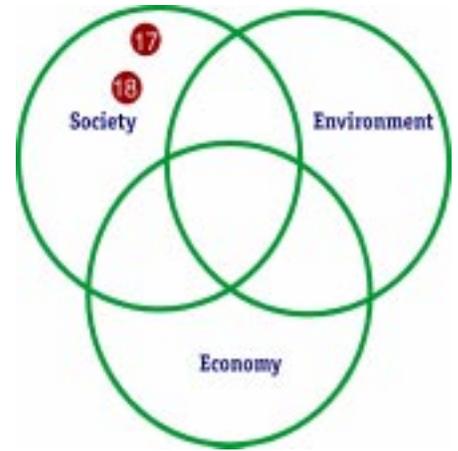
Knowledge gaps

Enrollment does not tell us how many opportunities exist for New Jerseyans to go to college. Opportunities are created through access to a good elementary and secondary 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 that 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 initiatives regarding sex offenders, better land-use planning, and sustainability as highlighted in this report. 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 general knowledge of key public affairs and issues is as weak, 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 Little change in knowledge of government..... page 34
- 18 Voter turnout decreasing..... page 35

What we don't know

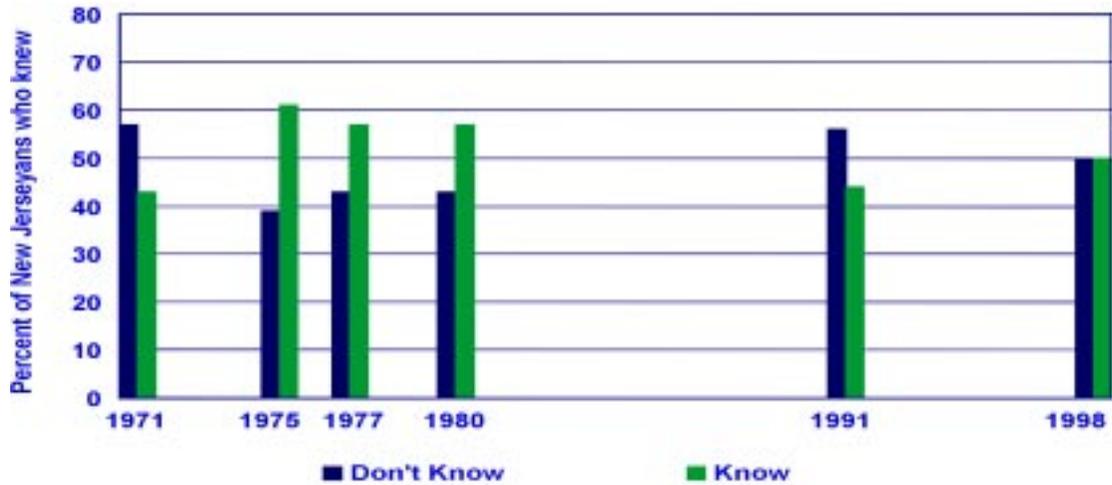
- Although we do know that we have the highest density of local governments in the nation with 566 municipalities, 618 school districts, 21 counties, and numerous local authorities, we do not have good measures of the efficiency of state and local government.
- To be most effective, public participation in government should be more informed. 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 levels.

INDICATOR

17

Knowledge of Government

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



Importance

While the numbers have slightly increased, in 1998 only half of us knew which party controlled the State Legislature; this is 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 promote economic health. However, if a majority of citizens lack the knowledge to express themselves within our government, we cannot be certain that government actions within the economy will serve our best interests.

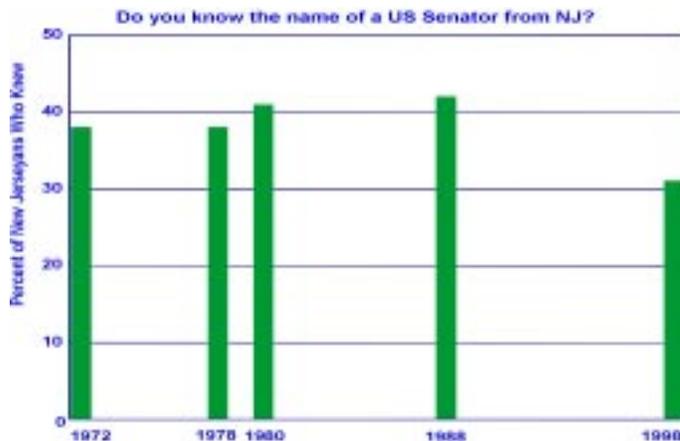
Environmental

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 a 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.



Things to think about

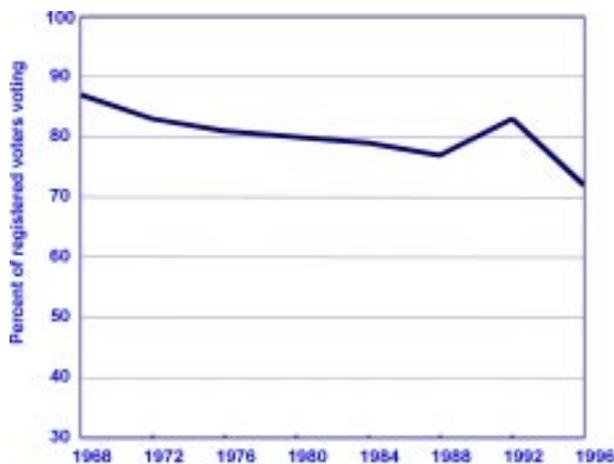
- U.S. Senators are among the most visible and media recognized of our elected leaders.
- In a two-party system such as ours, decisions on all public issues are generally boiled down to voting for a candidate representing one party or the other.

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 and have not been updated since 1998.

Voter Turnout

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



National presidential elections



State legislative elections

Importance

Voting is the fundamental way that we exercise our right to self-government. Voter turnout is the basic measure of how many of us are exercising this right. Through voting, we express our desires and set 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 31

percent of registered voters in 1999.

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, sometimes those who have a vested or financial interest in the outcome.

By voting, we can act to ensure

that decisions about the environment are in the best interest of all New Jerseyans, instead of that of a vocal or influential minority.

Social

When we vote, we exercise our most fundamental right as citizens of a democracy. A decline in voting may signal a negative change in how invested we are as citizens of a common state or country, and in 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.

Knowledge gaps

This indicator only measures the percent of registered voters who vote. 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 Motor Vehicles Services. We interact with our government in many other ways besides voting, including through campaign contributions, letters to newspapers, and direct conversations. In the future, it will be worthwhile to create measures of these interactions.

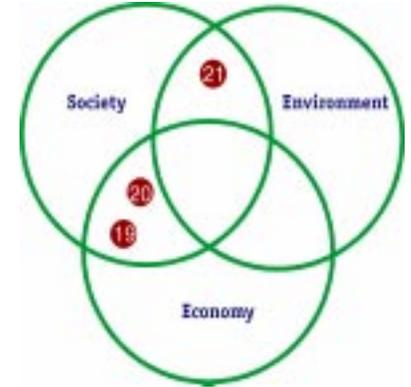
Things to think about

- In countries where voting has only recently become a privilege, voter turnouts are very high: for example, 92 percent in Uzbekistan and 91 percent in Kazakhstan.
- Voter turnout varies substantially, depending on what offices are up for election. 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 that often affect us the most - voter turnout is dismal. 1999 saw the lowest voter turnout in recent history.

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: average 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 able to do so. Rent costs have remained stable.



What we know

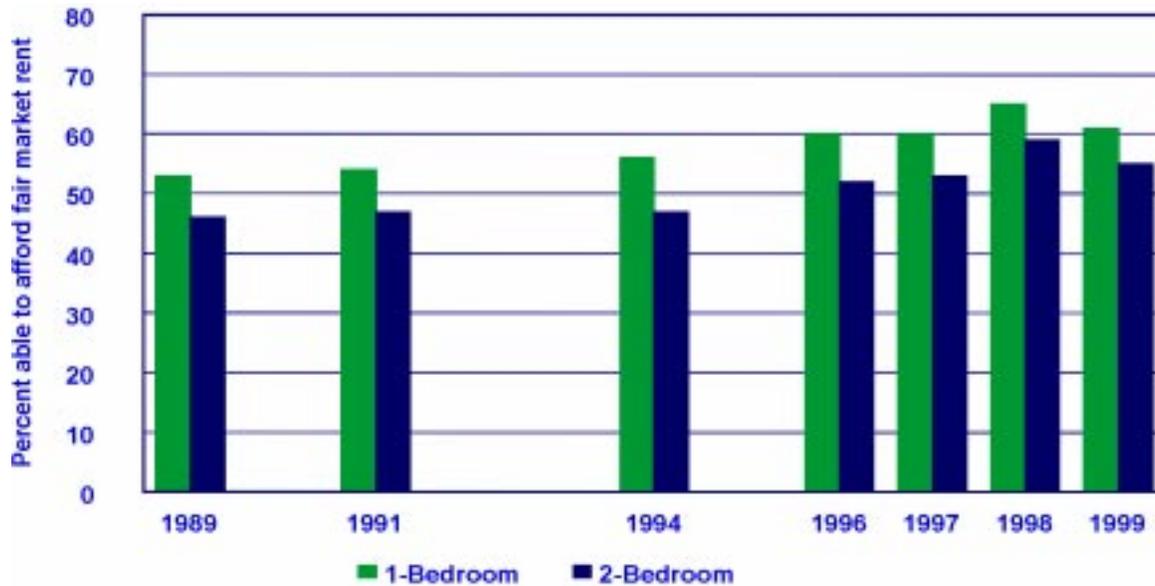
19	Little recent change in the number of New Jerseyans who can afford to rent	page 37
20	Income increasing faster than housing prices	page 38
21	Little change in housing choice	page 39

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 to 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 strain New Jerseyans endure in meeting their housing needs.

Rent Affordability

Percent of New Jersey renters able to afford fair market rent with 30 percent of their income: Little recent change



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. The percentage of us who can afford to rent has risen somewhat. 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 our state. Businesses have difficulty maintaining a workforce without affordable places for workers to live. Our economy is held back when significant numbers of us have little money to spend and invest due to the high cost of housing.

