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SCOPE OF THIS REPORT
The period covered in this North American Environmental Report is fiscal year 2003 (April 1, 2002 through March 31, 2003), and product model year 2003. If data are presented with different dates, this is clearly indicated. This report was published in November 2003.

This report discusses the environmental aspects of our products and processes, outlines environmental action plans to address them, and includes progress updates against those plans. We have structured this report to accord with the life cycle of our business, from design through manufacture and sales and distribution to end-of-life management. This year, we have broadened the scope of our report: 1) For the first time, we’ve expanded reporting on activity across the North American region — the United States, Canada and Mexico; and 2) we have published in hard copy and on the Web an English version of this report (using United States spelling), as well as electronically in French and Spanish.

In the United States, please go to www.toyota.com/environment or www.toyota.com. In Canada, please go to www.toyota.ca. A list of supplementary Web sites is provided in the back. A reader feedback form is provided on the Web and in this hard copy version. We listened to your comments and suggestions about last year’s report, and used them to improve this report. We would appreciate hearing from you again.

Cover: Toyota’s all new 2004 Prius hybrid passenger car, second-generation model of the world’s first mass-produced gasoline-electric automobile. The new model is bigger, more fuel-efficient, more powerful and offers faster acceleration than its award-winning predecessor.
Main: Team Member Jamie Laking gives the final touch to a new Toyota Matrix in the Paint Repair shop at Toyota Motor Manufacturing Canada, Inc., Cambridge, Ontario.
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DEAR READER

We are pleased to present our third annual Environmental Performance Report for Toyota North America. This year marks two significant advances in this report. For the first time, we’ve consolidated our North American activities into a single report covering the United States, Canada and Mexico. In addition, we have published the report in three languages — English, French (the Web only) and Spanish (the Web only). Reaching out in this way is a natural extension of Toyota’s Guiding Principles, which direct us to “respect the culture and customs of every nation.” We hope that more people than ever will enjoy access to the information contained in this report and develop a better understanding of Toyota and our continuing efforts to reconcile the automobile with society.

This report outlines our progress against our environmental goals during 2003, and it provides many new goals we’re setting for the future. Here are some key highlights from each stage of our business:

DESIGN AND DEVELOPMENT

For the 2003 model year, the fuel efficiency of our products once again outperformed the industry as a whole in both the United States and Canada. Federal government agencies recognized four different Toyota models for their class-leading fuel efficiency. This year also marked a milestone in Toyota’s development of advanced technology vehicles as we introduced the first fuel cell vehicle lease program in California, and we introduced the all-new, larger and more powerful Toyota Prius, further cementing both our commitment to and leadership in hybrid technology.

MANUFACTURING

We continued excellent progress in our key environmental performance areas, achieving a 25 percent per unit reduction in landfill waste disposal and a 12 percent per unit reduction in water usage. Additionally, due to our substantial progress towards meeting some of our existing targets, we have developed new, more challenging five-year (FY 2006) targets for air emissions and landfill waste.

SALES AND DISTRIBUTION

We are pleased to report that as of June 2003, Toyota’s cumulative global sales of the Prius topped 120,000 units, with 46 percent of those sales in North America. We are also making strides in working to reduce the impact of our sales and distribution business itself. On April 22, 2003, the new South Campus expansion to our U.S. sales and distribution headquarters in Torrance, California became the largest project to date to receive the United States Green Building Council’s Gold LEED™ award — LEED Stands for Leadership in Energy and Environmental Design.

END-OF-LIFE/RECYCLING

Toyota issued its “Toyota Recycle Vision,” a set of guidelines for Toyota’s global recycling activity, which renews our commitment to minimizing the environmental impact of our products at the end of their useful life. We also launched two new products this year, the 2004 Sienna minivan and Camry Solara coupe, which employ alternative materials to selected Substances of Concern that were used in prior generations of those vehicles.

STAKEHOLDERS

Toyota is committed to making positive contributions to society through partnerships with organizations dedicated to preserving the environment. For the fourth consecutive year, Toyota was the title sponsor of National Public Lands Day, the largest one-day volunteer cleanup of our nation’s parks. We also sponsored the first ever Canadian Environmental Awards, supported tree-planting initiatives through The National Arbor Day Foundation in the United States, and the planting of indigenous species through Evergreen in Canada. Our North American facilities participated in these and other environmental activities in their local communities.

Over the past decade, the auto industry has become truly global. Consolidation has served to speed the development of technology while providing personal mobility to hundreds of millions of people around the world. The potential for greater mobilization in developing nations will provide further opportunity for continued growth. If we take substantial and aggressive action to manage this growth in a beneficial and sustainable way, working with governments, communities, environmental groups, customers, suppliers, shareholders, our associates and the public, the automobile will continue to benefit people worldwide.
A Message from Our Leaders

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The Toyota Leadership, from left to right: Dennis C. Carmo, Senior Vice President, Toyota Motor Manufacturing, North America, Inc.; Atsushi “Art” Niimi, President and Chief Executive Officer, Toyota Motor Manufacturing, North America, Inc.; Toshiaki “tag” Taguchi, President and Chief Executive Officer, Toyota Motor North America, Inc.; James R. Olson, Senior Vice President, Toyota Motor North America, Inc.; Yutaka Funo, President and Chief Executive Officer, Toyota Motor Sales, U.S.A., Inc.; James E. Press, Executive Vice President and Chief Operating Officer, Toyota Motor Sales, U.S.A., Inc.; Stephen Beatty, Managing Director Toyota Canada Inc.; Tadashi “George” Yamashina, President, Toyota Technical Center, U.S.A., Inc.; and David R. Baxter, Vice President, Toyota Technical Center, U.S.A., Inc.
Toyota is the world’s third-largest automotive manufacturer and the tenth-largest company in the world. In North America, we are the fourth-largest automaker, building and selling vehicles under the Toyota, Lexus and Scion brands. In 2002 our sales exceeded 1.94 million units, the best sales performance in our 45-year presence in the region. Cumulatively, we have sold over 30 million vehicles in North America during this period. For the third consecutive year, Lexus was the best-selling luxury brand in the United States; the Camry was the best-selling car in the United States for the fifth time in six years.

Overall, Toyota’s North American operations impact society, the environment and the economy. In order to achieve long-term success in those three key areas, we need to gain and retain the trust of all our stakeholders, including employees, customers, shareholders, local communities, suppliers and dealers, governmental and non-governmental groups.

In this section, we present selected economic and operational data and information for our readers. For more comprehensive information about our overall operations, please visit our Web site at: www.toyota.com/about/operations/index.html.

“Automakers have both opportunity and obligation to take substantial action to develop technologies that will protect the earth.”
— Toshiaki “Tag” Taguchi, President and Chief Executive Officer, Toyota Motor North America, Inc.
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TOYOTA BY THE NUMBERS

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
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<tbody>
<tr>
<td>Direct North American Employment</td>
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<tr>
<td>Direct North American Payroll</td>
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<td>Dealer Employment</td>
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<td>North American Supplier Employment</td>
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<td>Direct North American Investment</td>
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<td>Cumulative North American Production</td>
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<td>North American Vehicle Sales (2002)</td>
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<td>U.S. Parts/Materials Purchasing (FY ending 03/02)</td>
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<td>North American Toyota, Lexus Dealers</td>
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<tr>
<td>Total U.S. Philanthropy (since 1991)</td>
<td>$195,721,923</td>
</tr>
</tbody>
</table>

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As our employee base grows, so does our direct payroll commitment, which is now more than $2 billion. In addition, we have approximately 55,000 North American suppliers, and last year we purchased nearly $15 billion of parts and materials from them. This investment in people is paralleled by our overall investment in new and continuing operations. Our cumulative North American investment through calendar year 2002 was more than $13.7 billion (see Figure D). This commitment to regional investment in people and operations is a hallmark of Toyota as a global company.

Toyota’s economic and social investment in North America has climbed steadily over the years. Last year, our North American plants produced 1.2 million cars and trucks, one million engines, 361,000 transmissions and many parts and components. The growth in our North American sales and production is shown in Figure E. At this time, we produce about 60 percent of what we sell here. We now build nine different Toyota cars and trucks in North America.

Toyota’s corporate culture reaches back to its founding as a company. Employees are expected to exercise humility in their work, while at the same time being competitive. Our internal corporate code expects every Toyota employee to:

- Hate waste and revere efficiency;
- Never be satisfied with the status quo;
- Respect the individual, but use the power of teamwork;
- “Go and see” because true understanding requires first-hand experience;
- Adapt to the responsibilities of citizenship wherever we do business.

One example of how we adapt to local responsibilities as citizens is in our new diversity initiative in the United States (see sidebar).
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Toyota Credit Canada Inc. — Headquartered in Scarborough, Ont. Began operation in 1970.


Toyota Motor North America, Inc. — Headquartered in Gardena/Torrance, Calif. Also assembled at TMMC. Production of the Lexus RX 330 began in September 2003 as Camry Solara production shifts also assembled at TMMC. Production of the Lexus RX 330 began in September 2003 as Camry Solara production shifts.


Toyota Motor Manufacturing, Baja California, S. de R.L. de C.V. — Manufacturing plant in Mexicali, Baja California, Mexico. Established 1995.


"We have a long history of concern for the environment, and are actively seeking ways to meet the growing transportation needs of society in ways that are less harmful to our Earth."

— Kenji Tomikawa, President and Chief Executive Officer, Toyota Canada Inc.
The automobile provides the mobility that is a principal means for people to achieve social and economic advancement. Currently, there are approximately 740 million automobiles in use worldwide. Yet, with a current global population of more than 6.1 billion people, we are facing a period of potentially rapid increases in the demand for automobiles. The business opportunity is great, but the potential impacts on fossil fuel resources and increasing carbon dioxide emissions are also significant. If the automobile industry continues to meet growing demand by simply making more cars, as we do today, it will surely serve to exacerbate these environmental impacts. Toyota is aware of these issues and considers environmental preservation and environmental management to be key business issues.

**TOYOTA’S GUIDING PRINCIPLES**

*ADOPTED JANUARY 1992, REVISED APRIL 1997*

- Honor the language and spirit of the law of every nation and undertake open and fair corporate activities to be a good corporate citizen around the world.
- Respect the culture and customs of every nation and contribute to economic and social development through corporate activities in local communities.
- Dedicate ourselves to providing clean and safe products and to enhancing the quality of life everywhere through our activities.
- Create and develop advanced technologies and provide outstanding products and services that fulfill the needs of customers worldwide.
- Foster a corporate culture that enhances individual creativity and teamwork value, while honoring mutual trust and respect between labor and management.
- Pursue growth in harmony with the global community through innovative management.
- Work with business partners in research and creation to achieve stable, long-term growth and mutual benefits, while keeping ourselves open to new partnerships.

"The expansion of automobile use will have a significant impact on society. The companies that will succeed will be those that promote environmental technology. This is one of Toyota’s key social responsibilities."

— Fujio Cho, President, Toyota Motor Corporation, Chairman, Toyota Environment Committee 2003


**I. Basic Policy**

1. Contribute toward a prosperous 21st century society
   - Aim for growth that is in harmony with the environment, and set a challenge to achieve zero emissions throughout all areas of business activities.

2. Pursue environmental technologies
   - Pursue all possible environmental technologies, developing and establishing new technologies to enable the environment and economy to coexist.

3. Take action voluntarily
   - Develop a voluntary improvement plan based on thorough preventive measures and compliance with laws, that addresses environmental issues on global, national and regional scales, while promoting continuous implementation.

4. Work in cooperation with society
   - Build close and cooperative relationships with a wide spectrum of individuals and organizations involved in environmental preservation, including governments, local municipalities and related companies and industries.


1. Always be concerned about the environment
   - Work toward achieving zero emissions at all stages, i.e., production, utilization and disposal:
     - Develop and provide products with top-level environmental performance;
     - Pursue production activities that do not generate waste;
     - Implement thorough preventive measures;
     - Promote businesses that contribute toward environmental improvement.

2. Business partners are partners in creating a better environment
   - Cooperate with associated companies.

3. As a member of society
   - Actively participate in social actions.
     - Participate in creation of a recycling-based society;
     - Support government environmental policies;
     - Contribute to non-profit activities.

4. Toward better understanding
   - Actively disclose information and promote environmental awareness.

Main: Team members at Toyota Motor Manufacturing, Alabama, Inc., review zero waste-to-landfill documents during environmental training.
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**TOYOTA’S EARTH CHARTER (APRIL 2000)**
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II. Action Guidelines
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   Work toward achieving zero emissions at all stages, i.e., production, utilization and disposal.
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ENVIRONMENTAL GOVERNANCE AND MANAGEMENT

Responsibility for environmental governance and management generally rests with each Toyota North American company. In addition, the North American Environmental Committee, a unified group referred to within Toyota as the NAEC, serves as a high-level coordinating forum across North America. The committee comprises one top executive from each North American company, as well as key executive coordinators from Toyota Motor Corporation. In some instances, issues requiring input or approval from Toyota's most senior executives are brought before Toyota's North American Planning Meeting (See Figure G).

Over the past year, we have made some changes to NAEC in order to improve its effectiveness. First, we formed a Steering Committee to serve as the planning body for the NAEC and to administer to its various internal working groups. The Steering Committee comprises a Secretariat; the leader of each internal working group; and the environmental action plan manager from each company. The Steering Committee has the flexibility to meet more frequently than is possible for the full NAEC, and can thus ensure progress and communication on an almost ongoing basis. Second, we created a working group specifically charged with developing and coordinating affiliate environmental action plans and publishing this report. Action plans continue to be implemented at the affiliate level, but this new working group will ensure a more cohesive overall strategy among the affiliates.

We discontinued the Stationary Source Working Group under the NAEC, as we found the committee structure within the manufacturing plants was better able to manage issues arising at those facilities.

The Toyota Environmental Action Plan is a medium-to-long-term plan that summarizes our environmental goals and targets. It sets five-year goals and targets designed to help us reach Toyota’s higher-level environmental mission and vision as expressed in the Earth Charter and Guiding Principles. Our five-year goals are in turn translated into annual affiliate environmental action plans, each with its own supporting goals and targets. We provided a combined North American Action Plan in last year’s environmental report and we provide it here again. We have achieved some targets and created other targets (see page 15).
ENVIRONMENTAL IMPACT OF THE AUTOMOBILE ACROSS ITS LIFE CYCLE

Automobiles impact the environment during all of their life cycle stages, from extraction of raw materials to parts manufacturing, vehicle assembly, delivery logistics, consumer use and end-of-life management. Perhaps the most challenging of these impacts is the contribution of automobiles to the levels of human-generated greenhouse gases. Toyota believes that it is prudent to reduce all emissions, including greenhouse gas emissions, from our plants, products and processes.

Beginning in 2005, Toyota will employ a comprehensive environmental impact assessment system, called Eco-Vehicle Assessment System. Throughout the vehicle development process, our engineers will use this system to make a methodical assessment of a vehicle’s environmental impact during its entire life cycle.

This report is arranged so as to correspond to these life cycle stages.

**Life Cycle I: Development and Design**

**Life Cycle II: Manufacturing**

**Life Cycle III: Sales, Distribution and Service**

**Life Cycle IV: Recycling End-of-Life Vehicles**

We also discuss Toyota’s other environmental and social contributions.

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**OUR ENVIRONMENTAL ACTION PLANNING PROCESS**

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In order to provide an appropriate mix of vehicle choices that meet varying customer needs, government regulations, environmental objectives and local market conditions, we research and develop a broad array of technologies (see Figure H). The lynchpin of Toyota's future power train strategy in the foreseeable future is hybrid-electric vehicle technology. We are fully committed to hybrids as a vital part of our response to global warming and air quality concerns. Further, successful development of hybrid systems will facilitate an eventual migration to hybrid-electric fuel cell vehicle technology. This is because, in Toyota's case, the hybrid system used in our fuel-cell vehicle system is essentially the same as the hybrid system used in our gas-electric hybrid system (see Figure 1). The primary difference is that the conventional gasoline engine is replaced by the fuel-cell stack.

In order to be successful, a technology must deliver performance, value and sociability, among other factors. In many cases, such as hybrid-electric vehicles, we are able to meet these criteria and deliver advanced environmental technologies ahead of the competition. In some instances, despite our best efforts, technology does not live up to its expected performance or is not embraced by customers. For example, this past year we decided to discontinue the RA V4 Electric Vehicle was very low, making it impractical to continue sales. Nonetheless, we gained valuable market experience, and made advances in component systems such as electric drive motors and batteries that will undoubtedly contribute to Toyota's hybrid-electric vehicle development program.