Environmental

Substandard housing can pose environmental health and safety problems. Housing is also 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

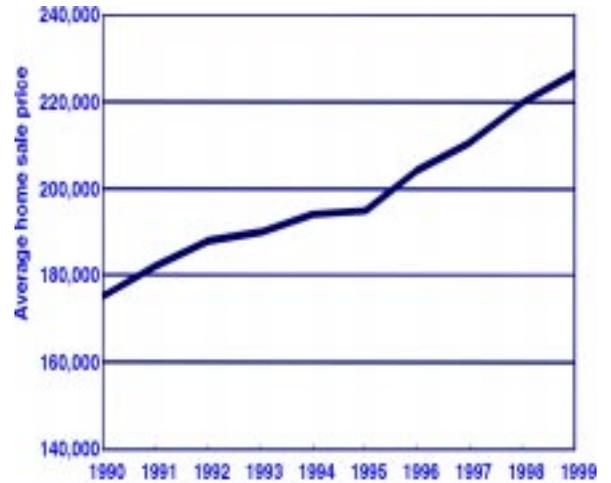
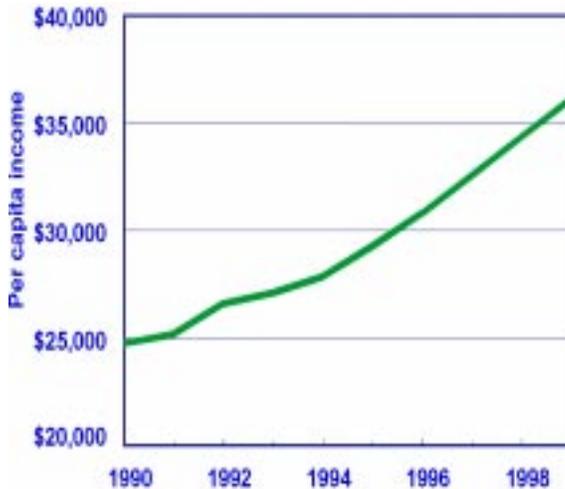
The definition of "fair market rent" has changed during the period in which data were collected. This definition should be standardized. We do not have data to ascertain whether some people might prefer different thresholds of affordability. Also, these data cover the entire state and so do not show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

INDICATOR

20

Home Prices vs. Income

The relationship between per capita income and average home sale price: 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. Since 1990, income has risen significantly faster than home prices. 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 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 different amounts of land and energy and generate different amounts of traffic 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 tend to take a long-term interest in community issues such as promoting education and fighting crime. Desirable homes help shape close communities where children play safely, where parents can visit each other 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 also don't know if housing inequality is widening.
- Homebuilding technology exists to significantly reduce environmental impacts of, for example, 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

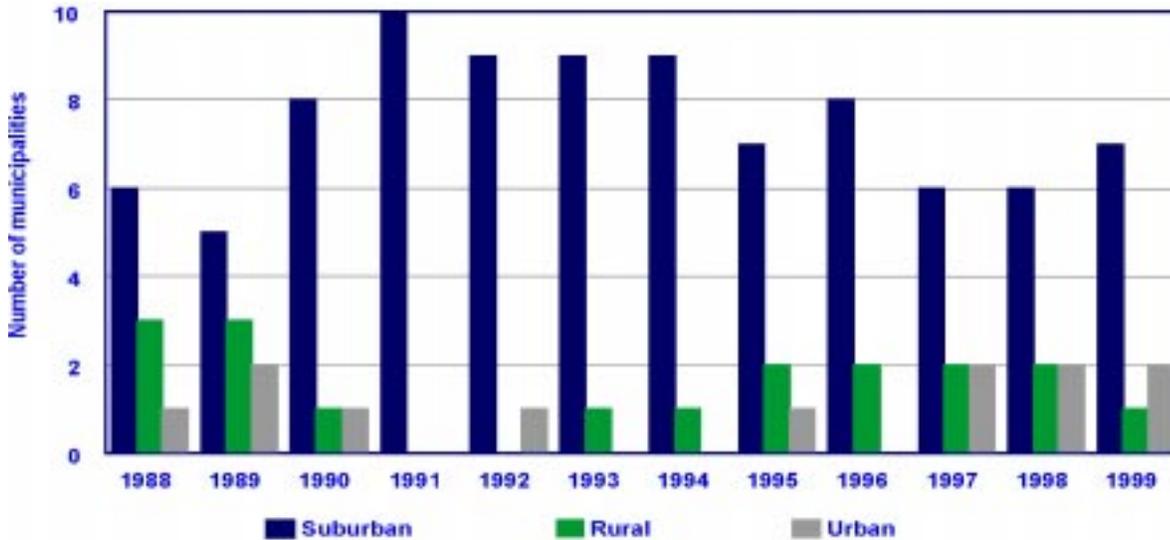
Although homes are more affordable, the data do not tell us the locations of the homes involved. Therefore, we don't know if the overall quality of homes is improving as affordability improves. For example, we cannot tell how safe the homes are, the quality of the school districts that serve them, the levels of racial segregation in the regions where they are located, their environmental impact, or how close the homes are to neighbors, key services, public transportation, and jobs. The data also do not reflect regional variations in home prices and income.

Note: See the Technical Appendix for information on the use of different data sources and a change in the description of this indicator since the 1999 Sustainable State Project Report.

DATA SOURCES: US DEPARTMENT OF COMMERCE, BUREAU OF ECONOMIC ANALYSIS, US BUREAU OF THE CENSUS, NJ DEPARTMENT OF LABOR, AND REGIONAL FINANCIAL ASSOCIATES

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. This trend contributes to the overall problem of limited options for homebuyers who wish to purchase high quality housing in non-suburban areas. 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, 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 water systems. Living in the suburbs increases our reliance on the automobile, which is a major source of greenhouse gases and other air pollution. Our choice to live mostly in the 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 that are being built is a major source of this uniformity.

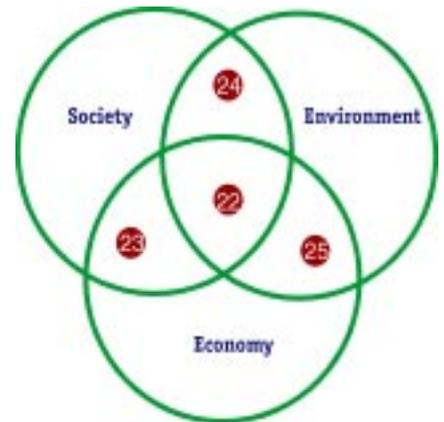
Knowledge gaps

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. An analysis that covers all towns in New Jersey is desirable.

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 credibly be called the health-knowledge capital of the world. We are home to some of the world's largest healthcare and pharmaceutical companies. Health service is one of our largest private-sector employers, 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 a variety of environmental problems - including smog, radon, and contaminated sites - that may potentially affect our health. For example, according to a recent Environmental Defense study, New Jersey has the eighth worst smog in the country.



What we know

22 Life expectancy increasing	page 41
23 Decreasing rate of occurrence of infectious diseases	page 42
24 Decreasing number of hospitalizations for asthma	page 43
25 Little recent change in workplace fatalities	page 44

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.

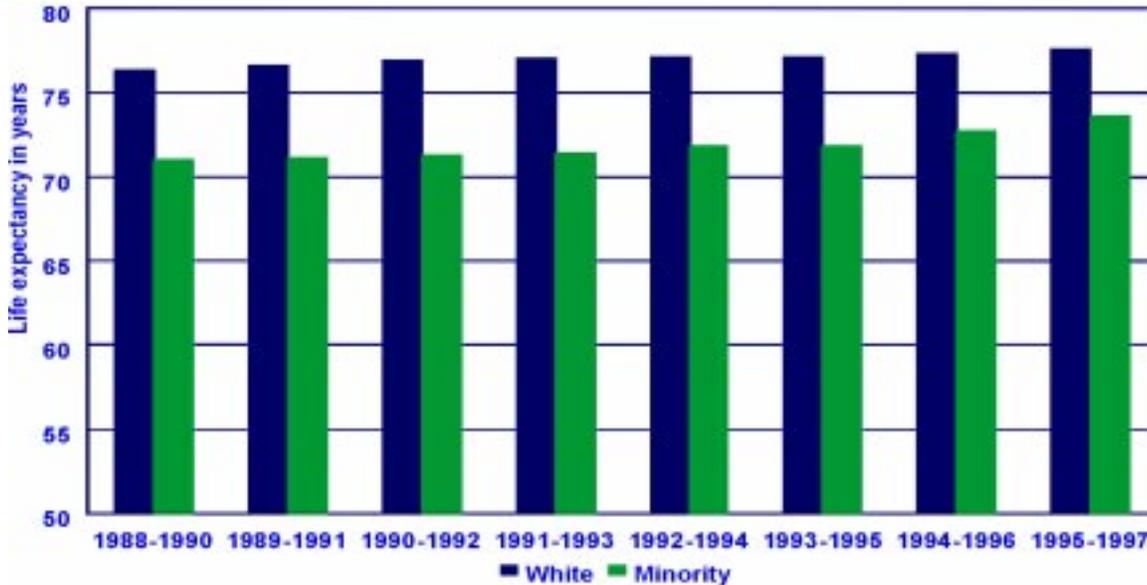
INDICATOR

22

Life Expectancy

Average expected number of years of life for New Jerseyans: Increasing

Life Expectancy



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 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.

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. 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 opportunity to apply the environmental lessons of our past. It also means that each of us imposes a larger burden on the planet, which increases 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 these losses are suffered disproportionately by some races, they help to perpetuate other inequities between races and weaken our whole social fabric.

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.

TARGETS

(from Healthy New Jersey 2010)

By 2010, increase life expectancy at birth, in years, to:

White	81.0	Current level: 77.6
Black	76.5	Current level: 69.5

Data for other minorities are not available.

Knowledge gaps

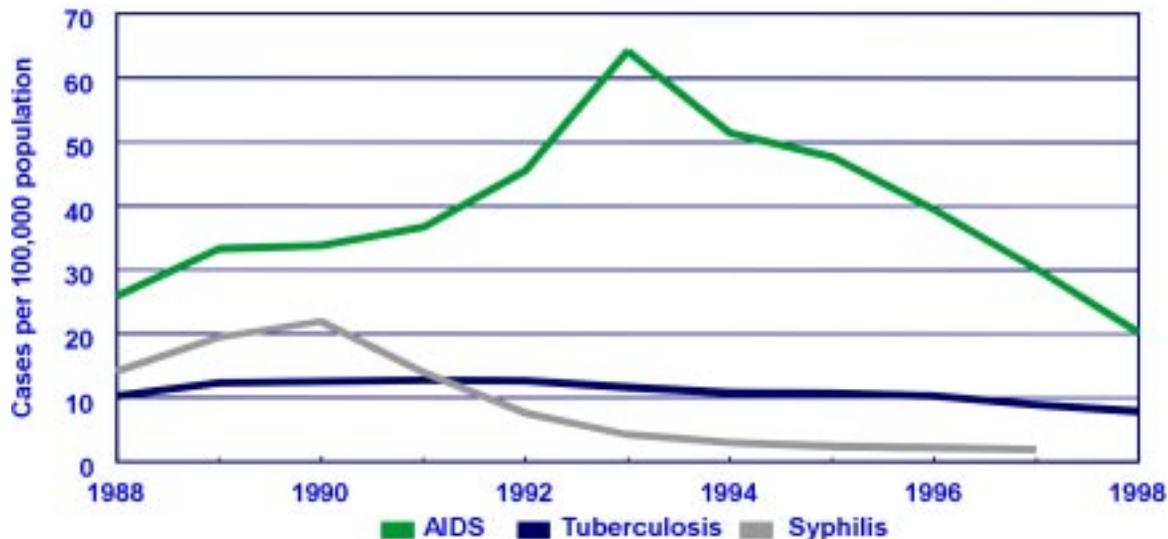
Even though we live longer, some of us are uncomfortable, or in pain, during our later years. This indicator does not address the quality of life that we enjoy at older ages.

Infectious Diseases

INDICATOR
23

Infectious Diseases

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



Importance

Tuberculosis (TB) remains a significant public health problem in New Jersey. At the same time, many of the infectious diseases that we face in New Jersey are preventable. Prompt identification, effective treatment, and reducing the risk of transmission are the keys to controlling infectious diseases and the hallmarks of an effective health care system. In general, we can reduce the rates of sexually transmitted disease and most other infectious diseases through better education about sex and better access to basic health care.

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 burden our social and familial relationships that are the building blocks of our economy.

Environmental

Environmental and health indicators often move in tandem. Healthy people create successful societies that continually improve

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

Social

The illness rates as shown by 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

- From 1986 through 1998, the active TB case rate among the minority population was much greater than that for the white population.
- The most effective and inexpensive way to fight sexually transmitted diseases such as chlamydia, gonorrhea, and HIV is not through treatment after exposure, but rather through education and prevention.
- Chlamydia cases have been rising dramatically in New Jersey: from 1,716 cases in 1991 to 11,683 in 1998.

TARGETS

(from *Healthy New Jersey 2010*):

- * By 2010, reduce the incidence of AIDS per 100,000 population to 14.6.
Current level: 20.2
- * By 2010, reduce the tuberculosis incidence rate per 100,000 population to 2.4.
Current level: 7.9
- * By 2010, reduce the incidence of primary and secondary syphilis per 100,000 population to 0.5.
Current level: 1.9

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 caused 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.

Note: See the Technical Appendix for the use of a different data source for AIDS than the source used in the 1999 Sustainable State Project Report.

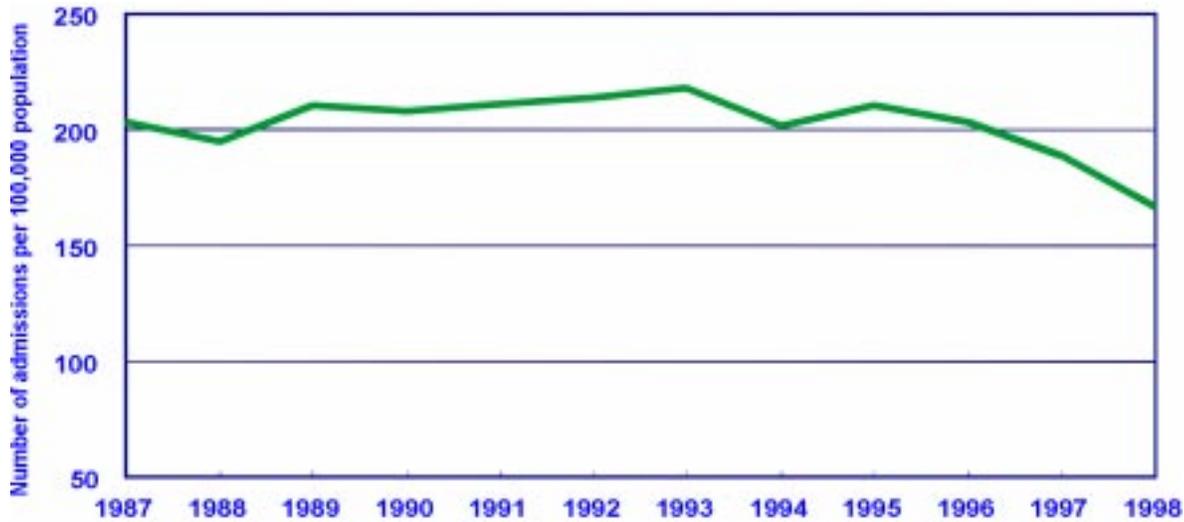
INDICATOR

24

Asthma

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

Asthma



Importance

Asthma is believed to be 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.

Economic

Elevated asthma rates increase health care costs. When their symptoms 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

- Asthma is the leading cause of school days missed due to illness.
- With good medical management, many asthma attacks can be prevented and should not require hospitalization.
- Asthma afflicts our children, racial and ethnic minorities, the elderly, and those of us who already have other respiratory illnesses more than other New Jerseyans.

TARGET

(from *Healthy New Jersey 2010*):

By 2010, reduce the annual asthma hospital admission rate per 100,000 population to 150.0
Current level: 166.6

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. In 1996, asthma was the tenth most common diagnosis nationally in hospital emergency rooms. We are not yet able to track emergency room visits in New Jersey, but it is probable that asthma is one of the most frequent diagnoses. Hospitalizations are only a proxy for asthma incidents. Asthma incidents may vary, yet not be fully reflected in the number of hospital visits.

Note: In the 1999 Sustainable State Project Report, the chart was labeled "Asthma" but included admissions due to both asthma and bronchitis. This report includes only asthma.

DATA SOURCE: NJ DEPARTMENT OF HEALTH & SENIOR SERVICES

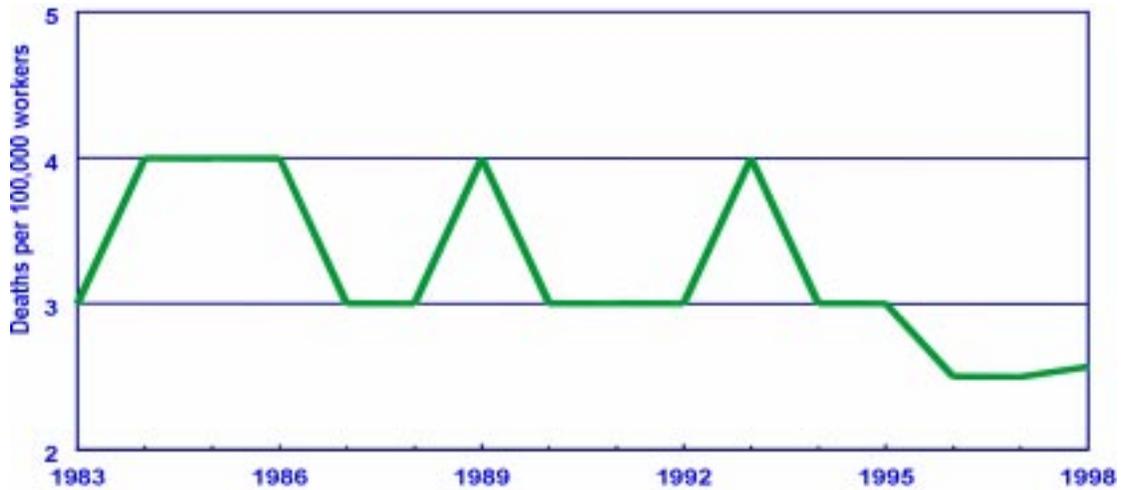
Workplace Fatalities

INDICATOR

25

Workplace Fatalities

Job fatalities per 100,000 workers: Little recent change



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. Some jobs are undesirable to workers because of the risk of injury.

Environmental

Environmental issues are generally not associated with workplace fatalities. However, environmental contaminants are among the causes of occupational harm. The contaminants list is

long and includes many chemicals unknown to most of us. We can also infer that a company that does not care for its workers does not care 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 comes when one of a household's breadwinners is hurt or killed.



TARGET

For Lead Toxicity
(from *Healthy New Jersey 2010*):

By 2010, reduce the number of workers per million* with occupational lead exposure causing blood lead level concentrations equal to or greater than 25 ug/dL of whole blood to 70. Current level: 129

*See the Technical Appendix for an explanation of the change from total workers in the chart used in the 1999 Sustainable State Report to a rate per million used this year.

Things to think about

- In most types of work in New Jersey, it is safer to do the job than to drive 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.
- Although job-related injuries have declined as our economy has shifted from manufacturing to services, there has been increased recognition of such disabilities as carpal tunnel syndrome in "white collar" occupations.
- 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

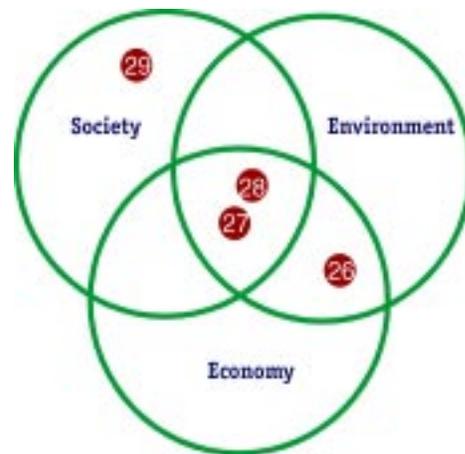
Lead poisonings and fatalities are only two of the various hazards that a worker can be exposed to on the job. Better indicators, which integrate worker health and safety statistics, are needed.