### Toyota's Environmental Contributions

#### Environmental Communication
- Promote environmental communication with community and key organizations.

#### Enhance environmental communication activities in each region/country

#### Toyota's Environmental Contributions

<table>
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<tr>
<th>Environmental Contribution</th>
<th>FY2005 Action Plan Goals</th>
<th>Targets</th>
<th>Status*</th>
<th>Page Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Environmental</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communication</td>
<td>Promote environmental communication with community and key organizations.</td>
<td></td>
<td>O</td>
<td>See pg. 53</td>
</tr>
<tr>
<td>Enhance environmental communication activities in each region/country.</td>
<td></td>
<td></td>
<td>O</td>
<td>See pg. 55</td>
</tr>
</tbody>
</table>

#### FY2005 Action Plan Goals

<table>
<thead>
<tr>
<th>Category</th>
<th>Goal</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life Cycle I: Development and Design</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fuel Efficiency</td>
<td>Achieve top levels of fuel efficiency in all vehicle classes.</td>
<td></td>
</tr>
<tr>
<td>Emission Reductions</td>
<td>Meet Tier 2 and LEV II emission requirements.</td>
<td></td>
</tr>
<tr>
<td>Clean Energy Vehicles</td>
<td>Introduce cleaner energy vehicles.</td>
<td></td>
</tr>
</tbody>
</table>

#### FY2005 Action Plan Goals

<table>
<thead>
<tr>
<th>Category</th>
<th>Goal</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life Cycle II: Manufacturing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Energy</td>
<td>Energy reduction</td>
<td>Reduce total energy usage by 15 percent per unit of production from the base year 2001 plus a 5 percent decrease in 2002.</td>
</tr>
<tr>
<td>Substances of Concern</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Develop new materials and production processes that meet lower substance use levels.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### FY2005 Action Plan Goals

<table>
<thead>
<tr>
<th>Category</th>
<th>Goal</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life Cycle III: Sales, Distribution and Service</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental Management Systems</td>
<td>Comply with Chemical Ban List/Environmental Data Sheet.</td>
<td></td>
</tr>
<tr>
<td>Environmental Management Systems</td>
<td>Qualify for the Environmental Guidelines to Canadian dealer network by FY2003.</td>
<td></td>
</tr>
<tr>
<td>Environmental Management Systems</td>
<td>Reduce the hazardous waste disposed for landfill by 95 percent from base year 1999.</td>
<td></td>
</tr>
<tr>
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<td>Reduce the hazardous waste disposed for landfill by 95 percent from base year 1999.</td>
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<table>
<thead>
<tr>
<th>Category</th>
<th>Goal</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life Cycle IV: Recycling-End of Life Vehicles</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Substances of Concern</td>
<td>Manage substances of concern.</td>
<td></td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Category</th>
<th>Goal</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vehicle Recycling</td>
<td>Promote recycling designs that incorporate material and design strategies for increased vehicle recyclability.</td>
<td></td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Category</th>
<th>Goal</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toyota's Environmental Contributions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental Communication</td>
<td>Promote environmental communication with community and key organizations.</td>
<td></td>
</tr>
<tr>
<td>Enhance environmental communication activities in each region/country.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
In order to provide an appropriate mix of vehicle choices that meet varying customer needs, government regulations, environmental objectives and local market conditions, we research and develop a broad array of technologies (see Figure H). The lynchpin of Toyota’s future power train strategy in the foreseeable future is hybrid-electric vehicle technology. We are fully committed to hybrids as a vital part of our response to global warming and air quality concerns. Further, successful development of hybrid systems will facilitate an eventual migration to hybrid-electric fuel cell vehicle technology. This is because, in Toyota’s case, the hybrid system used in our fuel-cell vehicle system is essentially the same as the hybrid system used in our gasolin-electric hybrid system (see Figure 1). The primary difference is that the conventional gasoline engine is replaced by the fuel-cell stack.

In order to be successful, a technology must deliver performance, value and sociability, among other factors. In many cases, such as hybrid-electric vehicles, we are able to meet these criteria and deliver advanced environmental technologies ahead of the competition. In some instances, despite our best efforts, technology does not live up to its expected performance or is not embraced by customers. For example, this past year we decided to discontinue production of the RAV4 Electric Vehicle worldwide.

Despite an aggressive retail program in California, strong dealer support and an enticing pricing level, sales of the RAV4 Electric Vehicle were very low, making it impractical to continue sales. Nonetheless, we gained valuable market experience, and made advances in component systems such as electric drive motors and batteries that will undoubtedly contribute to Toyota’s hybrid-electric vehicle development program.

### LIFE CYCLE I: DEVELOPMENT AND DESIGN

#### Fuel Efficiency
- Achieve top levels of fuel efficiency in all vehicle classes.
- **Achieved** retrofits CAFE/CAPC requirements for passenger and light-duty trucks.

#### Emission Reductions
- **Achieved** major reductions in NOx.
- **Achieved** LEV II emissions requirements.

#### Clean Energy Vehicles
- **Introduce** additional hybrid vehicles by FY2005.
- **Introduce** market additional new hybrid electric vehicles by FY2005.

### LIFE CYCLE II: MANUFACTURING

#### Energy
- **Reduce** total energy usage by 15 percent per unit of production from the base year 1999.
- **Exceeded** target by 23 percent in 2001.

#### Substances of Concern
- **Reduce** body-painting emissions of VOCs to less than 30 g/m² for all paint body shops.
- **Achieved** target for body-painting emissions of VOCs to less than 22 g/m² for all paint body shops.
- **Reduce** toxic chemicals emitted to air to 0.23 kg/vehicle or less for entire plant.
- **Achieved** target; **Reduce** toxic chemicals emitted to air to 0.73 kg/vehicle or less for entire plant.

#### Waste Disposal
- **Reduce** hazardous waste disposal to less than 65 kg from base year 1999.
- **New Target** reduce all waste disposal from base year 2003.

#### Waste Water
- **Reduce** total water usage by 15 percent per unit of production from base year of 2000.

### LIFE CYCLE III: SALES, DISTRIBUTION AND SERVICE

#### Environmental Management Systems
- **Achieve** ISO 14001 certification/registration at all parts and vehicle distribution centers by FY2005 in the U.S., and by FY2003 in Canada.

#### Hazardous Materials
- **Maintain** 100 percent compliance with all applicable HAZMAT/dangerous goods regulations.

#### Waste
- **Reduce** waste and conserve resources.

#### Energy
- **Reduce** energy usage by 15 percent per unit of production from base year of FY2003.

#### Dealers
- **Expand** network of certified dealers.

#### Other
- **Add** enhanced features to the Environmental Assistance Network Web site for dealers (U.S. only).

### LIFE CYCLE IV: RECYCLING-END-OF-LIFE VEHICLES

#### Substances of Concern
- **Manage** substances of concern.

#### Vehicle Recyclability
- **Incorporate** material and design strategies for increased vehicle recyclability.

### TOYOTA’S ENVIRONMENTAL CONTRIBUTIONS

#### Environmental Communication
- **Enhance** environmental communication activities in each region/country.

#### Other
- **Promote** environmental communication with community and key organizations.

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**Figure H**

Toyota Hybrid System (THS)

**Figure I**

Toyota Fuel Cell Hybrid Vehicle

**Figure J**

Striving for the Ultimate Eco Car

**Figure K**

Adaptability of the Toyota Hybrid System

**Figure L**

Toyota Hybrid System (THS)
ENVIRONMENTAL MANAGEMENT

MANUFACTURING

Toyota seeks to become the leader in environmental performance among automobile manufacturers. We have established a five-year action plan that sets aggressive targets for reducing energy use and carbon dioxide emissions in our North American manufacturing facilities. Additional information about our manufacturing targets and progress can be found beginning on page 33. In addition, in the United States, Toyota is participating in the U.S. Department of Energy’s Climate Vision program to reduce greenhouse gas intensity and to improve energy efficiency in U.S. automotive manufacturing plants (see sidebar).

SALES AND DISTRIBUTION

Our sales and distribution organization is integrating environmental management at many levels. This is more fully described beginning on page 45. We are a leader in green building design and our flagship work is being integrated across our whole organization and the North American region (see sidebar on page 18). This year we are working even more closely with our dealers on environmental issues. Toyota will introduce dealer environmental guidelines in Canada by FY2003.

RECYCLING

Toyota is working to reduce waste as much as possible and recycle whatever can be reused throughout the entire lifecycle of the automobile. In June 2003, we initiated “Toyota Recycle Vision,” a set of action guidelines, to improve vehicle recovery, increase the use of recycled materials, and reduce the number of used parts in the aftermarket and reduce use of substances of environmental concern. Toyota Recycle Vision is a part of Toyota’s implementation of its Global Earth Charter and Environmental Action Plans, worldwide programs for reducing environmental impacts. We will report more on the Toyota Recycle Vision initiative in our next Environmental Report. For further information, please see www.toyota.co.jp/IRweb/corp_info/pr/2003/0609.html.

<table>
<thead>
<tr>
<th>Toyota Recycle Vision—Topics and Targets</th>
<th>Target</th>
<th>Current State (in Japan)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steady improvement of vehicle recovery rate in Japan and Europe</td>
<td>Early achievement of announced Japanese standards, steady achievement of announced European standards*</td>
<td>Vehicle recovery rate 80-83 percent</td>
</tr>
<tr>
<td>Increased use of recyclable resources and recycled materials</td>
<td>Development of technology allowing 20 percent use of recyclable resources and recycled materials in 2015 (combining Toyota Eco-Plastic and recycled materials)</td>
<td>Use of Toyota Eco-Plastic started with launch of second-generation Raum in May 2003</td>
</tr>
<tr>
<td>Increased use of used parts</td>
<td>Ten-fold increase in sales of used parts by 2010 (compared to 2002)</td>
<td>CY2002 sales: 23,000 parts</td>
</tr>
<tr>
<td>Reduction in substances of environmental concern</td>
<td>Implementation worldwide of common standards in 2003</td>
<td>Basic policy established for adopting global response</td>
</tr>
</tbody>
</table>

*In Japan: ASR recycling rate of 30 percent in 2005, 50 percent in 2010 and 70 percent in 2015; vehicle recovery rate equivalent to 85 percent in 2005, 92 percent in 2010 and 95 percent in 2015. In Europe: vehicle recovery rate of 85 percent in 2006 and 95 percent in 2015.

Globally, Toyota has invested significant resources toward the improvement of vehicle recyclability. In Japan, we operate both a world-class ASR Recycling and Recovery Pilot Plant to recover materials from automobile shredder residue, termed “ASR,” and an Automobile Recycle Technical Center to promote research on dismantling vehicles. We are also conducting significant efforts in Europe to support the vehicle recycling infrastructure toward European Union Directive targets for recyclability.

INDUSTRY ALLIANCE COMMITS TO REDUCING GREENHOUSE GASES

In the United States, Toyota is a member of the Alliance of Automobile Manufacturers, which has committed to participating in the U.S. Department of Energy’s Climate Vision. Climate Vision is a presidential public/private partnership initiative launched by the Department of Energy to contribute to the president’s goal of reducing greenhouse gas intensity. Member companies of the Alliance commit to achieve by 2012 at least a 10 percent reduction in greenhouse gas emissions from their U.S. automotive manufacturing facilities, based on U.S. vehicle production, from a base year of 2002. For Toyota, this commitment complements our existing energy reduction targets. In order to track progress towards this commitment, Toyota is submitting a voluntary greenhouse gas report utilizing the protocols of the DOE 1605(b) reporting program. Please visit www.toyota.com/about/environment to access a copy of this report.

Mark Yamauchi, facilities strategic planning manager, reviews an array of photovoltaic panels that provide 536 kW of solar energy to Toyota’s South Campus headquarters complex in Torrance, California.

Toyota is working to reduce waste as much as possible and recycle whatever can be reused throughout the entire lifecycle of the automobile.
ENVIRONMENTAL MANAGEMENT

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RECYCLING

Toyota is working to reduce waste as much as possible and recycle whatever can be reused throughout the entire lifecycle of the automobile. i.e., development, production, use and disposal stages. In order to utilize limited resources more effectively, the results of these efforts are fed back to the development area, which in turn strives to make automobiles that take recycling into consideration. We describe these activities more fully on page 51.

Toyota is working to reduce waste as much as possible and recycle whatever can be reused throughout the entire lifecycle of the automobile.

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Toyota Recycle Vision—Topics and Targets

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<thead>
<tr>
<th>Topic</th>
<th>Target</th>
<th>Current State (in Japan)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steady improvement of vehicle recovery rate in Japan and Europe</td>
<td>Early achievement of announced Japanese standards, steady achievement of announced European standards*</td>
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<tr>
<td>Reduction in substances of environmental concern</td>
<td>Implementation worldwide of common standards in 2003</td>
<td>Basic policy established for adopting global response</td>
</tr>
<tr>
<td></td>
<td>Introduction from 2006 in Japan and Europe of vehicles with zero amount of mercury, cadmium and chromium (VI); lead use to be reduced to 1/10 or less of level in 1996</td>
<td>Hitherto target: introduction from 2006 of vehicles with zero use of substances of environmental concern (with exception of lead, which is to be reduced to 1/10 or less of level in 1996)</td>
</tr>
<tr>
<td></td>
<td>(By 2002, the average volume of lead used in newly introduced models was 1/6 the level used in 1996.)</td>
<td></td>
</tr>
</tbody>
</table>

*In Japan: ASR recycling rate of 30 percent in 2005, 50 percent in 2010 and 70 percent in 2015; vehicle recovery rate equivalent to 80 percent in 2005, 92 percent in 2010 and 95 percent in 2015. In Europe: vehicle recovery rate of 85 percent in 2006 and 95 percent in 2015.

Mark Yamauchi, facility strategic planning manager, reviews an array of photovoltaic panels that provide 536 kW of solar energy to Toyota’s South Campus headquarters complex in Torrance, California.
TOYOTA NORTH AMERICA
MANAGEMENT

page nineteen

Some key environmental data for the new South Campus headquarters complex include:
- Annual forecasted environmental cost savings: $150,000 due to the photovoltaic system — from our financial model. The system will pay for itself in seven years;
- $400,000 due to energy efficiency of building;
- $120,000 due to water efficiency of building.

- Annual forecasted energy savings (base building systems load not including plug load):
  - 26,245,000 BTU (can be equated to emissions avoided because of natural gas not used — either direct use or because of electricity not generated — per year);
  - 630,000 kW of electricity produced by the solar photovoltaic system per year (can be translated into emissions that would have been produced by electricity generating plants).

ENVIRONMENTALLY SOUND INVESTMENT: GREEN BUILDINGS

Toyota’s South Campus, at our U.S. sales and distribution headquarters complex in Torrance, California, is the largest project to date to receive the U.S. Green Building Council’s Gold LEED® Award — LEED stands for Leadership in Energy and Environmental Design. The U.S. Green Building Council, headquartered in Washington, D.C., is a non-profit coalition that promotes the understanding, development and accelerated implementation of green building policies, programs, technologies, standards and design practices. Toyota is working to learn from these experiences and replicate them where possible.

Other green aspects of the complex include low-maintenance landscaping, featuring drought-tolerant plants and native grasses that are impregnated with recycled water. We took steps to protect indoor air quality, including housing copier machines in separate small rooms with their own exhaust systems. Also, the ductwork was capped at both ends before it was delivered so that it would not collect dirt while it was awaiting installation.

PROMOTION OF GREENER BUILDING CONSTRUCTION AND MAINTENANCE OPERATIONS

Toyota is committed to investments that make economic and environmental sense. This is illustrated in our building projects, on which we spent over U.S. $220 million in FY2003 and expect to spend $140 million in FY2004. Our Real Estate and Facilities Department has made a strong commitment to environmental sustainability and in implementing a series of projects in Torrance developed under an initiative called Peacock Green. (This name is used in the United States only, although the activity is being applied across the region.)

OTHER RETAIL OPERATIONS

Our Real Estate and Facilities Department has made a strong commitment to environmental sustainability and in implementing a series of projects in Torrance developed under an initiative called Peacock Green. (This name is used in the United States only, although the activity is being applied across the region.)

In addition, we are working with product suppliers outside of manufacturing (see page 39). We are also working with product suppliers outside of manufacturing.

END-OF-PLANT TARGETS FOR MANUFACTURING

Every year, Toyota works to reduce the environmental impact of our plants; employing the principle of Acumen, Japanese for continuous improvement. Now, we have established eco-plant targets for our new facilities in Mexico and Alabama, to ensure that we included our past learning from the start of operations. Users will be able to see Toyota’s commitment to the environment at our new Texas facility in San Antonio. Toyota is committed to making this plant our most environmentally advanced by applying the best technology and expertise from around the world to build it to run it.

REGIONAL CROSSCUTTING ISSUES

Toyota has a long tradition of building on existing best practices and strengthening our regional business position. We recognize that sharing results of successful environmental initiatives that cut across affiliate company lines will improve our overall performance in North America.

The following discusses several areas where we have begun to coordinate activities among our affiliate companies.

GREENING SUPPLIERS

Our environmental efforts rely, to a large extent, on our ability to develop a “green” supply chain. We have required our manufacturing suppliers to conform to our list of banned substances, and also to become certified, or registered, to the international standard for environmental management systems, ISO 14001. This is discussed in more detail on page 39. We are also working with product suppliers outside of manufacturing (see page 43).

Our sales operations set a new target to develop sustainable operations standards for facilities at Toyota Motor Sales, U.S.A., Inc. (see page 49). In the construction of the Torrance campus, Toyota challenged its suppliers to meet its environmental goals while keeping costs under control. Two examples show how this resulted in creative responses from our suppliers outside of manufacturing that brought environmental and economic advantage to both sides — and to the planet:

Knoll Inc., a New York-based furniture company, has taken various steps over the years to eliminate or reduce emissions from fabrics and paints used in its furniture. Negotiations with Toyota gave new impetus to these efforts. Knoll challenged its suppliers to provide more documentation on their source material and is now actively marketing its line of green furniture and fabrics.

Interface Inc., a commercial fiber company based in Kennesaw, Georgia, supplied the carpet tiles used throughout the Toyota building. Interface has had an environmental program since 1994. Under its contract with Toyota, the company will reclaim the South Campus carpeting when it becomes worn, in order to keep it out of landfills.

EMPLOYEE ENVIRONMENTAL EDUCATION

Toyota considers environmental education and awareness-promotion activities to be an important basis for encouraging environmental action and continually enhancing environmental performance.

We are developing environmental education to help employees feel an affinity with the terms of our environmental policy and improve practical application of the policy at each workplace. We are creating activities that will enable employees to express their environmental consciousness in everyday life. On Earth Day, representatives from environmental organizations and government agencies are invited to visit our headquarters. These visitors make presentations about their work. They also talk with associates about their environmental activities at Toyota and encourage their ongoing participation.
ENVIRONMENTAL PRACTICES. TOYOTA NORTH AMERICA

Some key environmental data for the new South Campus headquarters complex include:

- Annual forecasted environmental cost savings: $150,000 due to the photovoltaic system; from our financial model. The system will pay for itself in seven years.
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Other green aspects of the complex include low-maintenance landscaping, featuring drought-tolerant plants and native grasses that are irrigated with recycled water. We took steps to protect indoor air quality, including housing copier machines in separate small rooms with their own exhaust systems. Also, the ductwork was capped at both ends before it was delivered so that it would not collect dirt while it was awaiting installation.

PROMOTING GREENER BUILDING

CONSTRUCTION AND MAINTENANCE OPERATIONS

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Details on these activities is provided on pages 48-49.

ESTABLISHMENT OF ECO-PLANT TARGETS FOR MANUFACTURING

Every year, Toyota works to reduce the environmental impact of our plants; employing the principle of lean manufacturing. Now, we have established eco-plant targets for our new facilities in Mexico and Alabama, to ensure that we included our past learning from the start of operations. Issues will be able to see Toyota’s commitment to the environment at our new Texas facility in San Antonio. Toyota is committed to making this plant our most environmentally advanced by applying the best technology and expertise from around the world to build it and to run it.

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_PROFILE_
Environmental Management

As is the case throughout Toyota, manufacturing devoted a significant number of man-hours to training. Some examples of the types of training provided to employees include:

- New team member environmental orientation training;
- ISO 14001 General Awareness training to assist team members with their understanding of environmental management procedures;
- Due diligence auditing procedures to assist team members in auditing of potential recyclers waste management companies;
- Resource Conservation and Recovery Act, RCRA, training for team members who manage waste as a normal part of their daily activities;
- Contractor environmental management training for Toyota new site construction requirements.

In addition to Toyota’s internal training programs, many team members also take part in specialized training programs offered by outside companies.

Toyota’s training is not limited to team members of Toyota. For example, as part of the Green Supplier program, Toyota Motor Manufacturing, North America, Inc., developed an ISO 14001 guidance program on CD to assist suppliers in achieving certification/registration.

We conduct annual, scheduled compliance reviews of our sales and distribution operations, as well as surprise reviews, to help them remain in compliance with regulations. If the facility has been ISO certified/registered they are subject to an additional, annual ISO conformance review (see page 43).

In FY2003, our sales operations and corporate environmental staff completed 41 facility environmental and HAZMAT/dangerous goods compliance audits, in addition to the various government agency inspections that occurred.

In addition to these reviews, we provide our coordinators with the tools and training needed to support their efforts. We supplied classroom training for over 400 sales associates on the following subjects: HAZMAT/dangerous goods transportation, HAZWASTE disposal, incident and spill response. We provided this training in conjunction with site compliance audits.

2003 Environmental Compliance Training Conference

In Torrance, California, from February 10 – 13, 2003, we held our second annual Environmental Compliance Conference at Toyota Motor Sales, U.S.A., Inc., for all of our environmental and HAZMAT/dangerous goods coordinators based at our parts and vehicle logistics sites nationwide and other business affiliate sites. Each Toyota site in North America is staffed with environmental coordinators. Separate annual conferences are held for those environmental and HAZMAT/dangerous goods coordinators at our manufacturing plants.

At this conference, we presented environmental classes, ISO 14001 and HAZMAT/dangerous goods training, team exercises and presentations. Speakers and presenters included representatives from our sales organization’s senior management, key suppliers, other automotive manufacturers, vendors, consultants and representatives from regulatory agencies such as the U.S. Coast Guard, U.S. Department of Transportation (including the Federal Aviation Administration and the Research and Special Projects Administration) and the U.S. Environmental Protection Agency.

RISK MANAGEMENT

With any type of manufacturing, spills of raw materials can occur at any time. At Toyota, our facilities are designed to contain spills within the confines of specially designed containment structures. These specially designed structures have enabled Toyota to avoid contaminating ground water and soil at its manufacturing sites. While we had no releases resulting in contamination in FY2003, at one of our facilities, we are proactively monitoring contamination caused by a neighboring plant.

“We are doing our part as a good corporate citizen by developing environmentally advanced vehicles with high mileage and low emissions to combat air pollution.”

— Yukitoshi Funo, President and Chief Executive Officer, Toyota Motor Sales, U.S.A., Inc.
Environmental Management

As is the case throughout Toyota, manufacturing devoted a significant number of man-hours to training. Some examples of the types of training provided to employees include:

- New team member environmental orientation training;
- ISO 14001 General Awareness training to assist team members with their understanding of environmental management procedures;
- Due diligence auditing procedures to assist team members in auditing of potential recyclers waste management companies;
- Resource Conservation and Recovery Act, RCRA, training for team members who manage waste as a normal part of their daily activities;
- Contractor environmental management training for Toyota new site construction requirements.

In addition to Toyota’s internal training programs, many team members also take part in specialized training programs offered by outside companies.

Toyota’s training is not limited to team members of Toyota. For example, as part of the Green Supplier program, Toyota Motor Manufacturing, North America, Inc., developed an ISO 14001 guidance program on CD to assist suppliers in achieving certification/registration.

We conduct annual, scheduled compliance reviews of our sales and distribution operations, as well as surprise reviews, to help them remain in compliance with regulations. If the facility has been ISO certified/registered it is subject to an additional, annual ISO conformance review (see page 43).

In FY2003, our sales operations and corporate environmental staff completed 41 facility environmental and HAZMAT/dangerous goods compliance audits, in addition to the various government agency inspections that occurred.

Compliance, Audits and Training

Environmental excellence begins with compliance to applicable local, state and federal regulations. Leadership requires a company to go beyond compliance. As standard practice, Toyota seeks to have a record of zero violations. We also conduct regular due diligence audits and compliance training across our operations.

Toyota considers regulatory compliance a fundamental business requirement of the highest priority for all operations. We achieved our targets of zero violations for applicable local, state and federal regulations. Leadership recognizes that compliance is a critical component of our environmental management strategy. Leadership also recognizes that compliance is a critical component of our environmental management strategy.

To comply with applicable laws and regulations, we have established environmental management systems that meet the requirements of ISO 14001 and other applicable standards. Toyota continually monitors and analyses regulatory requirements in order to ensure that our environmental management systems are effective and efficient.

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For the 2004 model year, Toyota improved both the fuel economy and performance of our hybrid-electric Prius. Looking forward, we must continue to deliver both of these attributes in order to ensure success of hybrid technology in the broader market.”

— Dave Baxter, Vice President, Toyota Technical Center, U.S.A., Inc.

Toyota remains committed to leading the automotive industry in environmental responsibility through the design and development of clean and efficient vehicles. Our commitment is often made difficult by the complex and sometimes competing priorities of consumers, shareholders, legislators, regulators and other groups. Nevertheless, our engineers continue to focus on developing innovative and practical technologies. Toyota invests in research and development aimed at reducing emissions and improving fuel economy. We view these investments as critical — not only to the future of the environment, but also to the future of our company and, we believe, the future of the auto industry.

**GOAL: ACHIEVE TOP LEVELS OF FUEL EFFICIENCY IN ALL VEHICLE CLASSES**

Toyota has a strong track record of offering fuel-efficient vehicles in a broad range of classes. As we have grown to become the fourth-largest vehicle manufacturer in North America, the challenge of continuing this leadership has also grown, driven in part by the expanding product line-up necessary to meet the needs of our customers. Nonetheless, we were again able to make positive strides in improving the fuel-efficiency of many of our vehicles.

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**2002-2003 Fuel Economy Change**

<table>
<thead>
<tr>
<th>Vehicle</th>
<th>2002 Model Year</th>
<th>2003 Model Year</th>
<th>Fuel Economy Change</th>
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<tbody>
<tr>
<td>LX 470 4.7L A/T</td>
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<tr>
<td>4Runner 4.0L A/T 4WD</td>
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<tr>
<td>4Runner 4.0L A/T 2WD</td>
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<tr>
<td>Carolla 1.8L A/T</td>
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<td>Echo 1.5L A/T</td>
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<td>Echo 1.5L M/T</td>
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<tr>
<td>Tundra 3.4L M/T 2WD</td>
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<tr>
<td>Tundra 3.4L M/T 4WD</td>
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<td>Tundra 4.7L 4A/T 2WD</td>
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<tr>
<td>Tacoma 3.4L M/T 2WD</td>
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<tr>
<td>MR2</td>
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<tr>
<td>Land Cruiser 4.7L A/T</td>
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**Note:** Data are based on EPA adjusted combined fuel economy rating. Four 2003 model year vehicle configurations — Lexus IS 200 3.0L A/T, Toyota Corolla 1.8L 5MT, Toyota RAV4 2.0L 4A/T 4WD and Toyota Tacoma 3.4L 4A/T 4WD — had lower fuel economy ratings than their 2002 model year counterparts.
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Main: Tuan Tran, senior technician, runs an emissions certification test on a 2004 Sienna minivan at the Toyota Technical Center, in Ann Arbor, Michigan. The Center works closely with the U.S. Environmental Protection Agency to confirm the emissions performance of all Toyota and Lexus cars and trucks sold in North America.
In the 2003 model year, Toyota produced vehicles representing 68 different model and powertrain configurations. Of these, we improved the rated fuel economy on 12 configurations (Figure J on page 23), while the rated fuel economy of 52 configurations remained the same.

As we work to improve fuel economy, we also must provide our customers with the performance, size and features they demand. This requires a delicate and often difficult balancing of consumer, marketplace and environmental needs. For example, four 2003 vehicle configurations had lower fuel economy than the previous model year. In other instances, such as the completely redesigned 2003 Toyota 4Runner, we were able to achieve a larger, more powerful engine and increased interior volume over the previous generation while achieving a 12 percent improvement in fuel economy.

Our customers have diverse needs and preferences when it comes to purchasing a new vehicle. Some require hauling and/or towing capacity, others seek luxury and performance and still others desire seating capacity for families and children. Our goal of being the leader of fuel-efficient and still others desire seating capacity for families and children. Our goal of being the leader of fuel-efficient and still others desire seating capacity for families and children. Our goal of being the leader of fuel-efficient and maximum airbag, or Toyota Safety Sense System, or TSS. We’ve also worked to reduce the number of models available to most fuel-efficient or our competitors. While these actions set Toyota apart, we now have relatively fewer options available to further improve fuel-efficiency compared to our competitors. Nevertheless, we will continue our ongoing efforts to expand the use of leading technologies and develop the next generation of advanced environmental vehicles.

As shown in Figure K, Toyota offers conventional gasoline-powered vehicles that are among the most fuel efficient in their class. The 2003 Model Year Fuel Economy Guide, published jointly by the U.S. Environmental Protection Agency and the U.S. Department of Energy, rated three 2003 Toyota models — Prius, RAV4 2WD manual transmission, and RAV4 2WD automatic transmission — as class fuel economy leaders based on EPA fuel economy mileage estimates. In addition, the EnerGuide, published by Natural Resources Canada, ranks three 2003 Toyota models as most fuel-efficient — Prius, Celica automatic transmission and Corolla Matrix manual transmission. While there is no formal fuel-economy program in Mexico analogous to those in the United States and Canada, Toyota’s policy is to introduce the same top-level vehicles into Mexico as it does in the other North American markets. We have improved fuel economy by applying technologies such as variable valve timing, four-valve cylinder heads and five-speed automatic transmissions, to name a few. In addition, we have consistently applied advanced technologies sooner and in greater volumes than most of our competitors. While these actions set Toyota apart, we now have relatively fewer options available to further improve fuel-efficiency compared to our competitors. Nevertheless, we will continue our ongoing efforts to expand the use of leading technologies and develop the next generation of advanced environmental vehicles.

Target: Exceed CAFE/CAFC Requirements For Passengers and Light-Duty Trucks

In the United States, automobile manufacturers are required to comply with Corporate Average Fuel Economy, or CAFE, standards for passenger cars and light trucks. CAFE standards are expressed in miles per U.S. gallon; the higher the number the better the fuel economy.

In Canada, Toyota has joined with other manufacturers in agreeing to meet voluntary Corporate Average Fuel Consumption, or CAFC, limits. CAFC limits are expressed in liters of fuel burned per 100 kilometers traveled; the lower the number the better the fuel economy.

For the 2003 model year, Toyota will meet our target to exceed CAFE standards and CAFC voluntary limits for both passenger cars and light-duty trucks (Figures L through O).

In both the United States and Canada, our performance continues to exceed the industry as a whole. However, in recent years, consumers of both regions have displayed a growing preference for more and larger trucks. Toyota’s product offerings have expanded to keep pace with this demand. We recognize that with increased truck sales comes the need to develop increasingly efficient technologies to minimize environmental impacts. As discussed later in this chapter, Toyota plans to introduce an advanced-technology hybrid sport utility vehicle into our fleet in the near future.
In the 2003 model year, Toyota produced vehicles representing 68 different model and powertrain configurations. Of these, we improved the rated fuel economy on 12 configurations (Figure J on page 23), while the rated fuel economy of 52 configurations remained the same.

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In 2003, Toyota introduced the California-specification Camry to meet the California Air Resources Board’s new Partial Zero Emission Vehicle requirements for 2004. Under these requirements:

- Tailpipe emissions must meet Super Ultra Low Emission Vehicle regulations for the full useful life of the vehicle (15 years/150,000 miles);
- The fuel system must meet zero evaporative emissions standards defined as less than .054 grams/test.

In order to meet these more stringent requirements, we incorporated many technical enhancements to the vehicle. The enhancements include:

- Incorporation of a carbon filter into the air cleaner to absorb hydrocarbons when the engine is stopped;
- Adoption of the Toyota hydrocarbon absorptive catalyst to assist with hydrocarbon control, particularly during cold engine operation;
- Addition of an intake valve-runner assembly to improve combustion efficiency;
- Incorporation of three sensors into the exhaust system, upgrades to the design and material content of the evaporative emission control system, and enhancements to the three-way catalytic converter design.

Toyota is on track for 2003MY vehicles to comply with the phase-in for the U.S. Environmental Protection Agency’s Supplemental Federal Test Procedure requirements, which represent enhanced emission control while operating the vehicle over a more severe drive cycle. Our passenger cars and light-duty trucks meet the 85 percent phase-in requirement, while 100 percent of our 2003MY heavy-duty trucks meet the phase-in, compared to the required 80 percent for this category.