DATA SOURCE: NJ DEPARTMENT OF HEALTH & SENIOR SERVICES

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, the 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 pattern, to build new homes rather than renovate existing towns, perpetuates our car culture. When we 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 increasing	page 46
27	Vehicle miles traveled increasing	page 47
28	Workplace transportation options increasingly auto-dependent	page 48
29	Traffic fatalities decreasing	page 49

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 wildlife habitat loss, air and water quality degradation, 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.

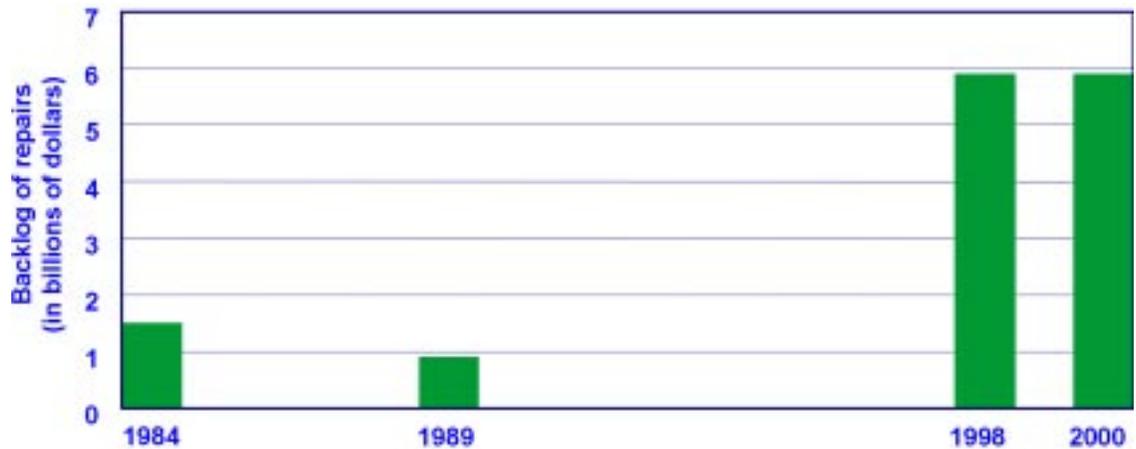
Road & Bridge Repairs

INDICATOR

26

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



Importance

Our daily lives take place within New Jersey's vast transportation infrastructure. Without proper maintenance, our options and opportunities - economic and social - will 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. Our transportation resources have become strained through building costly and inefficient new infrastructure to accommodate sprawl-type development in more rural areas, rather than using them for upkeep of infrastructure in older suburbs, towns, and cities.

Economic

An efficient and dependable transport system is a basic and necessary 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 simply 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 much 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 the need for more roads, and speed the pace of paving 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

- In the past, as much as 40 percent of New Jersey's construction and maintenance dollars went toward building new roads, often promoting suburban sprawl. In fiscal year 2001, however, only 4 percent of the state's proposed transportation capital investments is budgeted for new capacity highway improvements.
- Recent enactment of the "Statewide Transportation and Local Bridge Bond Act of 1999" marks an increased emphasis in the repair of existing infrastructure in cities and suburbs.
- Many major roads were built in New Jersey in the 1950s and 1960s. 40 years later, these roads and bridges need significant repair.
- Transportation decision-making is fragmented among federal, state, local, and regional agencies.

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 that are not under the jurisdiction of the New Jersey Department of Transportation.

TARGET

(from *NJDOT 1998 Capital Investment Strategy*):

By 2010, reduce the backlog in road and bridge repairs to \$1.3 billion.

Current level: \$5.9 billion

Vehicle Miles Traveled

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

Vehicle Miles Traveled



Importance

Vehicle miles traveled and ridership on public transit are both measures of mobility – a highly prized asset at the beginning of the 21st 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, and often elimination, of other transportation options. Planning our “built environment” better would mean increasing our ability to take public transit, bike, or walk. We would then 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 rises, 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 improves the competitiveness of the economy as workers, consumers, and goods get where they need to go with minimum time and cost.

Approximately 33 percent of all energy consumed in our state is used for transportation. Without continuous improvements in efficiency and environmental technology, our pollution will increase as VMT increases.

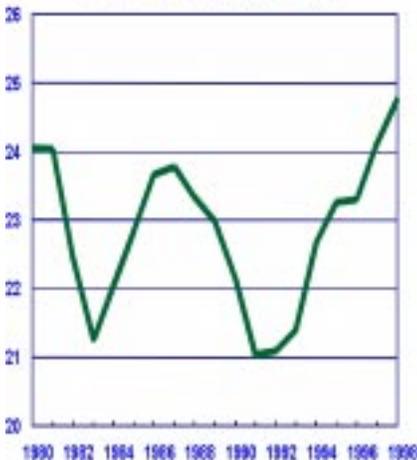
Social

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. Transit brings people together in stations, towns, and in larger vehicles.

Environmental

Motor vehicles and roads are a significant source of air and water pollution in New Jersey. Roads also fragment wildlife habitat, making it unsuitable for some species.

Annual NJ 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 commuter 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.

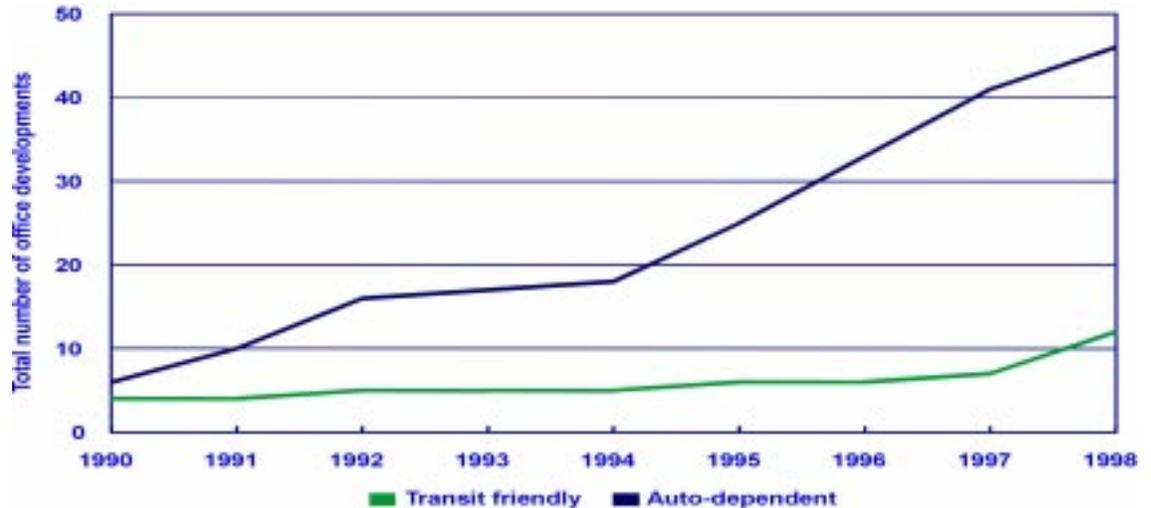
INDICATOR

28

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 reshapes the areas surrounding 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 cost the average driver \$6,893 in 1998 to own one mid-sized (Taurus-type) car, and even more if you com-

mute more 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. 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 one of the most serious environmental threats 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 parking 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 they do not generate enough riders to justify a transit stop.
- 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 single place we go.

Knowledge gaps

This indicator only measures the state’s largest developments and might not reflect trends in different regions of the state, where smaller office buildings prevail. As such, it does not reflect the automobile dependence of people who work in other sectors of the economy.

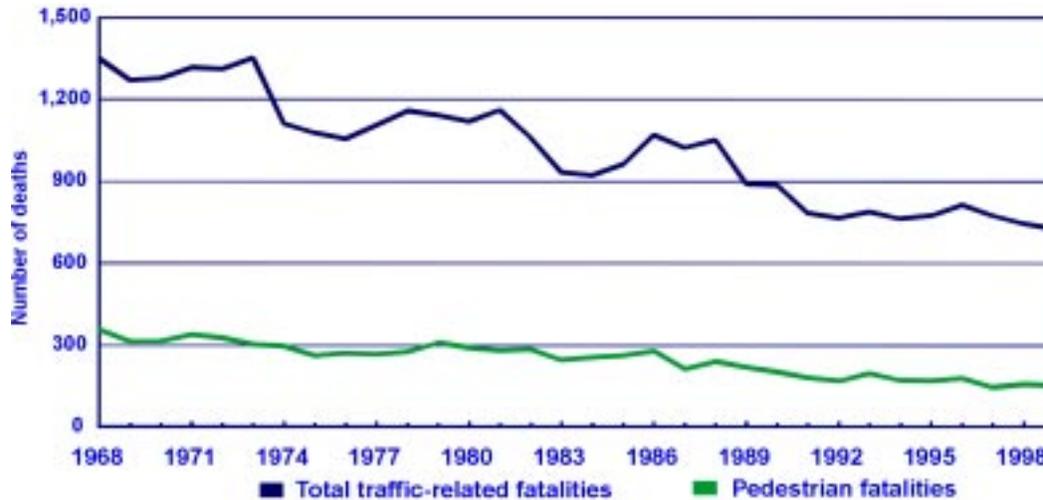
INDICATOR

29

Traffic Fatalities

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

Traffic Fatalities



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 of those investments far into the future. Instead, we pay high financial and emotional prices.

Environmental

There is no obvious connection between traffic fatalities and the environment.

Social

In traffic fatalities, we lose family, friends, and colleagues. Whether an accident takes the life of one or many in a community, deaths caused by traffic accidents have serious, long-term repercussions.

TARGET

(from 1998 NJDOT's *New Jersey First: A Transportation Vision for the 21st Century*):

By 2010, cut total auto fatalities by 25 percent. 1998 level: 745
Current level: 727

By 2010, cut pedestrian fatalities by 50 percent. 1998 level: 156
Current level: 151

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.

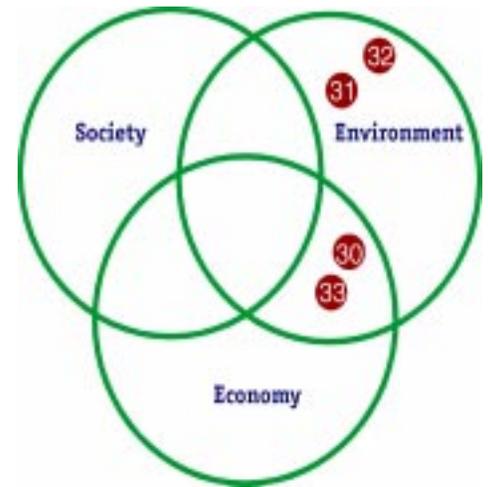
Knowledge gaps

Young people have more car accidents than any other age group does, so traffic mishaps take an especially high toll when measured in lost years of life. The indicator does not measure lost years and thus does not reveal this important distinction. In addition, at almost all ages, men are much more prone to car accidents than women are. 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 different types of habitat and ecosystems as New Jersey: bears and bald eagles populate our mountains, crabs and egrets live in our salt marshes, dolphins frolic off our shore, wild orchids bloom in our Pine Barrens. Unfortunately, much of this natural heritage is being threatened. We are addressing this in some ways 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

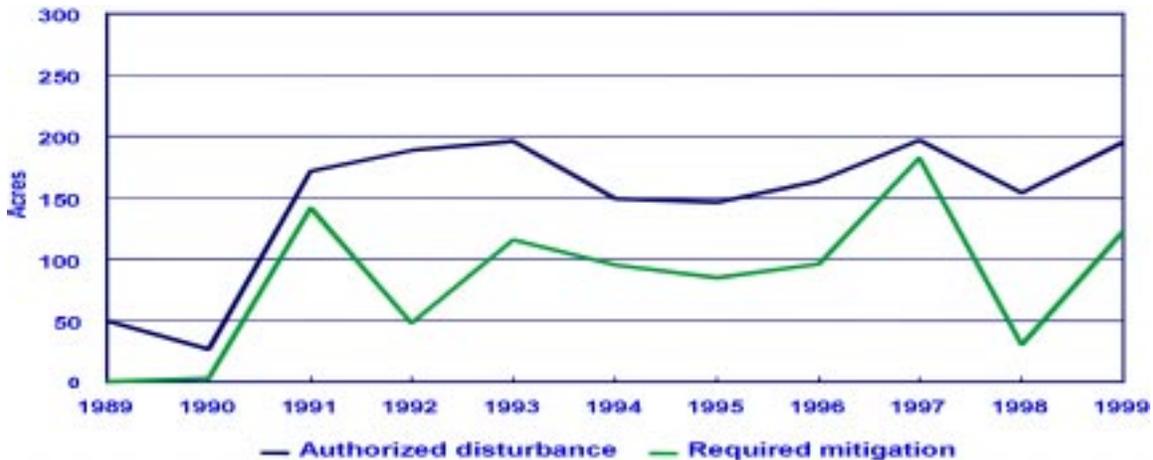
30 Freshwater wetland impacts show little recent change	page 51
31 Nesting water bird populations decreasing	page 52
32 River health shows little recent change	page 53
33 Marine water quality increasing	page 54

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.

Freshwater Wetland Impacts

The acres of freshwater wetlands permitted to be disturbed and required to be mitigated each year: Little recent change



Importance

Wetlands or bogs and marshes – including the Great Swamp and 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 estimates, we have lost 20 to 39 percent of our freshwater wetlands since colonial times. Fortunately, with the passage of the State's Freshwater Wetlands Protection Act, the rate of freshwater wetland losses has been significantly reduced over the past 12 years. On average, we now permit development of fewer than 175 acres of freshwater wetlands each year, from the approximately 700,000 acres of freshwater wetlands remaining in our

state. Currently, mitigation is required to offset many authorized wetlands disturbances. On average, 84 acres of mitigation is required per year. Mitigation may include restoration and enhancement of existing wetlands, creation of new wetlands, purchases of credits in a mitigation bank, or contribution to the State's Wetlands Mitigation Fund.

Economic

Wetlands act as natural filters 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 migratory 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, and bird watching are 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.
- In addition to freshwater wetlands, New Jersey is also home to over 200,000 acres of coastal wetlands.

TARGET

(from 1998 NJDEP Strategic Plan):

By 2005, there will be a net increase in wetland acreage and quality. (Net = wetlands loss minus wetlands created, restored, or enhanced.)

Knowledge gaps

These data are based on permits to legally alter and fill in freshwater wetlands. Some wetlands are filled illegally while others slated for development with permits remain untouched. Many legally disturbed or filled wetlands are replaced with mitigated or man-made wetlands. Over time, mitigation is expected to produce additional functioning wetlands. Studies are underway to assess the success and viability of mitigated wetlands. There is a need for better ways to measure the net changes in wetlands acreage, the quality of existing wetlands, and the impacts of development near wetlands.

Note: See the Technical Appendix for a change in this indicator since the 1999 Sustainable State Project Report.

DATA SOURCE: NJ DEPARTMENT OF ENVIRONMENTAL PROTECTION

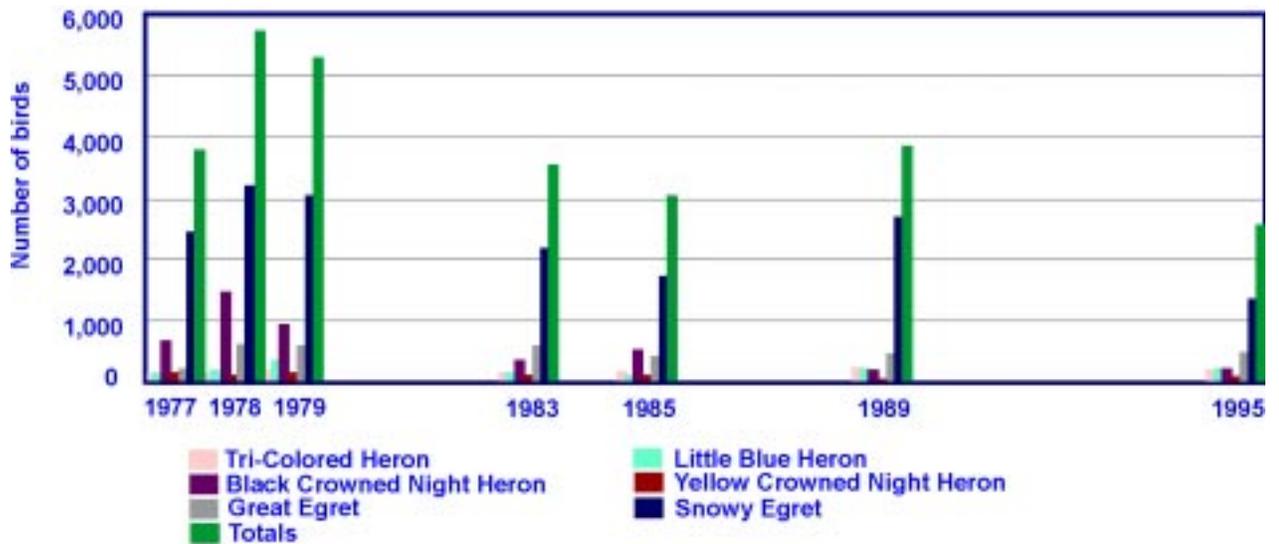
Nesting Water Birds

INDICATOR

31

Nesting Water Bird Populations

Population of nesting colonies of water birds: Decreasing



Importance

Our populations of American egrets, night herons, and other water birds are declining. Water birds are generally 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 that the species 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, including excessive human disturbance or disruption. Their decline alerts us to many environmental problems, from

pollution to habitat loss. They are good indicators of toxics because they are long-lived, feed high on the food chain, and are reproductively sensitive. As a result, they are a “plural indicator species.” Declining populations of indicator species can indicate an ecological unraveling that 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 back bays, lagoons, and marshes of our state and to participate in the tradition of experiencing nature.

Knowledge gaps

These data account for a small number of species in a small section of New Jersey. We 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. A clearer understanding of the factors involved in water bird population decline would also be useful. Additional data are needed for this indicator, as this survey has not been conducted since 1995. However, resources to update the data are being pursued.

Things to think about:

- Water birds such as 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 both from habitat loss, which may not be possible to reverse, as well as from human disturbance, excessive predation, and possibly exposure to contaminants and pesticides, which may be reversible.
- Water birds nest in large colonies and thus need large undisturbed areas for nesting and breeding.

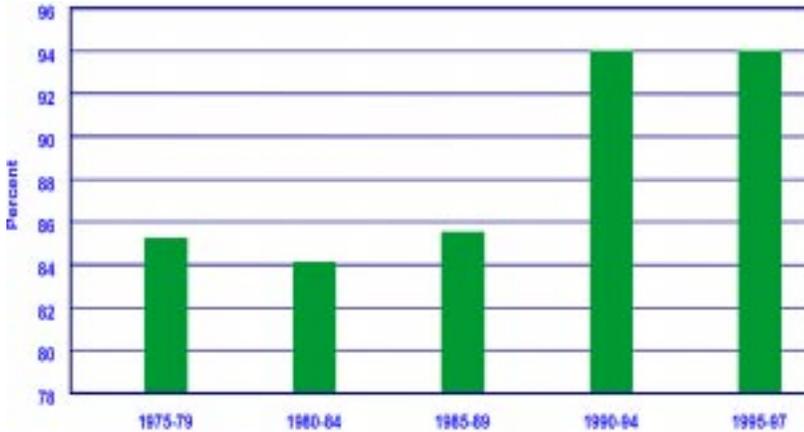
DATA SOURCE: NJ DEPARTMENT OF ENVIRONMENTAL PROTECTION

INDICATOR

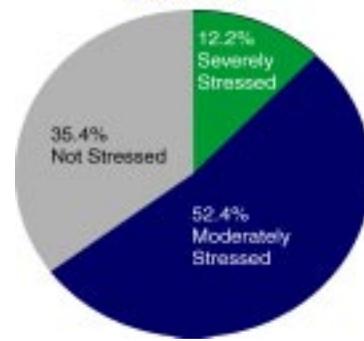
32

River Health/Dissolved Oxygen

Percent of testing stations reporting acceptable levels of dissolved oxygen: Little recent change



Biological Conditions in NJ Rivers (1992-1996)



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.” Severe eutrophication can kill fish and other species and change the ecological balance of 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 higher adjacent to healthy bodies of water.

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 may have the most polluted rivers.