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GOAL: PROMOTE EMISSIONS REDUCTION

Regulatory organizations around the world, including the U.S. Environmental Protection Agency, the California Air Resources Board and Environment Canada have challenged automakers to reduce levels of harmful emissions emitted by automobiles during normal operations.

In 2003, Toyota introduced three new models — Lexus GX 470, Toyota Corolla Matrix and the redesigned Toyota 4Runner with a new 4.0L V-6 engine. Each of these vehicles (except the Corolla Matrix XRS) is certified to meet Low Emission Vehicle or better standards.

*In the United States only
TARGET: INTRODUCE ADDITIONAL NEW HYBRID ELECTRIC VEHICLES BY 2005

Toyota currently stands as the clear leader in hybrid vehicle sales in North America, with over 50,000 units sold as of July 2003. During this past year, we reached several significant milestones on the way to that target, and made a number of announcements for hybrid vehicles.

COOPERATIVE DEVELOPMENT

We strongly believe that environmentally friendly technologies should be widely available and that cooperation between competitive manufacturers will be necessary. We recently announced a long-term agreement with Nissan Motor Corporation that includes supplying hybrid components and technical cooperation between our two companies. Both companies agreed to begin exchanging information and technical cooperation between our two companies. This year, Toyota completed development of our second-generation hybrid system, and discussing joint development of components related to hybrid systems. Beginning in 2006, and as a first step, Nissan will install selected components from Toyota’s hybrid system, including the transaxle and inverter, in Nissan vehicles to be sold in the United States.

NEW HYBRID PRODUCTS

This year, Toyota continued development of our second-generation hybrid system, called Hybrid Synergy Drive. The new system features a high-voltage power circuit combined with a more powerful and efficient electric motor, offering greater power, performance and fuel economy compared to our previous hybrid system. We also announced the upcoming sales of two vehicles that will use this system.

LEXUS RX HYBRID

At the 2003 North American International Auto Show in Detroit, Michigan, Toyota announced plans to offer our first-ever sport utility hybrid vehicle — the new Lexus RX Hybrid. The RX Hybrid will be available beginning with the 2005 model year, and will operate with front, standard and optional all-wheel drive rear electric motors combined with a V6 gasoline engine. It will combine the power and torque of a V8 with the fuel economy of a compact car, all while producing a fraction of the emissions of a standard SUV. It will also provide the benefits of all-wheel drive.

TOYOTA PRIUS

At the 2003 New York Auto Show, Toyota introduced the all-new 2004 Toyota Prius featuring the Hybrid Synergy Drive™. The vehicle has been reclassified from a compact to a midsize sedan. With additional power, and improved low-end torque from the drive motor, the new Prius’ acceleration is significantly improved over its predecessor (see Figure Q).

Not only have we enlarged the Prius and improved its performance, but we also improved the EPA-rated fuel economy from the high 40s to the mid-50s in terms of miles per gallon. In Canada, fuel consumption — the inverse of fuel economy — has been improved from the high to the low fours in terms of litres per 100 kilometers. This improvement gives Prius the best fuel economy rating of any mid-size vehicle sold in North America, delivering twice the combined mileage rating of its closest competitor. In fact, the midsize Prius boasts a higher combined mileage rating than even the most fuel-efficient compact sedan sold in North America.

Regarding emissions, the 2004 Prius is certified as an Advanced Technology Partial Zero Emission Vehicle® in California and states adopting California standards, and as Tier 2, Bin 3 in the rest of the United States and in Canada (see www.epa.gov/otap/trzhome.htm for a description of the Tier 2 emission program).

The 2004 Prius features advanced energy-saving features, including new body styling with a very low 0.26 coefficient of drag and a new air conditioning system that draws power from an electric motor rather than the traditional method of an engine belt and pulley.

Toyota believes that hybrid technology, especially as represented by our new Hybrid Synergy Drive system, is key to energy-efficient transportation, with immediate benefits for the environment and consumers. Today’s hybrids also give us a learning lab for future hybrid vehicles, including those that will employ fuel cells.

COOPERATIVE DEVELOPMENT

Toyota continues to make significant progress in the development, evaluation and refinement of fuel-cell-powered vehicles. Our engineers have focused on independent development of a Toyota-proprietary fuel-cell system that sets new standards for efficiency by using the same hybrid systems found in the Prius.

At this time, our primary fuel-cell-powered vehicle is the Fuel Cell Hybrid Vehicle, based on the Toyota Highlander sport utility vehicle platform. It features four 5,000-psi hydrogen fuel tanks. Hydrogen gas feeds into the Toyota fuel-cell stack where it combines with oxygen, generating a peak of 90 kW of electricity. Electricity from the fuel cell powers a 109-hp (194 lbs-ft of torque) electric motor and also charges the vehicle’s nickel-metal hydride batteries. These batteries feed power-on-demand to the electric motor in addition to the power supplied by the fuel-cell. Water vapor is emitted through the vehicle’s tailpipe.

The Toyota Fuel Cell Hybrid Vehicle is an evolution of the FCHV-4 fuel-cell vehicle, which has undergone 18 months of real-world testing in California and Japan, logging more than 80,000 miles of evaluation on test tracks and public highways. Much of this real-world evaluation was conducted in conjunction with the California Fuel Cell Partnership project, in which Toyota has been a member since 2000. The FCHV-4 vehicle has also gone through rigorous crash testing during its pre-market evaluation. During that time the vehicle’s hydrogen fuel system has proven to be reliable, safe, durable and easy to use.

TARGET: DEMONSTRATE FUEL-CELL TECHNOLOGY BY EVALUATING PROTOTYPE BEGINNING IN 2001

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The Toyota Fuel Cell Hybrid Vehicle is an evolution of the FCHV-4 fuel-cell vehicle, which has undergone 18 months of real-world testing in California and Japan, logging more than 80,000 miles of evaluation on test tracks and public highways. Much of this real-world evaluation was conducted in conjunction with the California Fuel Cell Partnership project, in which Toyota has been a member since 2000. The FCHV-4 vehicle has also gone through rigorous crash testing during its pre-market evaluation. During that time the vehicle’s hydrogen fuel system has proven to be reliable, safe, durable and easy to use.

TARGET: DEMONSTRATE FUEL-CELL TECHNOLOGY BY EVALUATING PROTOTYPE BEGINNING IN 2001

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— Jim Press
Executive Vice President, Toyota Motor Sales, U.S.A., Inc.
Also announced the upcoming sales of two vehicles that combine a more powerful and efficient electric generation hybrid system, called Hybrid Synergy Drive.

This year, Toyota completed development of our second-new hybrid products, including new body styling with a very low 0.26 coefficient of drag and a new air conditioning system that draws power from an electric motor rather than the traditional method of an engine belt and pulley.

Toyota believes that hybrid technology, especially as represented by our new Hybrid Synergy Drive system, is key to energy-efficient transportation, with immediate benefits for the environment and consumers. Today’s hybrids also give us a learning lab for future hybrid vehicles, including those that will employ fuel cells.

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Working with the California Air Resources Board and the South Coast Air Quality Management District, as well as corporations such as Stuart Energy and Air Products, the model-communities will have a network of six refueling stations — including the new station at Toyota Motor Sales national headquarters in Torrance, California. Supplied by our partner, Stuart Energy, this station uses electrolysis to turn plain tap water into oxygen and hydrogen. The electricity is generated from renewable sources, making this a carbon-free fuel source. A common infrastructure support system is important for fuel-cell technology to reach its fruition. Toyota is committed to working with other members of the global auto industry to reach this goal.

To葵HYDROGEN FUELING STATION

We have completed construction of our first hydrogen refueling station at our U.S. corporate sales headquarters complex in Torrance, California. Supplied by our partner, Stuart Energy, this station uses electrolysis to turn plain tap water into oxygen and hydrogen. The electrolysis is powered by renewable sources, making this a carbon-free fuel source. A common infrastructure support system is important for fuel-cell technology to reach its fruition. Toyota is committed to working with other members of the global auto industry to reach this goal.

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2003 Model Year Product Data for Selected Models

<table>
<thead>
<tr>
<th>North American Model</th>
<th>Engine</th>
<th>Transmission</th>
<th>City MPG-U.S. (100 km-Canada)</th>
<th>Highway MPG-U.S. (100 km-Canada)</th>
<th>Emission Standard</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toyota Prius (U.S. &amp; Canada Only)</td>
<td>1.5 L</td>
<td>See Note 3</td>
<td>52 mpg (4.3 L/100km)</td>
<td>45 mpg (4.7 L/100km)</td>
<td>ULEV</td>
<td>2003 Model Year EPA/DOT Fuel Economy Guide leader among compact cars and 2003 Natural Resources Canada EnerGuide most fuel-efficient vehicle.</td>
</tr>
<tr>
<td>Toyota RAV4 2WD</td>
<td>2.0 L</td>
<td>5M/T</td>
<td>25 mpg</td>
<td>31 mpg</td>
<td>LEV</td>
<td>2003 Model Year EPA/DOT Fuel Economy Guide leader among M/T SUV.</td>
</tr>
<tr>
<td>Toyota RAV4 4WD</td>
<td>2.0 L</td>
<td>4A/T</td>
<td>24 mpg</td>
<td>29 mpg</td>
<td>LEV</td>
<td>2003 Model Year EPA/DOT Fuel Economy Guide leader among A/T SUV.</td>
</tr>
<tr>
<td>Toyota 4Runner (U.S. &amp; Mexico) (Canada 4WD only)</td>
<td>4.0 L</td>
<td>4A/T 2WD</td>
<td>18 mpg</td>
<td>21 mpg</td>
<td>LEV</td>
<td>4Runner redesigned for 2003. New 4.0L and 4.7L engine offerings.</td>
</tr>
<tr>
<td>Toyota 4Runner (U.S. &amp; Canada) (U.S. only) LEV</td>
<td>4.0 L</td>
<td>4A/T</td>
<td>17 mpg (13.7 L/100km)</td>
<td>21 mpg (16.1 L/100km)</td>
<td>LEV</td>
<td></td>
</tr>
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<td>Toyota 4Runner (U.S. &amp; Mexico) (Canada 4WD only)</td>
<td>4.0 L</td>
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<td>21 mpg</td>
<td>LEV</td>
<td></td>
</tr>
<tr>
<td>Toyota Corolla, Matrix (U.S., Canada, &amp; Mexico)</td>
<td>1.8 L</td>
<td>4A/T 4WD</td>
<td>26 mpg</td>
<td>31 mpg (6.9 L/100km)</td>
<td>LEV</td>
<td>2003 Natural Resources Canada EnerGuide most fuel-efficient vehicle. New model for 2003.</td>
</tr>
<tr>
<td>Toyota MR2 (U.S. only)</td>
<td>1.8L</td>
<td>6M/T</td>
<td>26 mpg</td>
<td>30 mpg</td>
<td>TLEV</td>
<td>New 6MT transmission offering for 2003.</td>
</tr>
<tr>
<td>Toyota Celica (U.S. &amp; Canada)</td>
<td>1.8 L</td>
<td>4 A/T</td>
<td>29 mpg</td>
<td>36 mpg (6.0 L/100km)</td>
<td>LEV</td>
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Notes:
1. This chart shows 2003 models that are new, redesigned, or have new powertrain options; and models that were identified in the FY 2003 Model Year Fuel Economy Guide.
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3. Prius does not have a traditional automatic or manual transmission.
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Working with the California Air Resources Board and the South Coast Air Quality Management District, as well as corporations such as StuArt Energy and Air Products, the model-communities will have a network of six refueling stations — including the new station at Toyota Motor Sales national headquarters. With a current maximum range of approximately 180 miles, the southern fleet of Toyota Fuel Cell Hybrid Vehicles will have a driving range that covers most of Los Angeles and Orange Counties.

Figure R

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<td>Toyota 4Runner (U.S. &amp; Mexico) (Canada &amp; U.S.)</td>
<td>4.7 L</td>
<td>5A/T</td>
<td>15 mpg 15.5 l/100km</td>
<td>19 mpg 11.5 l/100km</td>
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Toyota is determined to achieve top-level environmental performance in the automotive manufacturing industry in North America. As part of our effort to do so, Toyota’s manufacturing facilities plan to significantly reduce energy usage, emissions of volatile organic compounds and toxics, and to reduce landfill disposal and water usage, by the end of FY2006. In addition to the voluntary initiatives described in this section, we take our regulatory obligations very seriously. As described in the Environmental Management section, we work hard to comply with applicable regulations and to quickly remediate any instance of non-compliance (see page 20).

UPDATED TARGETS
The “plan-do-check-act” cycle is integral to continuous improvement, or kaizen, that lies at the heart of the Toyota Production System. In checking the results of our past activities, it is clear that we are ahead of schedule to meet our previous five-year action plan goals, detailed in last year’s report. In fact, we have already achieved, or nearly achieved, our previous FY2006 goals in two areas: reducing waste disposal to landfills and reducing emissions of volatile organic compounds and toxics from body painting operations. Consequently in this year’s report, we are announcing new, more challenging goals for volatile organic compounds, toxics and waste reduction.

NEW PLANT ACTIVITIES: ECO PLANT PLANS
We develop “eco-plant” design plans for each new construction project that corresponds to our action plan performance categories and risk management. Each plant has a focus area in which to achieve top-level performance. For example, the Alabama plant began operating as a zero waste-to-landfill facility.

During FY2003, we completed construction of Toyota Motor Manufacturing, Alabama, Inc., in Huntsville, Alabama, our first facility outside Japan to manufacture V8 engines. We began building Toyota Motor Manufacturing de Baja California, a $140 million plant, in Baja, Mexico. When complete, the plant will create more than 700 jobs and produce 180,000 truck beds and 30,000 Tacoma trucks a year. We announced plans to build Toyota Motor Manufacturing, Texas, Inc., in San Antonio, Texas. This $800 million facility will create more than 2,000 jobs and produce 150,000 Tundra trucks annually. We also announced plans to construct a new casting facility in Jackson, Tennessee, to eventually produce one million engine blocks per year and create 200 jobs.

GLOBAL WARMING AND ENERGY USE
Toyota Motor Corporation’s Earth Charter requires all Toyota divisions to develop technologies that allow the environment and the economy to coexist. The resulting action plan requires manufacturing divisions worldwide to actively reduce emissions of carbon dioxide. As you read farther in this section, you will see that we have set energy-reduction targets in order to reduce our consumption of natural resources and carbon dioxide emissions.

GOAL: ENERGY REDUCTION
TARGET: REDUCE ENERGY USAGE 15 PERCENT PER UNIT OF PRODUCTION
We continue to make good progress towards our target of reducing total energy usage 15 percent per unit of production by the end of FY2006, from the base year 2000. This reduction will enable us to achieve a corresponding reduction in carbon dioxide emissions. To achieve our target, we are working to reduce energy consumption by three percent per year until FY2006.
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In FY2003, we reduced energy usage by five percent, which exceeded our target of three percent. This was a significant accomplishment considering the continued increases in production volume and plant size. Figure S illustrates our decreasing energy usage from 1999 to FY2003, expressed in million British Thermal Units per vehicle (mmBtu/vehicle).

In all, we have reduced energy consumption by approximately 12 percent per vehicle from 2000, our first year of reporting. We are well on the way to achieving our FY2006 target, as shown in Figure S.

Some of our North American energy-reduction kaizens include:

- Developing waste-heat recovery systems in our paint shops;
- Establishing energy-usage guidelines for non-production periods (weekends, between shifts, etc.);
- Creating model energy plants in order to develop best practices that can be applied in other facilities;
- Upgrading compressor controls and modifying boiler controls with more efficient systems.

**SUBSTANCES OF CONCERN**

The majority of air pollutants released by our manufacturing facilities are volatile organic compounds, or VOCs, from our auto body painting operations. The U.S. Environmental Protection Agency’s Toxic Release Inventory, TRL, and Environment Canada’s National Pollutant Release Inventory, NPRI, defines some of these VOCs as toxic air pollutants. In this section we discuss progress towards reduction of emissions of these substances of concern.

**GOAL:** Develop extensive reduction strategies to reduce emissions of volatile organic compounds

Our environmental action plan sets targets for reduction of emissions of substances of concern. We developed and put into place a Toxic Chemical Release Reduction Strategy that has enabled us to make steady progress toward those targets. The strategy includes:

- Increasing tracking of performance data for early evaluation of trends/opportunities for improvement;
- Installing low-wattage lighting fixtures and energy-efficient bulbs;
- Replacing compressed-air dryers with new, more efficient units;
- Installing electrostatic guns to improve paint efficiencies;
- Improving data management to quickly check our progress and project the impacts of each improvement strategy.