Environmental

Rivers are particularly important ecosystems. They matter not only to a wide range of freshwater fish

Things to think about

- New Jersey’s great cities, including Trenton, 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.
- River levels of dissolved oxygen have improved dramatically in New Jersey over the last 20 years due to improvements in wastewater treatment. Continued improvement will require improved management of nonpoint source runoff from suburban development and farming.
- 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. For example, fertilized suburban lawns contribute to the excessive nutrients that pollute New Jersey’s water.
- Another method of assessing the health of the aquatic life in New Jersey’s rivers had shown that approximately one-third of the tested rivers are not stressed, approximately one-half are moderately stressed, and 12 percent are severely stressed. Recent resampling (1997-1999) of many of these rivers has shown little change in most retested areas.

Knowledge gaps

The dissolved oxygen indicator does not tell us everything about river quality. In addition, relatively insignificant changes in the amount of oxygen can occasionally cause a station to drop below acceptable levels, yet the river may not truly be impaired. It is necessary to have data on river health that are consistently collected and carefully analyzed to provide a complete picture of water quality and biological health.

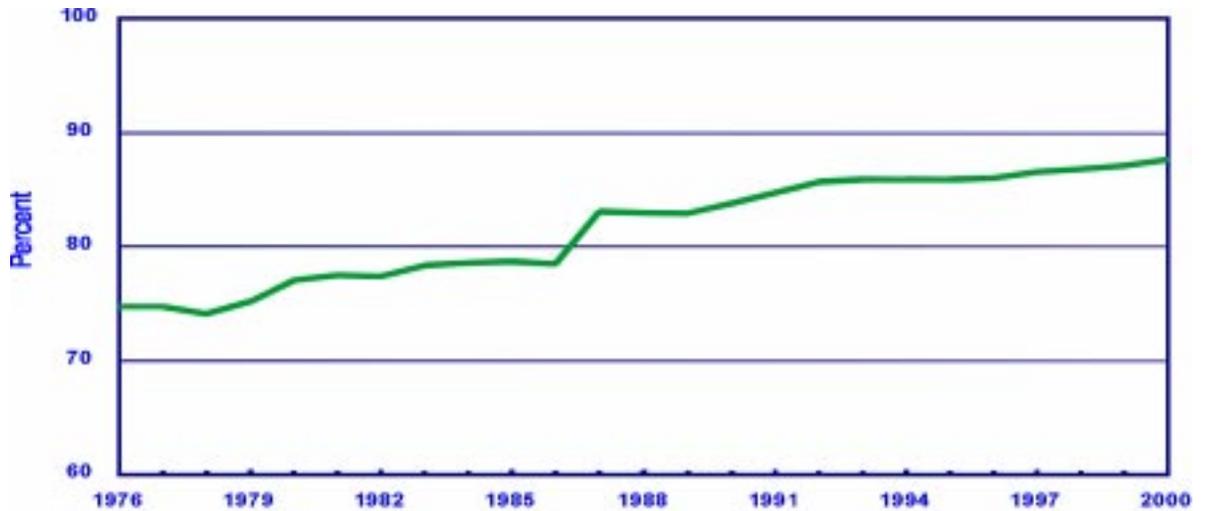
Note: See the Technical Appendix for a change in this indicator since the 1999 Sustainable State Project Report.

INDICATOR

33

Marine Water Quality

Percent of shellfish habitat safe for harvesting: Increasing



Importance

Shellfish are a very sensitive indicator of pollution because they eat by filtering whatever is floating in the coastal waters where they live. 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 the chart above shows, New Jersey has been successful in upgrading coastal water quality and opening up more areas for shellfish harvesting. In each of the past twelve years, we have been able to open up more acres of shellfish for harvest.

Economic

As a coastal state, marine resources are important to New Jersey's economy. We have a vibrant commercial fishing industry, of which shellfish are a part. The commercial and sport fishing industries rely on clean water just as much as the shellfish industry. Water quality and fresh shellfish 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 preserves an important part of our heritage.

Things to think about

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

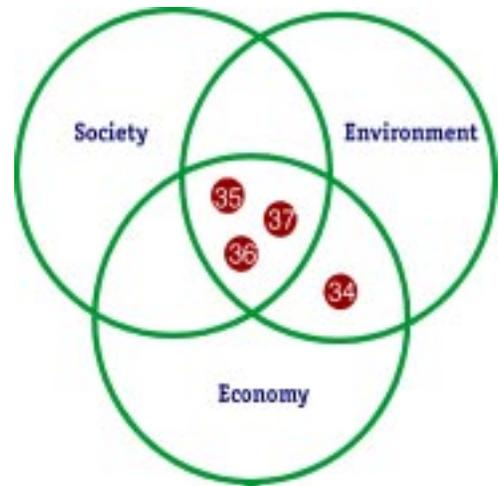
Knowledge gaps

In general, our information concerning the health of marine ecosystems is poor. We still know little about ocean ecosystems and our many effects on them. We need a greater understanding of how pollutants enter our coastal waters, particularly from non-point sources such as stormwater runoff. We also need scientific study of how these substances affect marine ecosystems.

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 as much as 39 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	56
35 Farmland decreasing.....	page	57
36 Beach closings decreasing.....	page	58
37 Preserved and developed land both increasing.....	page	59

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 full extent of the actual quality and quantity of our natural water supply.
- The amount of energy we use, and that 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

INDICATOR

34

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 creation and consumption of energy. Perhaps the most troublesome aspect of our energy dependence is that most of our energy comes from burning fossil fuels like coal, oil, and gas 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, especially transportation, 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

The combustion of coal, oil, or natural gas by power plants, motor vehicles, and other sources emits greenhouse gases that contribute to global warming. Most air pollution is the result of some kind of energy produc-

tion or consumption. In addition, the extraction and use of these sources of energy can radically alter local landscapes, and sometimes leads to oil spills in the ocean or accidents at power plants. There is not yet an accepted long-term solution for safe disposal of radioactive waste from nuclear power plants.

Social

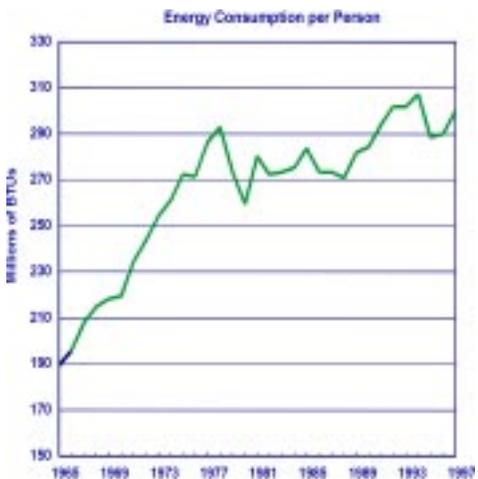
New Jersey is a major recipient of – and contributor to – air pollution. Just as pollution from upwind neighbors angers us, the pollution we emit angers our neighbors when it crosses into their states and countries. To voluntarily reduce the energy we consume will require cooperation among neighbors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

Knowledge gaps

We do not yet have widely released, assessed, or accepted data on the percentage of our energy that comes from renewable, clean, or sustainable sources. As a result of energy deregulation, new data are becoming available through a new reporting requirement that provides consumers with a standard set of information about the environmental characteristics of energy they purchase.

Things to think about

- Approximately 33 percent of the energy we consume in New Jersey is used for transportation.
- New and renewable sources of energy, such as wind and solar power, offer us impressive potential to pollute less while still living in whatever ways we choose. However, to reap these 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.



Farmland

Total acres of farmland in New Jersey: Decreasing



Farmland

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 economically viable requires large continuous

blocks of farmland. 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 with too many strip malls will stand at a disadvantage.

Environmental

Crops and farmland offer habitat for birds, other wildlife, and a host of insects and small creatures that perform functions like pollination and decomposition. Farmlands, when worked respon-

sibly, filter pollutants from the water and air, and even play a role in increasing 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 as the state loses its agricultural landbase. 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 1998, only 7 percent of the state's farmland had been preserved from development. The other 93 percent remains open to future development.
- Despite existing farmland preservation programs, other alternatives are needed for landowners who often face financial pressure to sell their farmland to commercial developers. They should have better incentives to sell it instead to other farmers, government, or to preservation groups.
- The sprawl created by subdivisions in former farming areas contributes to traffic congestion, longer drives, and air pollution.
- In 1998, New Jersey voters overwhelmingly passed a referendum to spend \$98 million per year for the next ten years to preserve one million acres of the state's remaining open space and farmland.

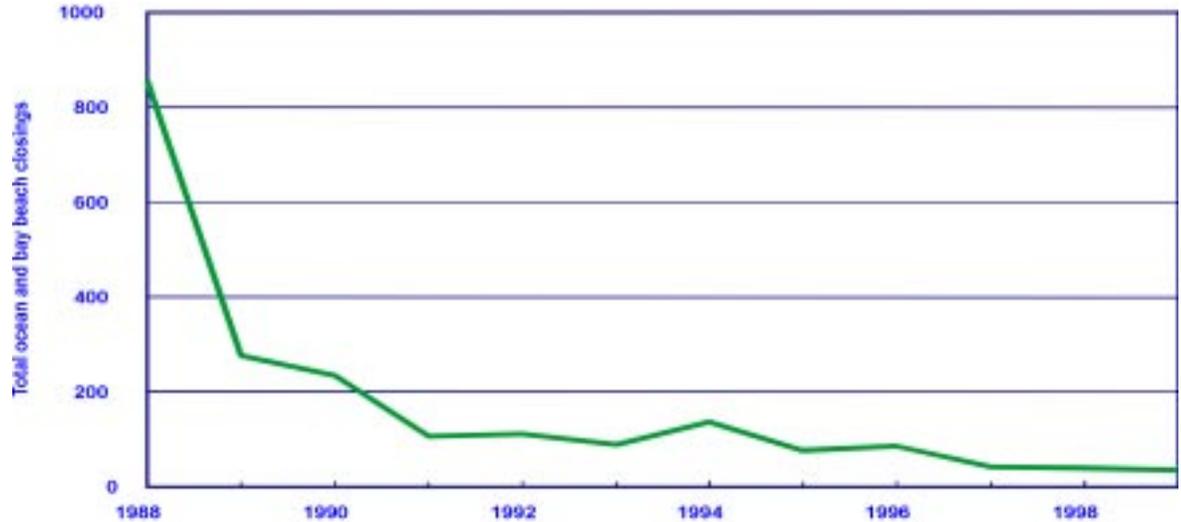
Knowledge gaps

This indicator shows the amount of farmland, but not economic viability. We also have little data on the percent of our local and total food production, or other agricultural production, that comes from unsustainable and fossil-fuel dependent methods of farming.