**TARGET:** Reduce body-painting emissions of volatile organic compounds

Volatile organic compounds are a category of chemicals that can react photochemically in the atmosphere to form ground level ozone — a primary component of smog. In last year’s report, we restated that our environmental action plan called for a reduction in emissions to less than 30 g/m² for all body paint shops by FY2006. In FY2003 we achieved a two percent reduction in body-painting emissions from FY2002. While this reduction may appear small, we have reduced VOC emissions by approximately 32 percent from the base year of 1998, meeting our target in the first year of our action plan and continuing significant reductions in every year since the original target was set.

To reach our target, we are continuing the kaizens that have enabled us to reduce VOCs, including:

- Investigating low VOC/hazardous air pollutant cleaning solvents;
- Introducing new robotics to optimize spray efficiencies;
- Installing electrostatic guns to improve painting efficiencies;
- Removing streamlining painting operations;
- Removing manual spray-painting guns from paint booths to prevent unnecessary use of cleaning chemicals;
- Reducing use of cleaning solvents;
- Introducing waterborne painting technology.

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**Figure S**

**Average mmBtu/Vehicle**

<table>
<thead>
<tr>
<th>Year</th>
<th>FY 01*</th>
<th>FY 02*</th>
<th>FY 03*</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>9.4</td>
<td>9.1</td>
<td>8.6</td>
</tr>
</tbody>
</table>

**Figure T**

**Average VOC g/m²**

<table>
<thead>
<tr>
<th>Year</th>
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<th>FY 02*</th>
<th>FY 03*</th>
</tr>
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<tbody>
<tr>
<td>1998</td>
<td>35.4</td>
<td>25.3</td>
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</tr>
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— Dennis Cuneo, Senior Vice President, Toyota Motor Manufacturing, North America, Inc.
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In all, we have reduced energy consumption by approximately 12 percent per vehicle from 2000, our first year of reporting. We are well on the way to achieving our FY2006 target, as shown in Figure S. Our environmental action plan sets targets for reduction of emissions of substances of concern. We developed and put into place a Toxic Chemical Release Reduction Strategy that has enabled us to make steady progress toward those targets. The strategy includes:

- Investigating low VOC/hazardous air pollutant cleaning solvents;
- Introducing new robotics to improve painting efficiencies;
- Removing streamlined painting operations;
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- Reducing use of cleaning solvents;
- Increasing tracking of performance data for early evaluation of trends/opportunities for improvement;
- Introducing waterborne painting technology.

To reach our target, we are continuing the kaizens that have enabled us to reduce VOCs, including:

- Increasing tracking of performance data for early evaluation of trends/opportunities for improvement;
- Introducing waterborne painting technology.

**GOAL: DEVELOP EXTENSIVE REDUCTION STRATEGIES TO REDUCE EMISSIONS OF CONCERN**

Our environmental action plan sets targets for reduction of emissions of substances of concern. We developed and put into place a Toxic Chemical Release Reduction Strategy that has enabled us to make steady progress toward those targets. The strategy includes:

- Investigating low VOC/hazardous air pollutant cleaning solvents;
- Introducing new robotics to improve painting efficiencies;
- Removing streamlined painting operations;
- Removing manual spray-painting guns from paint booths to prevent unnecessary use of cleaning chemicals;
- Reducing use of cleaning solvents;
- Increasing tracking of performance data for early evaluation of trends/opportunities for improvement;
- Introducing waterborne painting technology.

**TARGET: REDUCE BODY-PAINTING EMISSIONS OF VOLATILE ORGANIC COMPOUNDS**

Volatile organic compounds are a category of chemicals that can react photochemically in the atmosphere to form ground level ozone — a primary component of smog. In last year’s report, we restated that our environmental action plan called for a reduction in emissions to less than 30 g/m² for all body paint shops by FY2006. In FY2003 we achieved a two percent reduction in body-painting emissions from FY2002. While this reduction may appear small, we have reduced VOC emissions by approximately 32 percent from the base year of 1998, meeting our target in the first year of our action plan and continuing significant reductions in every year since the original target was set.

Because of our overall progress, we strengthened our FY2006 action plan target by revising it to 22 g/m² as an overall average across auto body paint shops in North America, a 26 percent target reduction and 38 percent overall reduction from baseline.

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LIFE CYCLE II

TARGET: CONTINUE R&D ACTIVITIES AIMED AT ELIMINATING ALL VOLATILE ORGANIC COMPOUNDS AND CUTTING OILS USED IN UNIT PLANTS

Although insignificant in volume compared to our assembly plants, we continued to develop and introduce coolants, washing chemicals and cutting oils with lower VOC and toxics for our unit plants. The Alabama engine plant started production with low-VOC materials previously introduced at our West Virginia facility.

WASTE DISPOSAL

Continuous improvement, or “kaizen,” and the elimination of waste, or “muda” are core principles of the Toyota Way. In the following section we discuss our kaizens to reduce waste and conserve material resources, whenever possible.

TARGET: REDUCE TOXIC CHEMICALS EMMITTED BY VEHICLE ASSEMBLY PLANTS

Our initial action plan called for us to reduce toxic chemicals emitted by each vehicle assembly plant to 1.0 kg/vehicle or less by 2006. As you will see in Figure U, we achieved our target in 2000. We have continued to maintain our achievement of this target through 2001 and 2002. The same projects used to reduce emissions of volatile organic compounds have helped us reduce toxic emissions overall by 53 percent from the base year of 1997.

We achieved these successes in our North American plants by means of conservation and recycling kaizens, including:

• Segregating cafeteria wastes, eliminating styrofoam, and composting food wastes.
• Segregating recyclable materials such as paper, metal, plastic, wood and cardboard.
• Sending wastewater sludge to cement kilns as an alternative to a landfill.
• Recycling over 100 types of plugs, caps and other insulators and parking blocks.
• Recycling paint sludge to make guard-rail insulators and parking blocks.
• Converting from disposable to returnable packaging.
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• Re-programming painting robots to improve the spray pattern and decrease over-spraying, thereby reducing the amount of paint used.
• Installing briquetters to recycle metal sludges that would otherwise be landfilled.
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• Converting from disposable to returnable packaging.
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• Re-programming painting robots to improve the spray pattern and decrease over-spraying, thereby reducing the amount of paint used.
• Installing briquetters to recycle metal sludges that would otherwise be landfilled.
• Recycling paint sludge to make guard-rail insulators and parking blocks.
• Recycling over 100 types of plugs, caps and other packaging items.
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Because of our overall progress in reducing all types of landfill waste, we have now set a more challenging target for FY2006 — reduce landfill of all waste by 70 percent to 10 kg/vehicle from a 1999 baseline. This includes continuing to work towards a 95 percent reduction in hazardous waste disposed to landfill.

GOAL: REDUCE WASTE AND PROMOTE RESOURCE CONSERVATION ACTIVITIES

TOYOTA’S “5RS” PROGRAM FOR WASTE REDUCTION

To reduce waste, especially hazardous waste, our manufacturing facilities continue kaizen efforts based on our Toyota “5Rs” Program for Waste Reduction:

• Refine: Substitute materials and change designs to expand “Reduce, Reuse and Recycle” capabilities;
• Reduce: Develop and design production technologies that generate less waste;
• Reuse: Reuse waste materials in the same production process;
• Recycle: Utilize waste materials in a different capacity;
• Retrieve Energy: Utilize waste energy resources.

TARGETS: REDUCE HAZARDOUS WASTE DISPOSAL AT LANDFILLS BY 95 PERCENT; REDUCE LANDFILL OF ALL WASTE BY 70 PERCENT TO 10 KG/VEHICLE

A hazardous waste is one that is ignitable (i.e., burns readily), corrosive or reactive (e.g., explosive) or contains certain amounts of toxic chemicals.

Our initial FY2006 environmental action plan target called for a 95 percent reduction in hazardous waste disposal at landfills by FY2006, from a 1999 base year. The plan also committed us to continuing research and development activities aimed at reducing the landfill of other wastes. Since 1999, Toyota has reduced landfill disposal of hazardous waste by 67 percent to 0.20 kg/vehicle and disposal of all waste at landfills by approximately 47 percent to 18 kg/vehicle as seen in Figure V.

We are one of two Toyota factories in the United States to achieve zero landfill status. It’s something our plant is proud of.”

— Don Stewart, Manager
Toyota Motor Manufacturing, West Virginia, Inc.
TARGET: REDUCE TOXIC CHEMICALS EMITTED BY VEHICLE ASSEMBLY PLANTS

Our initial action plan called for us to reduce toxic chemicals emitted by each vehicle assembly plant to 1.0 kg/vehicle or less by 2006. As you will see in Figure U, we achieved our target in 2000. We have continued to maintain our target in 2000. We have continued to develop and introduce coolants, washing chemicals and cutting oils with lower VOC and toxics for our unit plants. The Alabama engine plant started production with low-VOC materials previously introduced at our West Virginia facility.

WASTE DISPOSAL

Continuous improvement, or “kaizen,” and the elimination of waste, or “muda” are core principles of the Toyota Way. In the following section we discuss our kaizens to reduce waste and conserve material resources, whenever possible.

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We achieved these successes in our North American plants by means of conservation and recycling kaizens, including:

- Segregating recyclable materials such as paper, metals, plastic, wood and cardboard;
- Converting from disposable to returnable packaging;
- Re-programming painting robots to improve the spray pattern and decrease over spraying, thereby reducing the amount of paint used and the amount of drippage to be discarded;
- Installing briquetters to recycle metal sludges that would otherwise be landfilled;
- Recycling paint sludge to make guard-rail insulators and parking blocks;
- Sending wastewater sludge to cement kilns as a raw material feedstock;
- Recycling over 100 types of plugs, caps and other packaging items;
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WATER USE
One of our most challenging goals is reducing the amount of water needed to produce a vehicle. We use water in many different manufacturing processes. Painting operations account for the greatest use, but quenching, cooling and cleaning activities are examples of other uses. In this section we describe our efforts to conserve this natural resource.

GOAL: IMPLEMENT AGGRESSIVE PLANS TO REDUCE CONSUMPTION OF WATER
Despite our need for water in so many manufacturing processes, related technical staff throughout North America continue to investigate ways to limit our consumption of water. We’re currently benchmarking our activities against our competitors’ and our own best plants, and evaluating improvements that have been successful in similar processes. We’re also developing new plant water usage targets for new plant construction projects.

TARGET: REDUCE TOTAL WATER USAGE BY 15 PERCENT PER UNIT OF PRODUCTION
Our North American environmental action plan calls for a 15 percent reduction per unit of production by the end of FY2006, from our base year of 2000. We reduced overall water use per vehicle produced by approximately 12 percent since 1999. In FY2003 we reduced water usage by approximately 11 percent over FY2002.

Our overall success is the aggregate of successful kaizen activities across North America. For example:

- Installing industrial water recycling systems;
- Installing new plant water recycling systems to significantly reduce the amount of water purchased from utility companies;
- Recycling condensate to be re-used in steam systems;
- Installing waterless urinals to reduce domestic water usage.

WATER USE

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Figure W

Water Usage Average kg/vehicle

GREEN SUPPLIER GOAL: ESTABLISH GREEN SUPPLIER GUIDELINES
We work with our suppliers to promote business activities that better protect the environment. In June 2000, we issued Green Supplier Guidelines that promote “greener” purchasing activities. Our Web site www.toyota.com/about/environment/manufacturing/supplier.html contains our Green Supplier Guidelines.

TARGET: CERTIFY/REGISTER KEY SUPPLIERS TO 150 14001 BY DECEMBER 2003
We require key suppliers of raw materials and/or parts and components to develop and implement an ISO 14001 certified/registered environmental management system by end of 2003. We have assisted suppliers with the certification/registration process by providing an ISO 14001 Guidance Manual. In addition, ISO 14001 requires facilities to conduct periodic internal compliance reviews of their environmental management systems.

TARGET: COMPLY WITH CHEMICAL BAN LIST/ENVIRONMENTAL DATA SHEET
We created a streamlined, efficient Web-based system to approve raw materials destined for our manufacturing facilities. We send environmental data sheet requests electronically to suppliers. They enter the ingredients of raw materials they intend to supply. Before approving the new materials, we compare the ingredients against a series of databases containing our chemical ban list as well as other regulatory lists.

North American suppliers must eliminate the use of chemicals and certain chemical categories on Toyota’s global chemical ban list in new and/or reformulated materials.

TARGET: DEVELOP PROCEDURES THAT ENSURE COMPLIANCE WITH HAZARDOUS MATERIALS/DANGEROUS GOODS TRANSPORTATION GUIDELINES
To ensure that all shipments to and from our North American facilities comply with applicable regulations, we provide training to all Toyota employees involved with the handling and/or transportation of hazardous materials/dangerous goods. We also require our suppliers and contractors to put in place a transportation system that complies with hazardous materials/dangerous goods transportation guidelines, including a means to monitor changes in such regulations.

Toyota Motor Corporation's Senior Managing Director Yasuhito Yamauchi, addresses the proceedings.

Day One was attended by top management at each manufacturing facility charged with environmental responsibility. The agenda included overall and individual plant environmental performance status reports, future direction and new programs, a plant kaizen tour to view implemented improvements and an awards ceremony highlighting individual plant progress towards FY2006 action plan targets.

The remaining two days of the event included technical discussions, planning and information sharing between core environmental staff in North America to facilitate further progress towards established goals.

Environmental Conference

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2003 NORTH AMERICAN PRODUCTION ENVIRONMENTAL CONFERENCE
Manufacturing held its annual three-day environmental conference, a 13-year tradition, this past November at Toyota Motor Manufacturing Kentucky, Inc.’s Georgetown, Kentucky plant. Day One included the first jointly coordinated meeting with Toyota Motor Corporation’s Environmental Affairs Division to increase global standardization and the priority of environmental management. Yasuhito Yamauchi, TMC senior managing director in charge of global production and environmental management, chaired the proceedings.

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Team Member Jennifer Tieu checks robots applying Polyvinyl Chloride to cars at Toyota Motor Manufacturing, Canada, Inc., Cambridge, Ontario. Toyota reprogrammed the robots to eliminate excess material dripping onto the floor.

**PLANT ACTIVITIES**

Across North America Toyota facilities are continuously seeking ways to improve environmental performance and reduce the potential environmental impacts of their operations. Here is a sampling of some of our current and on-going activities:

**Bodine Aluminum, Inc.** — In St. Louis and Troy, Missouri, Bodine reduced landfill of hazardous waste by 98 percent. The plant recycles aluminum dust from melting operations and sends its waste foundry sand to a cement kiln for use in making concrete. Bodine recycles almost five tons per month of paper and cardboard, and began a recycling program for plastic soda bottles.

**Canadian Autoparts Toyota, Inc. (CAPTIN)** — In Delta, British Columbia, CAPTIN participates in the Power Smart Program. Under terms of the program, CAPTIN is reducing its use of energy and procuring some of its electricity from green sources. CAPTIN also phased out the use of dichloromethane, (used to clean painting fixtures) because it is on the Toyota banned chemical list.

**New United Motor Manufacturing, Inc. (NUMMI)** — In Fremont, California, NUMMI won a waste reduction award for reducing non-hazardous waste for the fourth straight year. In addition, NUMMI completed a plant-wide re-lamping project that saves 12.5 million kWh of electricity per year.

**Toyota Motor Manufacturing, Alabama, Inc. (TMMAL)** — In Huntsville, Alabama, TMMAL, our newest manufacturing facility, started up as a zero waste-to-landfill facility. To make this possible, TMMAL made it easier for team members to collect paper, plastic, cardboard and other recyclable materials. The plant installed a briquetter that makes it easier to recycle metal sludge that might otherwise have ended up in a landfill. TMMAL participates in the City of Huntsville’s waste-to-energy program. Waste that can’t be recycled is trucked to a city facility that burns it to create energy. TMMAL designed the plant’s lighting, heating, ventilation and air conditioning units and chilled water systems to conserve energy.

**TABC, Inc.** — In Long Beach, California, TABC decreased water consumption by reusing reject water from a reverse osmosis unit in other, non-critical processes. TABC was one of Toyota’s first plants to reach its hazardous waste reduction target, and is currently using Toyota “5Rs” Program for Waste Reduction to reduce landfill disposal of non-hazardous wastes.

**Toyota Motor Manufacturing, Canada, Inc. (TMMC)** — In Cambridge, Ontario, TMMC installed a new waterborne paint system in its Lexus RX 330 body paint shop to reduce emissions of volatile organic compounds. TMMC recycles paint sludge for use in making plastic highway guard-rail insulators and parking lot blocks, and reprogrammed robots applying Polyvinyl Chloride, PVC, to the underside of our vehicles, eliminating excess PVC that dripped onto the floor and, previously, went to landfill. TMMC also installed new air compressor controls, reducing energy use by approximately 15 percent. The plant also installed waterless urinals, reducing water usage by 51,000 gallons per month.

**Toyota Motor Manufacturing, Kentucky, Inc. (TMMK)** — In Georgetown, Kentucky, TMMK refurbished the paint shop in Plant One which is projected to reduce VOC emissions by nearly 30 percent. The plant created Earth Care Centers to improve segregation of recyclable materials, and diverted more than 120 tons of plastic, cardboard, paper, glass and other items from landfill. In addition, TMMK is implementing pilot projects to reduce waste and recycle/reuse wastewater and reduce the use of water. Finally, Toyota is developing TMMK as a model plant for energy reduction in paint shops.

**Toyota Motor Manufacturing, Indiana, Inc. (TMMI)** — In Princeton, Indiana, TMMI focused on reducing energy use during non-productive times and equipped its new East Plant with a waterborne cartridge painting system that reduces emissions of volatile organic compounds.

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**Toyota Motor Manufacturing, West Virginia, Inc., (TMMWV)** — In Buffalo, West Virginia, TMMWV completed initial implementation of a zero waste-to-landfill program at the plant; currently no wastes are being disposed in landfills. To achieve the goal, the plant improved its material segregation techniques, installed a bailer to make recycling of plastics more practical and installed a briquetter to recycle metal sludge. TMMWV ships wastewater sludge to a cement kiln for use in making concrete. Toyota is developing TMMWV as a model plant for energy reduction, with emphasis on reducing energy used between shifts and enhancing the compressed air control system.

“Besides the obvious benefits of increasing environmental awareness ... there are real cost savings that can and are being achieved as a result of this program.”

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Our sales and distribution organization in the United States (Toyota Motor Sales, U.S.A., Inc.), in Canada (Toyota Canada Inc.) and in Mexico (Toyota de Mexico) is responsible for sales, marketing, distribution, service and parts support for Toyota, Lexus and Scion* products in North America.

As with all areas of our business, Toyota continually seeks to minimize the environmental impacts of the above activities — emissions, packaging wastes, consumption of water and energy resources, etc. The following section discusses our progress and additional targets.

**GOAL: ESTABLISH AN ENVIRONMENTAL MANAGEMENT SYSTEM**

Rigorous environmental management systems help us integrate environmental awareness into long-term and short-term business strategies as well as everyday operations. They also help us achieve progress against our environmental goals and targets and make it easier to track our performance.

In the United States, we plan to attain ISO 14001 registration at all appropriate facilities, including vehicle distribution and parts distribution facilities by FY2005. We also intend to establish environmental management requirements for sites not covered in our ISO 14001 program.

In 2001, our Canadian sales and distribution headquarters in Scarborough, Ontario, became one of the first Toyota administration offices in the world to achieve ISO 14001 certification/registration. This achievement established the foundation on which we have been building towards our Canadian goal of ISO 14001 certification/registration at all vehicle and parts distribution centers by end of FY2003, and at all other facilities across Canada by FY2004.

**TARGET: ISO 14001 CERTIFICATION/REGISTRATION AT ALL PARTS AND VEHICLE DISTRIBUTION CENTERS BY FY2005 IN THE UNITED STATES AND BY FY2003 IN CANADA**

We remain on schedule to meet our ISO 14001 certification/registration goal. 18 of 21 North American parts and vehicle distribution centers have been ISO 14001 certified/registered. We also actively encourage our after-market parts and accessories suppliers to implement an environmental management system wherever possible.

In early 2003, we surveyed these suppliers and found that 49 percent of them had obtained ISO 14001 certification/registration and an additional 33 percent were in the process of obtaining ISO 14001 certification/registration. As part of our effort to communicate with suppliers on environmental issues, we invited the Toyota Motor Sales Supplier Alliance to send representatives to our Annual Compliance Conference in February 2003; at the conference, they presented an overview of some of their member companies’ environmental activities.

**GOAL: PROMOTE EXCELLENCE IN HANDLING AND TRANSPORTING HAZARDOUS MATERIALS/DANGEROUS GOODS**

Some of our vehicle components we ship in North America, such as air bag modules, seat-belt pretensioners, paint and refrigerants, are considered hazardous materials, or HAZMAT, designated as “dangerous goods” in Canada. We must receive, store and ship these materials safely and in compliance with all applicable regulations.

Our comprehensive HAZMAT/dangerous goods compliance plan aims to keep us 100 percent in compliance and to establish the best practices in our industry, while protecting our customers, associates, the community and the environment.

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"Toyota’s at the leading edge of cars with dramatic new technology that will offer plenty of power, high mileage and little or no pollution."

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“Toyota’s at the leading edge of cars with dramatic new technology that will offer plenty of power, high mileage and little or no pollution.”

— Jim Press, Executive Vice President and Chief Operating Officer, Toyota Motor Sales, U.S.A., Inc.
Toyota is exploring opportunities to use renewable energy sources. As a first step, we are using photovoltaic solar panels on our new Torrance, Calif., South Campus buildings.

**TARGET: IMPLEMENT NATIONWIDE WASTE-TRACKING PROGRAM**

We implemented a Web-based waste-tracking system in the United States that makes it easier to collect and analyze data. In Canada, we’re considering a similar waste-tracking program for the future, where it will enable us to set waste-reduction targets for our Canadian facilities.

The electronic system generates automatic e-mail reminders each month requesting waste and recycling information from each sales and distribution site. Our environmental site coordinators enter the data on a central Web site and the system generates reports that enable us to analyze data at the site, business unit and entity-wide level. Toyota plans to incorporate this data into its worldwide tracking of logistics and supply waste-management metrics in FY2004.

**TARGET: SET NATIONWIDE WASTE-REDUCTION TARGETS**

In the United States, we will have comprehensive nationwide waste-reduction targets in place in FY2004. Each group within the organization is contributing to the development of the targets. Some have collected necessary data and set baseline levels, while others are still working on them. We expect to roll out the full waste-reduction program for our supply and logistics operations in FY2005. At that time we will conduct training and other educational activities to make people aware of the new targets, and what they can do to help achieve them.

As part of this on-going process, our U.S. parts distribution centers have already established a waste baseline and reduction target for their operations. Historically, parts distribution operations have generated 4,000 pounds of solid waste per million dollars’ worth of parts distributed. Our centers have set a goal to reduce that by 10 percent by the end of FY2004.

As already reported here and in earlier environmental reports, many of our facilities have set individual facility targets, and are meeting their objectives. However, these will be incorporated into a fully comprehensive waste-reduction program in FY2005.

Toyota Motor Sales, U.S.A., Inc.’s nationwide computer recycling program, in FY2003, diverted approximately 278,916 pounds of computer equipment from landfills — desktops, laptops, monitors, servers, printers and other miscellaneous electronic equipment — an increase of almost 40 percent over the FY2002 figure.

Proper disposal or recycling of computer and related equipment is of particular importance, since most IT equipment contains hazardous materials/dangerous goods such as lead and other toxins that have the potential to pollute water supplies. In addition, storage devices such as hard drives can contain sensitive corporate information, which must be completely erased from the storage device before recycling or disposal.

**TARGET: MAINTAIN 100 PERCENT COMPLIANCE WITH ALL APPLICABLE HAZMAT/DANGEROUS GOODS REGULATIONS**

We achieved this target in 2002, for the fifth consecutive year, in both Canada and the United States. However, we continue to strive to further improve our systems and processes in coordination with all of our affiliates in North America.

**GOAL: REDUCE WASTE AND CONSERVE RESOURCES**

As in other areas, reducing waste and conserving resources are high priority concerns. Our five-year environmental action plan sets four key targets for waste management.

**ISO 14001 Certification/Registration Status**

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Legend:
- VDC means Vehicle Distribution Center
- PDC means Parts Distribution Center
- NAPC means North American Parts Center

*These sites are certified at the adjacent Toyota assembly plant.

We also play an active role in industry associations including The Council of the Safe Transport of Hazardous Articles; The Dangerous Goods Advisory Council; and the North American Automotive Hazard Action Committee, comprising automotive manufacturers and suppliers of related parts. Within these associations, we share best practices and assist others in presenting the industry’s position regarding future legislation.

**RIVER CLEAN-UP IN PUERTO RICO**

Samuel Iván Alejandro Rivero, a local student in Puerto Rico, expressed concern over the number of old cars and debris dumped in the Río Indio River. Toyota of Puerto Rico heard about the story through a local environmental group, Yo Limpia a Puerto Rico. Toyota worked with the group to clean up the river, spending $100,000 to remove the waste material. The action attracted positive attention from local politicians, as well as the Puerto Rico Departments of Transportation and Environmental Protection. In this photograph, Samuel and Mauro Davila, president of Toyota de Puerto Rico, enjoy the cleaner river.
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This is our third waste-management target and we were successful in achieving it. In FY2003, our parts distribution centers saved 536,270 pounds of cardboard and 1,679,014 pounds of wood, saving more than $1 million in the process. We made significant progress in preparing to establish a returnable packaging program, thanks to the active participation of our large-parts centers and regional parts distribution centers, as well as three additional distributors: Gulf States Toyota, Inc., Southeast Toyota Distributors, LLC and Toyota Canada Inc. Our current “closed loop” program utilizes returnable packaging among facilities in the same geographic region of the country, but not between facilities in different regions. In FY2004, we will launch an “open loop” returnables program that will enable us to link many more facilities, adding considerably to the use of returnable packaging within the organization. (see Figure Y above). We estimate this will enable us to save an additional two million pounds of cardboard, 800,000 pounds more cardboard and 77,000 pounds of wood and more than $250,000.

GOAL: REDECE GREENHOUSE GASES
Toyota is strongly committed to reducing energy use. As a first step, we set a target to establish an energy usage database, updated monthly, for all sales and distribution facilities. We have achieved the target, and after analysis of data generated by the database, we have set an energy reduction target for our sales and distribution facilities in the United States.

TARGET: INCREASE RETURNABLE PACKAGING AND DIRECT SHIPMENT PROGRAMS TO VEHICLE DISTRIBUTION CENTERS
We also achieved the fourth and last waste-management target. Three direct shipment programs were created using returnable containers for the distribution of carpet mats used in the Camry, Sienna and RAV4. We also made improvements in bulk shipments and packaging for vehicle distribution centers in 2003. The kaizen, or continuous improvement, saved more than 92,000 pounds of cardboard, 77,000 pounds of wood and more than $1.8 million in gross packaging costs.

GOAL: REDUCE ENERGY USE
In FY2004, we will launch a protocol developed by the World Resources Institute and the World Business Council on Sustainable Development. The scope of the inventory includes GHG emissions from electricity use and natural gas use; and indirect sources such as business travel, employee commuting, and vehicle parts and logistics activities. Our greenhouse gas inventory measures tons of GHG emissions on an absolute and normalized basis.

Our logistics operation is complex, involving shipment of both fully-assembled vehicles and individual parts and components by road, rail, ship and air transport systems, some independent and some Toyota-owned. This complexity makes measuring our GHG emissions a challenging task. However, having created a successful model, we are now evaluating established environmental activities where GHG-reduction targets will be most effective.

For example, we are evaluating a potential emissions reduction technology for the trucks that deliver our new vehicles to dealers. In January 2003, Toyota Transport, our in-house vehicle logistics group, installed and began testing a new fuel catalyst on some of our transport trucks to see if the catalyst can reduce a range of emissions, namely carbon dioxide, carbon monoxide, nitrogen oxides and particulate matter. If the results are positive, we’ll consider installing the device on all 55 in-house trucks.

We are also looking at how our energy use goal and projects such as the photovoltaic solar energy rooftop system at our Torrance, California, South Campus headquarters complex fit into our overall action plan for managing GHG emissions.

T oyota Distributors, LLC and T oyota Canada Inc.

One of our Toyota dealerships, Bev Smith Toyota, Ft. Pierce, Florida, received the first St. Lucie County Commercial Recycling Partnership Award. The award recognized the dealership efforts to recycle waste paper, cardboard, aluminum cans, plastic bottles, etc. Bev Smith Toyota reduced solid waste sent to the local landfill by approximately 50 percent, eliminating an eight cubic yard container and reducing expenses.

BEV SMITH TOYOTA REWARDED FOR RECYCLING EFFORTS

Environmental Report 2003

In April 2003, Novato Toyota, Inc., a dealership located in Novato, California, received the “Marin County Green Business Certificate of Compliance” from The Bay Area Green Business Program. To receive certification, the dealership had to be in compliance with all regulations and meet program standards for conserving resources, preventing pollution and minimizing waste. In addition to meeting the criteria, Novato Toyota provides customers with a Price as a toliner vehicle while their cars are being serviced.

The Bay Area Green Business Program is a partnership of environmental agencies and utilities that assists, recognizes and promotes businesses and government agencies that volunteer to operate in a more environmentally responsible way.
In FY2004, we will launch an open loop returnable packaging program that will enable us to link many more facilities, across the organization (see Figure Y above). We estimate this will enable us to save an additional two million pounds of wood, 800,000 pounds more cardboard and 77,000 pounds of wood and more than $250,000. We accomplished these savings by installing the device on all 55 in-house trucks.

GOAL: REDUCE GREENHOUSE GASES

Last year, in the United States, as a first step in developing a greenhouse gas reduction strategy, we set a target of compiling an inventory of greenhouse gases, often abbreviated as GHG, by FY2004. We achieved the target, using a protocol developed by the World Resources Institute and the World Business Council on Sustainable Development. The scope of the inventory includes GHG emissions from electricity use and natural gas use; and indirect sources such as business travel, employee commuting, and vehicle parts and logistics activities. Our greenhouse gas inventory measures tons of GHG emissions on an absolute and normalized basis.

Our logistics operation is complex, involving shipment of both fully-assembled vehicles and individual parts and components by road, rail, ship and air transport systems, some independent and some Toyota-owned. This complexity makes measuring our GHG emissions a challenging task. However, having created a successful model, we are now evaluating established environmental activities where GHG-reduction targets will be most effective. For example, we are evaluating a potential emissions reduction technology for the trucks that deliver our new vehicles to dealers. In January 2003, Toyota Transport, our in-house vehicle logistics group, installed and began testing a new fuel catalyst on some of our transport trucks to see if the catalyst can reduce a range of emissions, namely carbon dioxide, carbon monoxide, nitrogen oxides and particulate matter. If the results are positive, we’ll consider installing the device on all 55 in-house trucks.

We are also looking at how our energy use goal and projects such as the photovoltaic solar energy rooftop system at our Torrance, California, South Campus headquarters complex fit into our overall action plan for managing GHG emissions.
GOAL: PROMOTE ENVIRONMENTAL RESPONSIBILITY AMONG DEALERS

There are more than 1,400 franchised Toyota and Lexus dealerships in the United States, and 233 across Canada, operating as independent businesses. We support and encourage their efforts in pursuing environmental excellence.

TARGET: ADD ENHANCED FEATURES TO THE ENVIRONMENTAL ASSISTANCE NETWORK

Launched in the United States in 2001, the Environmental Assistance Network, or EAN, provides dealers with an easy-access resource and planning tool, which supplies information from federal, state and many local regulatory agencies in one convenient location. Over the course of the past year, the EAN Web site has seen numerous improvements including additions to state and local regulatory content and improved navigation for the AWARE newsletter.

This year we focused on tracking and expanding use of the Web site, which continues to increase. Service managers and parts directors use the site regularly. Since the beginning of the year we have averaged 50 visitors per week, who spend approximately 10 minutes per visit. Some use EAN to determine critical storage requirements for coolants, chemicals and oils, while others use the site as a tool to build facility equipment requirements for things like waste, diverting 410 tons of solid waste from landfills. In addition, more than 80 percent of the construction materials contain recycled content. For example, all Toyota and Lexus dealerships across Canada by 2004.

We are developing province-specific posters and brochures for our Canadian dealerships that help employees understand their responsibilities regarding environmental regulatory compliance. We will also be publishing a quarterly newsletter, with pertinent regulatory compliance information. We’ll forward it to our dealers via Infostream, a communication tool we developed to pass information to and from our dealerships.

We also offer dealers assistance in running environmentally sound businesses, including:

• Providing general information to dealers on the proper procedures for transporting, handling, storing and disposing of dangerous goods;
• Establishing a nationwide lead-acid battery program to recover batteries from our Canadian dealers;
• Establishing an oil recovery program in the provinces of Alberta, Saskatchewan, Manitoba, and British Columbia to collect and recycle used oil, oil filters and oil containers from dealerships.