INDICATOR
36

Beach Closings: Ocean and Bay

Number of times per year a New Jersey beach has been closed to the public due to unhealthful 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 nonpoint source pollution, typically due to runoff from streets and lawns. Less frequently, failures in sewage collection and treatment systems occur and may result in beach closings.

Economic

Beach closings are highly visible events that can drive away potential visitors and reduce the large revenues that are otherwise generated by coastal tourism. They tarnish the general reputation of our state, hurting our chances to attract new jobs and businesses.

Environmental

Extended beach closings represent serious incidents of pollution mainly due to elevated levels of fecal coliform from wildlife and

stormwater runoff. Beaches are closed when conditions are detected that may be unhealthful for humans. No closings have been attributable to floating debris since 1990.

Social

Many families have gone to the beach every summer for generations. The beach provides recreation for people of all ages. Beach closings 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-related discharges, ocean and bay beach 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 comprehensive monitoring than most.
- 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 and we need to be diligent about protecting our coastal waters.

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. Although the monitoring performed for recreational bathing is very comprehensive, it does not include all contaminants. Ecosystems can be affected by lower levels of pollution and by factors that are not threats to human health.

Note: See the Technical Appendix for a change in the description of this indicator since the 1999 Sustainable State Project Report.

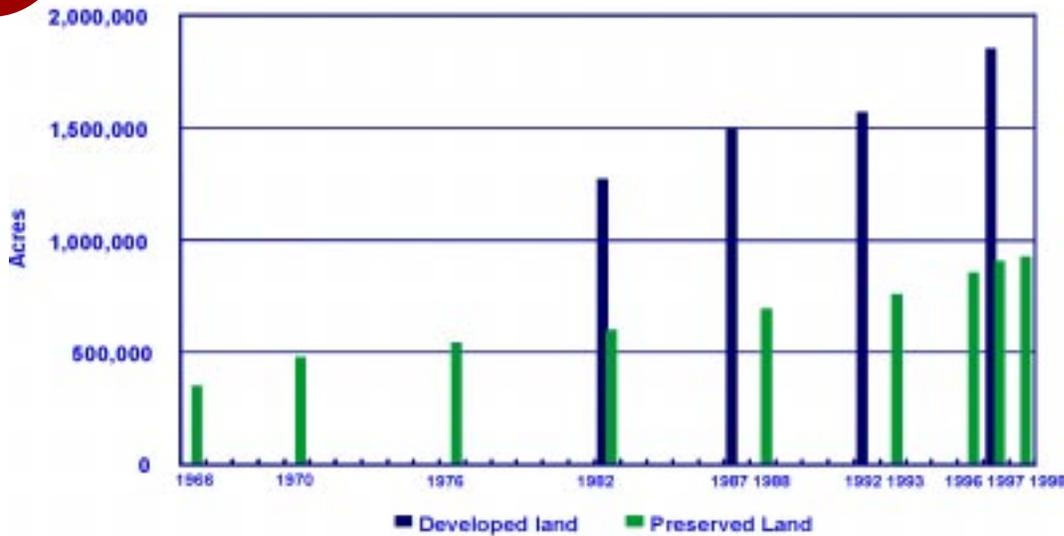
DATA SOURCE: NJ DEPARTMENT OF ENVIRONMENTAL PROTECTION

INDICATOR

37

Preserved and Developed Land

Cumulative 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 that developed land is increasing, 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 tax revenues, allowing municipalities to 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. Poorly planned 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. While all new roads and

development can have these impacts, good planning and land preservation can ameliorate some of the concerns. Land preservation offers a refuge for people, cleans our air and water for free, and provides habitat for a wealth of species.

Social

How do you value a place where a child has room 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.
- In 1998, New Jersey voters overwhelmingly passed a referendum to spend \$98 million per year for the next ten years to preserve one million acres of the state’s remaining open space and farmland.
- As our population grows and undeveloped land becomes more scarce and more expensive, it becomes increasingly difficult to preserve open space for future generations. They may place a higher value on preserving open space than we do, but their options for preservation will be fewer than ours. Less land will be available, so the prices they will have to pay will be higher.

Knowledge gaps

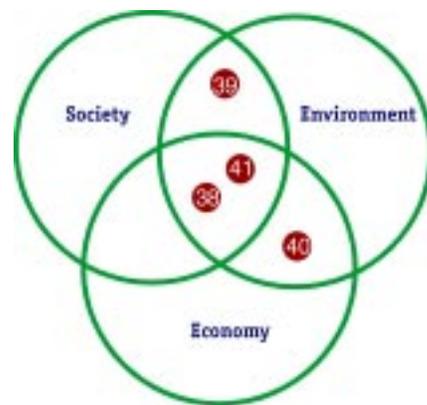
This indicator does not tell us about the ecological richness and value of the land that is preserved. We also cannot see whether we have preserved a full cross-section of New Jersey’s native habitats and ecosystems.

Preserved & Developed Land

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 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 “Superfund” waste sites than any other state. Pollution has driven investment away from our inner cities and has contributed to illness and rising health care costs throughout the state.



What we know

38	New Jersey’s greenhouse gas releases recently increasing	page 61
39	Drinking water quality shows little change	page 62
40	Total solid waste production recently leveling off	page 63
41	Air pollution decreasing	page 64

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 risks 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

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



Importance

Global warming is considered by many to be one of the most significant environmental threats to the future of modern civilization. Most of it is caused when gases released by human activities, particularly burning oil, coal, and gas, accumulate 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 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 and affect future drinking water supplies. New Jersey could become more vulnerable to hurricanes, floods, new pests, and diseases migrating north from tropical places. Reducing greenhouse gas (GHG) emissions before the full effects are felt presents economic challenges and opportunities.

Environmental

If some 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 will lead to invasions of exotic species that will displace native wildlife and become carriers of 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. The United States is the largest greenhouse gas emitter in the world. Other countries have begun to express significant anger toward our country because our emissions cause problems with which they will have to deal.

Things to think about

- New Jersey represents approximately 0.1 percent of the world's population, yet generates approximately 0.5 percent of the world's GHG emissions.
- The longer we wait to act to address global warming, the more difficult and costly it will be. Prevention, as always, is the least expensive solution.
- There are a number of near term and very cost effective options for minimizing and controlling GHG emissions. Examples include cars that get more miles per gallon and compact fluorescent light bulbs that save electricity, which are available now to help us save energy.
- The majority of land in our state is not very high above sea level. Most of South Jersey is low-lying coastal plain.
- Since we can now purchase our electricity in the same way we purchase phone service, one of the most important things we can do as individuals is buy "green" power - that is, the electricity generated from renewable sources and sources with the lowest environmental impacts.

TARGET

(from NJDEP Administrative Order 1998-09, 1998 NJDEP Strategic Plan, NEPPS FY 99/00 Performance Partnership Agreement, NJ Sustainability Greenhouse Gas Action Plan):

By 2005, reduce GHG emission levels to 3.5% below 1990 levels
(Baseline = 136 million tons of carbon dioxide equivalents in 1990)
1997 level: 155 million tons

Knowledge gaps

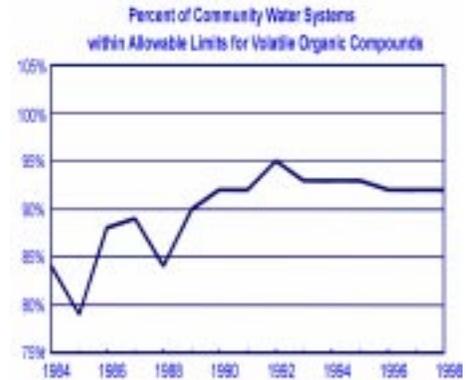
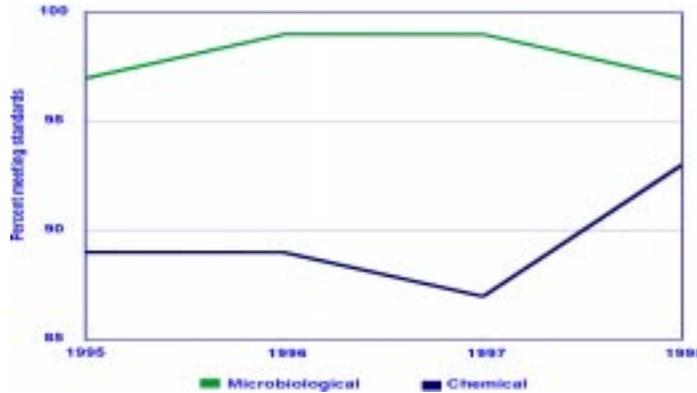
A large majority of scientists believe that global warming and climate change is happening. However, we do not know how serious the effects may be or what reductions in greenhouse emissions are necessary to prevent global warming. These data are only estimates and will vary from actual emissions.

INDICATOR

39

Drinking Water Quality

The percent of community drinking water systems with no violations of any microbiological and chemical contaminants: Little change



Importance

In New Jersey we are blessed with abundant water supplies and drinking water systems that protect us from many of the chemicals, radiological contaminants, bacteria, viruses, and parasites that affect the health of people in many other parts of the world. However, regular testing of drinking water is necessary to protect the safety of our water supplies. This indicator tells us what percent of our community water supplies met all drinking water safety standards. Since 1995, the number of community water systems that met all safety standards has remained between 97 and 99 percent for microbiological standards and between 87 and 93 percent for chemical standards. The number of community water systems testing within allowable limits for volatile

organic compounds has increased from a low of 78 percent in 1985 to 92 percent in 1998. Sources of contamination in drinking water supplies are industrial pollution of groundwater, urban and agricultural runoff, and industrial discharges into surface water supplies.

Economic

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

Environmental

Water supplies that do not meet safety standards for people may also contain chemicals that can harm ecosystems and sensitive wildlife such as frogs, whose populations have declined substantially in recent years. Clean water and a pollution-free environment are as vital to our ecosystems as they are to our health.