We are looking at opportunities to expand this program. For example, the province of Ontario should begin its program by 2004.

• Offering a subsidy on the price of new oil to help dealers pay the cost of properly disposing of used oil;
• Establishing a nationwide collection and recycling program for nickel-metal hydride batteries from Prius hybrid vehicles.

GOAL: PROMOTE GREENER BUILDING CONSTRUCTION AND MAINTENANCE OPERATIONS

Toyota Motor Sales has developed Process Green (see page 18 for a more complete discussion) to ensure that we use practices and products that are sustainable, address end-use cost and meet business needs in a socially responsible manner. The process includes building systems and materials, as well as products used by the custodial staff.

TARGET: DEVELOP SUSTAINABLE OPERATIONS STANDARDS FOR TOYOTA MOTOR SALES, U.S.A., INC.’S FACILITIES

We want to continue implementing these types of Process Green initiatives in other projects. Consequently, we established a new target: Develop sustainable operations standards for all Toyota sales and distribution facilities. Toyota develops an environmental strategy for every new building or renovation project before work begins.

To improve the sustainability of our maintenance operations, we worked with our maintenance business partner to eliminate 45 of 60 different cleaning agents used at our headquarters complex. We also decreased waste by installing a new dispensing system for concentrated cleaning solutions and introduced 11 Green Seal-certified cleaning products. We’re currently evaluating other supplies such as plastic garbage liners, bathroom paper products and hand soaps.

TARGET: ACHIEVE LEED™ CERTIFICATION FOR THE UNITED STATES SALES HEADQUARTERS SOUTH CAMPUS COMPLEX BUILDINGS BY THE END OF 2003

We achieved this goal, which illustrates Process Green at work. In 2003, our South Campus headquarters complex in Torrance, California, received the Gold Leadership in Energy and Environmental Design, LEED™, from the U.S. Green Building Council under its green building certification program. To date, our new facility is the largest Gold LEED-certified project in the United States.

The buildings include environmental building initiatives to eliminate greenhouse gases, reduce waste, consumption of water and energy. For example, we installed water saving features such as drip irrigation, drought-tolerant plantings, low-flow toilets and waterless urinals, etc. Together these improvements will conserve 11 million gallons of drinking water annually.

During the construction, we recycled 96 percent of the waste, diverting 410 tons of solid waste from landfills. In addition, more than 80 percent of the construction materials contain recycled content. For example, all structural steel is made from recycled metals — mostly from automobiles.

We installed a roof-mounted, 536 kW photovoltaic solar energy system that will generate enough electricity to power 500 homes each year of its 25-year lifespan, while reducing carbon dioxide emissions by as much as 167 tons annually, or 4,181 tons over the expected 25-year lifespan of the system.*

The buildings are free of formaldehydes and hydrochlorofluorocarbons, which are greenhouse gases. The elevators in the buildings use vegetable-based rather than petroleum-based hydraulic fluid.

*Based on the U.S. Environmental Protection Agency’s E-GRID2000 database using 1998 utility mix data.
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**TARGET: INTRODUCE TOYOTA ENVIRONMENTAL GUIDELINES TO THE CANADIAN DEALER NETWORK BY 2004**  
We’re developing an environmental strategy and guidelines to encourage environmental regulatory compliance at all Toyota and Lexus dealers across Canada by 2004.

We are developing province-specific posters and brochures for our Canadian dealerships that help employees understand their responsibilities regarding environmental regulatory compliance.

We will also be publishing a quarterly newsletter, with pertinent regulatory compliance information. We’ll forward it to our dealers via Infostream, a communication tool we developed to pass information to and from our dealerships.

We also offer dealers assistance in running environmentally sound businesses, including:

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We installed a rooftop-mounted, 336 kW photovoltaic solar energy system that will generate enough electricity to power 500 homes each year of its 25-year lifespan, while reducing carbon dioxide emissions by as much as 167 tons annually, or 4,181 tons over the expected 25-year lifespan of the system.*

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Through numerous initiatives on a global scale, Toyota is on the leading edge of reducing the environmental impact of automobiles at the end of their useful life. As part of this effort, in North America, Toyota is working to achieve a 95 percent vehicle recovery rate and to reduce our use of various Substances of Concern.

**TARGET: GATHER NORTH AMERICAN BASELINE DATA FOR SELECTED SUBSTANCES OF CONCERN**

Following last year’s Substances of Concern content analysis of the 2002 Camry, Toyota recently completed a similar study on the 2004 Solara Coupe. Both analyses will help us reduce use of Substances of Concern in the future design of our North American vehicles.

**TARGET: DEVELOP FUTURE NORTH AMERICAN SOC STRATEGY**

In accordance with the Toyota Recycle Vision, Toyota materials, design and production engineers in North America, Japan and Europe are establishing global standards for the reduction of Substances of Concern in all Toyota vehicles. In addition, the Vision’s aggressive goals for nearly eliminating four key Substances of Concern in various global regions will positively impact products introduced to the North American market.

In 2002, we set targets, specific to our North American vehicles, for eliminating, replacing or reducing use of critical Substances of Concern, including arsenic, hexavalent chrome, cadmium, mercury and lead. We successfully reduced use of Substances of Concern in the 2004 Solara and 2004 Sienna, compared with the previous generation vehicle. For example, we greatly reduced use of lead in the Solara by using a lead-free radiator and heater core, glass-black coating. Additionally, we used lead-free body electro-coat on both the Solara and Sienna.

**GOAL: DEVELOP RECYCLING DESIGNS AND PROMOTE EXPANDED USE OF RECYCLED MATERIALS**

The recyclability of an end-of-life vehicle depends on two key factors: the economics of handling the end-of-life vehicle and the initial design of the vehicle. The Toyota Recycle Vision encourages enhanced recyclable designs and promotes increased use of renewable resources and recycled materials.

**TARGET: INCORPORATE MATERIAL AND DESIGN STRATEGIES FOR INCREASED VEHICLE RECYCLABILITY**

Below are three recent North American activities which support our efforts toward reaching a 95 percent vehicle-recovery rate by FY2015.

- Development of recyclable designs for vehicles — We replaced the Polyvinyl Chloride instrument panel cover used in the 2003 Solara Coupe and 2003 Sienna minivan, with durable thermoplastic urethane in the North American designed and built 2004 models.

- Use of renewable resources — We expanded our use of kenaf, a natural material, in the composition of door-trim components. We are also evaluating the use of kenaf and a proprietary eco-plastic in future North American-designed vehicles.

- Expanded utilization of used parts (re-manufacturing parts for vehicle service applications) – In North America, Toyota has targets to consistently expand our existing remanufactured product lines and to develop additional product lines. During this reporting period, we added 170 additional remanufactured applications to our existing product lines.

“It is essential for Toyota as an automaker to... promote the creation of a sustainable, recycle-oriented society.”

—Toyota Recycle Vision, June 2003
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— Toyota Recycle Vision, June 2003
Toyota believes a great car company should not only make and sell quality vehicles, but also be a powerful engine for positive change. That’s why we continuously challenge ourselves to find ways to reduce the environmental impact of our operations and products. And why we partner with cultural, civic, educational and environmental organizations to support programs that help make our world a better place.

In North America, Toyota supports a range of leading community associations and activities. Each year we invest millions of dollars in projects that enrich the communities where we do business. We make additional investments through our foundations: The Toyota U.S.A. Foundation provides one-time grants to pioneering K-12 mathematics and science programs; and The Toyota Canada Foundation supports scholarships as well as Earth Day Canada and Evergreen initiatives. Visit www.toyota.com or www.toyota.ca to learn more.

Here are some highlights of our activities specifically related to the environment:

**EARTH DAY**

On Earth Day, April 22, 2003, Toyota held an ECO Fair in Torrance, California, to raise employee awareness of our latest environmental programs. The fair featured exhibits by eight departments at Toyota on their environmental efforts, as well as by our environmental partners, including West Basin Water District, Audubon, Heal the Bay and the Marine Mammal Care Center. Approximately fifty local students from North High School in Torrance were also invited to spend Earth Day at Toyota. They participated in the ECO Fair, attended a workshop on hydrogen and hybrid vehicles, toured our hydrogen fueling station and witnessed the grand opening of the South Campus buildings.

We also sponsor the annual Race to Stop Global Warming, a series of races and walks across America, beginning on Earth Day. Throughout the year about 10,000 participants take part in this grassroots movement to stop global warming, administered by Green House Network.

Other 2003 Toyota Earth Day events around the country included:

- Donation of Prius sedans to six New England public television station auctions;
- Title sponsorship of an Earth Day Festival in Nashville, Tennessee;
- Prius “Ride and Drives” at the Florida State Capitol building.

As a principal sponsor of Earth Day Canada, Toyota helped plan a tree planting festival in Toronto, Ontario, and a downtown street clean-up in Montreal, Quebec. Also in Canada, we launched the Toyota Earth Day Scholarship Program which awards $5,000 to 10 graduating high school students entering colleges or universities who have achieved academic excellence in their secondary school studies and who have distinguished themselves in environmental community service.

**ENVIRONMENTAL PARTNERSHIPS WITH STAKEHOLDERS**

No single company can solve complex global issues on its own. But we can make progress by partnering with government and non-profit organizations, schools, universities and other enterprises to support programs that help make our communities and our world cleaner, healthier and more livable. The following are a sampling of some of these partnerships:
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*Main:* On Arbor Day in Nebraska City, Nebraska, Emily Pfeifer learns about the importance of trees thanks to the National Arbor Day Foundation, supported by Toyota.

*Inset:* Lied Lodge and Conference Center, on the Arbor Day Farm, Nebraska City, Nebraska. The center, created with recycled materials, offers educational programs. (Visit www.liedlodge.org for more information.)

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“By balancing our social and economic initiatives, ...Toyota hopes to contribute to the realization of a sustainable society.”

— Fujio Cho, President, Toyota Motor Corporation
Team members from New United Motor Manufacturing, Inc., Fremont, California, help a local wildlife organization.

ToYota North America Holders

Canadian Environmental Awards

In September, Toyota sponsored the first-ever Canadian Environmental Awards, presented in Hull, Quebec. The awards, developed by Canadian Geographic Enterprises and the Canadian government, recognize individuals and groups who protect, restore and preserve Canada’s environment.

As part of these awards, Toyota also sponsors junior and senior winners of The Green Team Challenge, recognizing outstanding school and community-based projects that demonstrate the role of youth as environmental stewards.

Industry Partnerships

We value cooperation with other companies in developing technologies that will benefit the environment. For example:

• Exxon-Mobil, to develop more efficient internal combustion engines, hybrids and fuels for lower emission vehicles;
• General Motors, to jointly develop alternative propulsion methods and hybrid technologies;
• Nissan, to supply state-of-the-art hybrid system components and discuss future joint development.

Non-Profit Organizations

Audubon

Toyota’s $2 million contribution to Audubon established an Endowment Fund for Environmental Education for the organization’s first urban education centers in New York and Los Angeles. The center in New York’s Prospect Park in Brooklyn, provides New York City children and their families with hands-on nature and education experiences. In Los Angeles, the Debs Park urban center is scheduled to open in the fall of 2003.

Ccar-Greenlink

Provides information about environmental regulatory issues and waste stream management to dealerships.

Evergreen

Evergreen is a national, non-profit environmental organization whose mission is to bring communities and nature together. In 2000, we pledged CAN$1.8 million over three years to help Evergreen establish the Toyota Evergreen Learning Grounds program in Canada, and recently extended our commitment for three more years.

In 2002, we distributed CAN$100,000 in grants to help 87 schools purchase native trees, shrubs and plants to turn asphalt and turf school grounds into inviting natural play and learning spaces. Our dealerships participated in check presentations and community planting events at local schools.

Friends of the Rouge Watershed

Toyota has contributed CAN$75,000 and a T100 4X4 pickup truck to the Friends of the Rouge Watershed, a community-based conservation group in Scarborough, Ontario. Each June, Toyota associates volunteer to plant wild flowers and install raptor posts (towers used as hunting perches by birds of prey) at the Beare Road Landfill — a former dumpsite that the conservation group is rehabilitating.

The National Arbor Day Foundation

Toyoha and The National Arbor Day Foundation partner on projects focusing on educating youth and communities about the importance of trees, Arbor Day and environmental stewardship.

We sponsor the Foundation’s annual Arbor Day National Poster Contest, reaching 1,750,000 fifth graders, in 47 states. Under the theme, “Trees are Terrific from Acrorn to Oak,” hands-on activities helped demonstrate the unique characteristics that differentiate oaks from other trees.

We also support an Arbor Day Video, “Grow Your Own Tree” classroom activity kits and a “Tree Planting Resource Kit for Volunteers.”

National Environmental and Education Training Foundation

In partnership with the National Environmental and Education Training Foundation, Toyoha has been title sponsor of National Public Lands Day for the past five years.

In 2003, National Public Lands Day brought together 80,000 volunteers from across the country to improve the country’s largest natural resource — its public lands. Volunteer efforts combined with contributions of food, tools and equipment resulted in more than $10 million of improvements.

Nearly 2,200 Toyoha employees, their families and friends turned out to “lend their hands to America’s lands” at 25 sites where many of our offices, dealerships, parts centers and manufacturing plants are located.

National Science Teachers Association

In partnership with the National Science Teachers Association, the Toyoha TAPtrey Program provides 50 annual grants of up to $10,000 each and 20 mini-grants of up to $2,500 each to K-12 science teachers nationwide for innovative classroom environmental and physical science, as well as literacy and science education projects.

The World Wildlife Fund

The World Wildlife Fund, Toyoha and the University of Colorado jointly developed the Galapagos Sustainable Energy Initiative. The ultimate goal is to create a renewable, non-polluting energy supply for the Galapagos Islands through a series of projects and investments in the islands’ power supply, transportation, fishing and tourism sectors.

Additional Local Plant Initiatives

Across North America, Toyoha’s manufacturing facility employees help improve their local communities. A few examples are below:

• Bodine Aluminum, Inc. — In Troy and St. Louis, Missouri, Bodine volunteers participated in National Public Lands Day, creating a habitat for endangered shorebirds at the Hayward Regional Shoreline; participated in Audubon’s San Francisco Bay Restoration Project; and helped a local high school to establish a recycling program (see sidebar on page 56).
• New United Motor Manufacturing, Inc. (NUMMI) — NUMMI volunteers took part in National Public Lands Day, creating a habitat for wildlife, at 25 sites.
• Toyota Motor Manufacturing Canada, Inc. (TMMC) — In Cambridge, Ontario, TMMC hosted an annual open house for Waterloo Region educators. Principals and teachers spent a day learning about its water recycling system, attending a Prius demonstration and taking an environmentally focused plant tour. In support of School Earth Week, TMMC also donated “Kindness to the earth” themed merchandise to local schools.
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**INDUSTRY PARTNERSHIPS**
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**ADDITIONAL LOCAL PLANT INITIATIVES**

Across North America, Toyota’s manufacturing facility employees help improve their local communities. A few examples are below:

- **Bodine Aluminum, Inc.** — In Troy and St. Louis, Missouri, Bodine volunteers participated in National Public Lands Day, restoring native prairie grass at a local state park.
- **New United Motor Manufacturing, Inc. (NUMMI)** — NUMMI volunteers took part in National Public Lands Day, creating a habitat for endangered shorebirds at the Hayward Regional Shoreline; participated in Audubon’s San Francisco Bay Restoration Project; and helped a local high school to establish a recycling program (see sidebar on page 56).
- **TABC Inc.** — In Long Beach, California, TABC volunteers participated in National Public Lands Day and other community projects.
- **Toyota Motor Manufacturing Canada, Inc. (TMMC)** — In Cambridge, Ontario, TMMC hosted an annual open house for Waterloo Region educators. Principals and teachers spent a day learning about its water recycling system, attending a Prius demonstration and taking an environment-mentally focused plant tour. In support of School Earth Week, TMMC also donated “Kindness to the earth”-themed merchandise to local schools.
The partnership continues. At NUMMI, Alter is developing recycling projects around the plant. NUMMI is also helping Alter create lessons tying recycling processes into the high school curriculum. The plant continues to help her write grants and create additional waste reduction goals for the school.

**Toyota Motor Manufacturing, Indiana, Inc. (TMMI)** — In Princeton, Indiana, TMMI volunteers took part in environmental activities at Earth Aware Camp at Camp Carson, the Butterfly Retreat at North Woods Nature Trail and River Sweep, a litter clean-up project along the Ohio River.