Social

A safe and stable water supply is a foundation for any civilization and is important to New Jersey's communities. Residents of many New Jersey towns have concerns about the health of their water systems and are seeking new ways to learn about the quality of their drinking water. Access to a healthy water supply is essential to the well-being of our communities.

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.
- Drinking water is not regularly tested for all possible contaminants. Approximately 90 microbiological, radiological, and chemical contaminants are monitored in New Jersey's drinking water supplies.
- Treatment processes have become more rigorous, due in part to the fact that more chemicals and contaminants are now regulated than ever before.

TARGET

(from NEPPS FY99/00 Performance Partnership Agreement):

By 2005, 95% of the public water systems will provide water that meets the microbiological and chemical drinking water standards.

(NOTE: target is being met for microbiological standards for community water systems):

Current level (microbiological): 97%
Current level (chemical): 93%

Knowledge gaps

The contaminants measured here are only a portion of the known drinking water contaminants suspected to be detrimental to human health. Research is currently underway to identify additional contaminants of importance in drinking water supplies. The data do not include the test results from more than 4,000 non-community water systems in New Jersey. Noncommunity water systems do not serve permanent residents and include office buildings and highway rest stops.

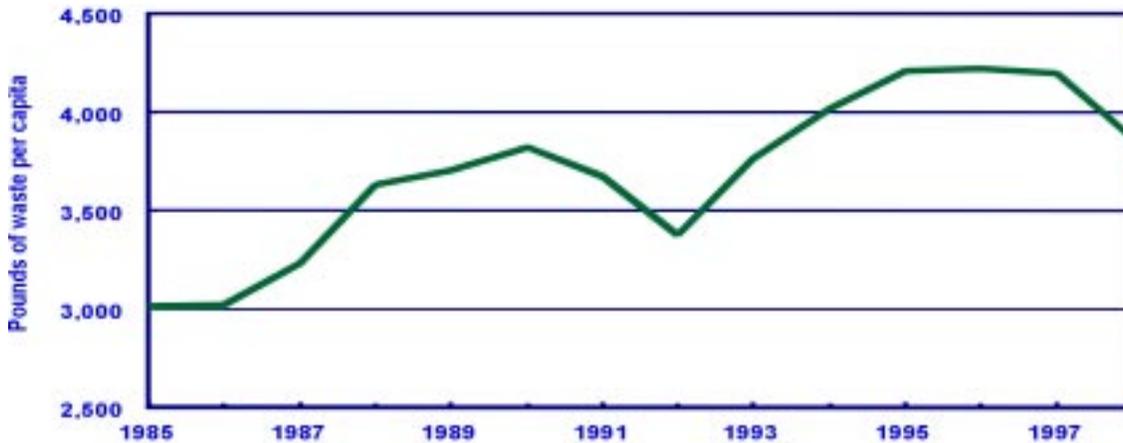
Note: In the 1999 Sustainable State Project Report, the primary graph for this indicator showed the percentage of water systems testing for volatile organic compounds (17 contaminants) that met the drinking water standards. It is shown here as a secondary indicator. In this report, the primary graph shows compliance with all chemical and microbiological standards for drinking water.

INDICATOR

40

Total Solid Waste Production

Pounds of solid waste generated annually, per New Jersey resident: Recently leveling off



Importance

New Jerseyans generate about two tons of garbage per person every year. 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 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 with the most efficient manufacturing processes. True efficiency means wasting little and avoiding purchase of costly materials and energy in the first place.

Environmental

We dispose of our waste by burying it in landfills or burning it in incinerators. This can result 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 potential health risks of pollution from incinerators and landfills. Anecdotal evidence indicates that 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 1990s. But instead, since 1985 each of us has on average increased our waste by more than 1,000 pounds.
- 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.”



TARGET

For Recycling Rate

(from 1998 NJDEP Strategic Plan & NEPPS FY99/00 Performance Partnership Agreement):

By the end of the year 2000, achieve and maintain recycling rates of 65% of the total solid waste stream (and 50% of the municipal waste stream).

Current level (1998): 56% of the total solid waste stream recycled.

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 from extraction through production to disposal or re-use. Such information is mostly unavailable.

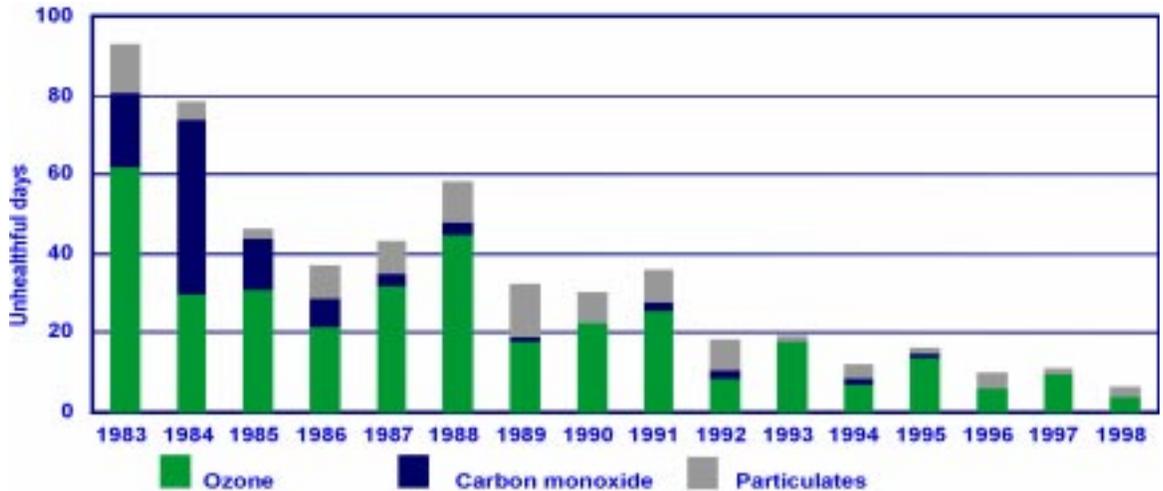
Solid Waste Production

INDICATOR

41

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 among the worst in the country for ground-level ozone. Ground-level ozone is the main component of smog, a chronic air quality problem with serious health effects in our state. "Particulate matter" (PM) 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. Absenteeism caused by air pollution impacts school children and workers. 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. Air pollution can also have other economic effects such as crop damage or degradation of art, statues, buildings, and other materials.

Environmental

Poor air quality is a generally recognized public health threat. It is linked to significant long- and short-term health problems. These can include an increased incidence of asthma attacks, heart disease, and cancer risk. 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 cars traveling on 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. Some forms of air pollution also cause a loss of visibility or can cause unpleasant odors that undermine our quality of life. Air pollution can be concentrated in low-income and minority areas and, if so, represents an inequity in our society.

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 direct control of our citizens or our state government. However, New Jersey has been a leader in trying to coordinate regional air pollution control efforts.
- Ozone levels are strongly affected by weather conditions. Hot, sunny, windless days tend to exacerbate the ozone problem. The relatively cool summer of 1998 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 1998.

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 ozone. This indicator does not measure all problem air pollutants.

TARGETS:

(From 1998 NJDEP Strategic Plan & NEPPS FY99/00 Performance Partnership Agreement)

- * By 2007, attain the 1 and 8 hour standards for ozone statewide.
- * By 2007, maintain current attainment for PM10 – inhalable particulate matter – and attain the standard for PM2.5 – fine particulate matter.

GLOSSARY

Abbott Districts: The New Jersey Supreme Court ordered that educational funding for 30 poor urban districts must be assured at the level of the property-rich districts; that such funding could not depend on the ability of local school districts to tax but must instead be guaranteed by the State; and that the level of funding must also provide for their special educational needs to achieve the constitutionally required thorough and efficient education.

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 quantitative reference point that will be officially adopted through the Sustainable State public process for each indicator, which will operationalize the goal and against which indicators can be compared in any given year. Often confused with Indicator and Target.

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 Gro 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 measure of energy. Specifically, one BTU is the amount of energy required to raise the temperature of one pound of water one degree Fahrenheit. One BTU = 0.293 watt hours = 1054 joules.

Community Water System: A water system that regularly serves at least 15 service connections or 25 year-round residents. Examples of community water systems include cities, towns, and mobile home parks.

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 ecological system, a natural unit of living and nonliving components that interact to form a system in which a cyclic interchange of materials takes place between living and nonliving units. (from *Dictionary of Biology*, Edwin Steen)

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 intervention to protect 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.

NEPPS: National Environmental Performance Partnership System. State-Federal partnership system designed to foster identification of state environmental priorities and goals and to allow states to better direct federal resources to address those priorities through the use of environmental indicators as measures of progress in environmental quality. New Jersey was one of the first states in the nation to implement this environmental management system and is currently engaged in its third plan with the US Environmental Protection Agency.

Noncommunity water system: Noncommunity water systems do not serve permanent residents. There are two types of these systems: transient noncommunity systems and nontransient noncommunity systems. A transient noncommunity water system serves at least 25 people per day, but the people are different each day (e.g., highway rest stop, motel). A nontransient noncommunity water system serves at least 25 of the same persons over 6 months a year (i.e., office building, school).

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.”

Particulate matter: Particulate matter is the general term used for a mixture of solid particles and liquid droplets found in the air. These particles originate from many different stationary and mobile sources as well as from natural sources. They range in size from about 0.005 micrometers to 50-100 micrometers in diameter (a human hair is approximately 70 micrometers in diameter). Particles smaller than 10 micrometers (PM10) can be inhaled into the lungs and particles smaller than 2.5 micrometers (PM 2.5) are thought to have the greatest impact on human health.

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 relationships among people, their Culture, and their Environment.

Species: A biological classification referring to a group of organisms that share similar traits and genetic codes and that 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 implicit 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*.)

System: A set of actors or entities bound together by a set of rules and relationships 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).

Target: A desired level of achievement. In this report, some of the indicator pages include quantitative targets adopted by state agencies through public processes; these are considered ambitious yet achievable performance levels.

Vehicle Miles Traveled (VMT): A unit to measure vehicle travel made by a private vehicle, such as an automobile, van, pickup truck, or motorcycle. Each mile traveled is counted as one vehicle mile regardless of the number of persons in the vehicle.

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 very large.

Wetlands Loss: In this report, wetlands loss is defined as conversion of wetlands to other land types.

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A technical appendix for the indicators in this report will be available this winter at www.state.nj.us/dep/dsr.

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