**Toyota Motor Manufacturing, Kentucky, Inc. (TMMK)** — In Georgetown, Kentucky, TMMK sponsored the Full Hall Roundup of household hazardous waste for the eighth consecutive year. The program has enabled more than 160,000 pounds of waste collection since 1992. TMMK also supported the Living Stream Exhibit at the Louisville Science Center. TMMK volunteers also took part in National Public Lands Day and other community clean-up projects.

**ENVIRONMENTAL AWARDS**

Over the years, Toyota's efforts to reduce the environmental impact of our products, processes and facilities have been recognized. Here are some of our most recent awards:

- Prius: "Clean Air Choice of Earth Day Canada," 2002, from Earth Day Canada;
- "President’s Circle Award 2003," from the American Lung Association; Gold LEED™ (Leadership in Energy and Environmental Design) Award, 2003, from the United States Environmental Protection Agency and Resources Canada, in partnership with the state and Consumer Services Agency, in partnership with the state and Consumer Services Agency; for Toyota’s South Campus buildings, Torrance, California;
- "Green Power Leadership award", 2003, from the U.S. EPA, the U.S. Department of Energy, and the Center for Resource Solutions for on-site generation of renewable electricity at Toyota’s new South Campus Buildings, Torrance, California;
- "Most Improved Permittee" Award, 2003, from the Port of Long Beach to Toyota’s Vehicle Distribution Center in Long Beach, California, for participation in the port’s Master Storm Water Program;
- "Waste Reduction Award," 2003, from the California Integrated Waste Management Board, for programs at New United Motor Manufacturing, Inc. and Toyota’s North American Parts Center;
- "Most Fuel-Efficient Production Sedan, (Toyota Prius) from The Northeast Sustainable Energy Association;"

**NUMMI PARTNERS WITH HIGH SCHOOL ON RECYCLING PROGRAM**

During the summer of 2002, the Environmental Affairs Division of New United Motor Manufacturing, Inc. (NUMMI), Fremont, California, helped chemistry teacher Mindy Alter develop a sustainable recycling program at James Logan High School, in nearby Union City. Alter came to NUMMI through the Industry Initiative for Science and Math Education, a Bay Area non-profit organization that places teachers in summer jobs at local companies.

NUMMI connected Alter with local recycling organizations, helped her write successful grant proposals and provided promotional ideas for the program. Alter helped NUMMI develop ways to reduce and recycle solid wastes from the manufacturing process. Alter’s recycling program was a success. James Logan High, a school of almost 4,300 students, was able to reduce its waste output by 40 percent in the program’s first three weeks.

The partnership continues. At NUMMI, Alter is developing recycling projects around the plant. NUMMI is also helping Alter create lessons tying recycling processes into the high school curriculum. The plant continues to help her write grants and create additional waste reduction goals for the school.

**LIST OF ACRONYMS**

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAM</td>
<td>Alliance of Automobile Manufacturers</td>
</tr>
<tr>
<td>As</td>
<td>Arsenic (a Substance of Concern)</td>
</tr>
<tr>
<td>AT-PZEV</td>
<td>Advanced Technology Partial Zero Emission Vehicle</td>
</tr>
<tr>
<td>CAFF</td>
<td>Corporate Affordability Fund</td>
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<tr>
<td>CAFP</td>
<td>Corporate Affordability Fund Program</td>
</tr>
<tr>
<td>CARB</td>
<td>California Air Resources Board</td>
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<td>CCAR®</td>
<td>Coordinating Committee for Automotive Repair</td>
</tr>
<tr>
<td>Cd</td>
<td>Cadmium (a Substance of Concern)</td>
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<tr>
<td>Co</td>
<td>Carbon Monoxide</td>
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<tr>
<td>CO2</td>
<td>Carbon Dioxide</td>
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<tr>
<td>Co+6</td>
<td>Hexavalent Chrome (a Substance of Concern)</td>
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<tr>
<td>ED</td>
<td>Electric Deposition</td>
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<tr>
<td>EHS</td>
<td>Environmental Health and Safety</td>
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<tr>
<td>EPA</td>
<td>United States Environmental Protection Agency</td>
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<tr>
<td>ED</td>
<td>Electric Vehicle</td>
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<tr>
<td>FCHV</td>
<td>Fuel Cell Hybrid Vehicle</td>
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<td>FY</td>
<td>Fiscal Year</td>
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<tr>
<td>GHG</td>
<td>Greenhouse Gas</td>
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<tr>
<td>GPS</td>
<td>Global Positioning System</td>
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<tr>
<td>HAP</td>
<td>Hazardous Air Pollutant</td>
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<tr>
<td>HGM</td>
<td>Hazardous Materials (designated as &quot;Dangerous Goods&quot; in Canada)</td>
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<td>HC</td>
<td>Hydrocarbon</td>
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<td>HCFC</td>
<td>Hydrochlorofluorocarbons</td>
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<td>HEV</td>
<td>Hybrid Electric Vehicle</td>
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<tr>
<td>HG</td>
<td>Mercury (a Substance of Concern)</td>
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<tr>
<td>ISO</td>
<td>International Organization for Standardization</td>
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<tr>
<td>Kg</td>
<td>Kilogram</td>
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<tr>
<td>LEED™</td>
<td>Leadership in Energy and Environmental Design</td>
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<tr>
<td>LEV</td>
<td>Low Emission Vehicle</td>
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<tr>
<td>LEVII</td>
<td>California’s Second Generation Low Emission Vehicle Program</td>
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<tr>
<td>MGP</td>
<td>Miles per Gallon</td>
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<tr>
<td>MY</td>
<td>Model Year</td>
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<tr>
<td>N-MH</td>
<td>Nickel-Metal Hydride</td>
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<td>NMOC</td>
<td>Non-Methane Organic Gas</td>
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<td>NOW</td>
<td>Notice of Violation</td>
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<tr>
<td>NOx</td>
<td>Nitrogen Oxides</td>
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<tr>
<td>NPI</td>
<td>National Pollution Release Inventory (Canada)</td>
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<td>NWF</td>
<td>National Wildlife Federation</td>
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<tr>
<td>Pb</td>
<td>Lead (a Substance of Concern)</td>
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<tr>
<td>PDF</td>
<td>Portable Document Format</td>
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<tr>
<td>PZEV</td>
<td>Partial Zero Emission Vehicle</td>
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<tr>
<td>SOC</td>
<td>Substance of Concern</td>
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<tr>
<td>SULEV</td>
<td>Super Ultra Low Emission Vehicle</td>
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<tr>
<td>TRI</td>
<td>Toxic Release Inventory (United States EPA)</td>
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<tr>
<td>ULEV</td>
<td>Ultra Low Emission Vehicle</td>
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<tr>
<td>VOC</td>
<td>Volatile Organic Compound</td>
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<tr>
<td>ZEV</td>
<td>Zero Emission Vehicle</td>
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<tr>
<td>ZEVNET</td>
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**TOYOTA-SPECIFIC ACRONYMS**

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<tbody>
<tr>
<td>CAPTIN</td>
<td>Canadian Auto Parts, Inc.</td>
</tr>
<tr>
<td>EAN</td>
<td>Environmental Assistance Network</td>
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<tr>
<td>EDS</td>
<td>Environmental Data Sheet</td>
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<tr>
<td>HSD</td>
<td>Hydro Synergy Dive</td>
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<tr>
<td>NAREC</td>
<td>North American Electric Cooperative</td>
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<tr>
<td>NAPM</td>
<td>North American Planning Meeting</td>
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<tr>
<td>NUMMI</td>
<td>New United Motor Manufacturing, Inc.</td>
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<tr>
<td>PDC</td>
<td>Parts Distribution Center</td>
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<tr>
<td>REI</td>
<td>Real Estate and Facilities Department</td>
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<tr>
<td>TCI</td>
<td>Toyota Canada Inc.</td>
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<tr>
<td>TFS</td>
<td>Toyota Financial Services</td>
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<tr>
<td>TLS</td>
<td>Toyota Logistics Services</td>
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<tr>
<td>TSB</td>
<td>Toyota Hybrid System</td>
</tr>
<tr>
<td>TMA</td>
<td>Toyota Motor North America, Inc.</td>
</tr>
<tr>
<td>TMC</td>
<td>Toyota Motor Corporation</td>
</tr>
<tr>
<td>TMMAL</td>
<td>Toyota Motor Manufacturing, Alabama, Inc.</td>
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<tr>
<td>TMMK</td>
<td>Toyota Motor Manufacturing, Kentucky, Inc.</td>
</tr>
<tr>
<td>TMMI</td>
<td>Toyota Motor Manufacturing, Indiana, Inc.</td>
</tr>
<tr>
<td>TMMK</td>
<td>Toyota Motor Manufacturing, Kansas, Kentucky, Inc.</td>
</tr>
<tr>
<td>TMMMA</td>
<td>Toyota Motor Manufacturing, North America, Inc.</td>
</tr>
<tr>
<td>TMMBV</td>
<td>Toyota Motor Manufacturing, West Virginia, Inc.</td>
</tr>
<tr>
<td>TMS</td>
<td>Toyota Motor Sales, U.S.A., Inc.</td>
</tr>
<tr>
<td>TSP</td>
<td>Toyota Super Olefin Polymer</td>
</tr>
<tr>
<td>TUC</td>
<td>Toyota Technical Center, U.S.A., Inc.</td>
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<td>VDC</td>
<td>Vehicle Distribution Center</td>
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- General Toyota environmental information: www.toyota.com and/or www.toyota.ca
- Toyota environmental updates: www.toyota.com/about/environment/news/index.html
- Toyota environmental technology: www.toyota.com/about/environment/technology/index.html
- Toyota manufacturing facilities and information: www.toyota.com/about/manufacturing/index.html
- Toyota Supplier Environmental Guidelines: www.toyota.com/about/environment/manufacturing/supplier.html
- Toyota in the community: www.toyota.com/about/community/index.html
- Toyota environmental awards: www.toyota.com/about/environment/awards/index.html

For additional information or comments, please contact: TOYOTA MOTOR NORTH AMERICA, Inc. – Environmental Report Manager - 1850 M Street NW, Suite 600 Washington, DC 20036 - Email: environmentalreport@tma.toyota.com

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- Toyota environmental technology: www.toyota.com/about/environment/technology/index.html
- Toyota manufacturing facilities and information: www.toyota.com/about/manufacturing/manufacturerinfo.html
- Toyota Supplier Environmental Guidelines: www.toyota.com/about/environment/manufacturing/supplier.html
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- Toyota manufacturing facilities and information: www.toyota.com/about/manufacturing/manufacturerinfo.html
- Toyota Supplier Environmental Guidelines: www.toyota.com/about/environment/manufacturing/supplier.html
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- This North American Environmental Report: www.toyota.com/about/environment and www.toyota.ca/environment
- General Toyota environmental information: www.toyota.com and/or www.toyota.ca
- Toyota environmental updates: www.toyota.com/about/environment/news/index.html
- Toyota environmental technology: www.toyota.com/about/environment/technology/index.html
- Toyota manufacturing facilities and information: www.toyota.com/about/manufacturing/manufacturerinfo.html
- Toyota Supplier Environmental Guidelines: www.toyota.com/about/environment/manufacturing/supplier.html
- Toyota in the community: www.toyota.com/about/community/index.html
- Toyota environmental awards: www.toyota.com/about/environment/awards/index.html

For additional information or comments, please contact: TOYOTA MOTOR NORTH AMERICA, Inc. – Environmental Report Manager - 1850 M Street NW, Suite 600 Washington, DC 20036 - Email: environmentalreport@tma.toyota.com
During the summer of 2002, the Environmental Affairs Division of New United Motor Manufacturing, Inc. (NUMMI), Fremont, California, helped chemistry teacher Mindy Alter develop a sustainable recycling project at James Logan High School, in nearby Union City. After coming to NUMMI through the Industry Initiatives for Science and Math Education, a Bay Area non-profit organization that places teachers in summer jobs at local companies, NUMMI connected Alter with local recycling organizations, helped her write successful grant proposals, and provided promotional ideas for the program. After helped NUMMI develop ways to reduce and recycle solid wastes from the manufacturing process. Alter’s recycling program was a success. James Logan High, a school of almost 4,800 students, was able to reduce its waste output by 40 percent in the program’s first three weeks.

The partnership continues. At NUMMI, Alter is developing recycling projects around the plant. NUMMI is also helping Alter create lessons tying recycling processes into the high school curriculum. The plant continues to help her write grants and create additional waste reduction goals for the school.

NUMMI PARTNERS WITH HIGH SCHOOL ON RECYCLING PROGRAM

Toyota Motor Manufacturing, Indiana, Inc. (TMMI) — In Georgetown, Kentucky, TMMI volunteered in environmental activities at Earth Aware Camp at Camp Carson, the Butterfly Retreat at North Woods Nature Trail and River Sweep, a litter clean-up project along the Ohio River.

Toyota Motor Manufacturing, Kentucky, Inc. (TMMK) — In Georgetown, Kentucky, TMMK sponsored the Full Haul Roundup of household hazardous waste for the eighth consecutive year. The program has enabled more than 160,000 pounds of waste collection since 1992. TMMK also supported the Living Stream Exhibit at the Kentucky Fish and Wildlife Center, Frankfort, Kentucky, and the World Around Us Exhibit at the Louisville Science Center. TMMK volunteers also took part in National Public Lands Day and other community clean-up projects.

ENVIRONMENTAL AWARDS

Over the years, Toyota’s efforts to reduce the environmental impact of our products, processes and facilities have been recognized. Here are some of our most recent awards:

- Prius: “Clean Air Choice of Earth Day Canada,” 2002, from Earth Day Canada;
- “President’s Circle Award 2003,” from the American Lung Association; Gold LEED® (Leadership in Energy and Environmental Design) Award, 2003, from the United States Green Building Council for Toyota’s new South Campus buildings, Torrance, California;
- “Most Improved Permittee Award, 2003, from the Port of Long Beach to Toyota’s Vehicle Distribution Center in Long Beach, California, for participation in the port’s Master Storm Water Program;
- “Most Fuel-Efficient Production Sedan, Toyota Prius” from The Northeast Sustainable Energy Association;

Please refer to the following Web sites for supplementary information:

**LIST OF ACRONYMS**

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<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>AAM</td>
<td>Alliance of Automobile Manufacturers</td>
</tr>
<tr>
<td>Ar</td>
<td>Are (a Substance of Concern)</td>
</tr>
<tr>
<td>AT-PZEV</td>
<td>Advanced Technology Partial Zero Emission Vehicle</td>
</tr>
<tr>
<td>CAFE</td>
<td>Corporate Average Fuel Economy</td>
</tr>
<tr>
<td>CARC</td>
<td>California Air Resources Board</td>
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<tr>
<td>CGCAR</td>
<td>Coordinating Committee for Automotive Repair</td>
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<tr>
<td>Cd</td>
<td>Cadmium (a Substance of Concern)</td>
</tr>
<tr>
<td>Co</td>
<td>Carbon Dioxide</td>
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<tr>
<td>CO2</td>
<td>Carbon Dioxide</td>
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<tr>
<td>Cx+6</td>
<td>Hexafluorine Chromium (a Substance of Concern)</td>
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<tr>
<td>ED</td>
<td>Electric Deposition</td>
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<tr>
<td>EMS</td>
<td>Environmental Management System</td>
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<tr>
<td>EPA</td>
<td>United States Environmental Protection Agency</td>
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<td>EV</td>
<td>Electric Vehicle</td>
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<td>FCHV</td>
<td>Fuel Cell Hybrid Vehicle</td>
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<td>FY</td>
<td>Fiscal Year</td>
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<td>GI</td>
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<td>GPS</td>
<td>Global Positioning System</td>
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<td>HAP</td>
<td>Hazardous Air Pollutant</td>
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<tr>
<td>HAGMAT</td>
<td>Hazardous Materials (designated as “Dangerous Goods” in Canada)</td>
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<td>HFC</td>
<td>Hydrofluorocarbons</td>
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<td>HEV</td>
<td>Hybrid Electric Vehicle</td>
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<td>Hg</td>
<td>Mercury (a Substance of Concern)</td>
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<tr>
<td>ISO</td>
<td>International Organization for Standardization</td>
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<tr>
<td>kg</td>
<td>Kilogram</td>
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<tr>
<td>LEED™</td>
<td>Leadership in Energy and Environmental Design</td>
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<td>California’s Second Generation Low Emission Vehicle Program</td>
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<td>Ni-MH</td>
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<td>NiMoG</td>
<td>Non-Methane Organic Gas</td>
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<tr>
<td>NOW</td>
<td>Notice of Violation</td>
</tr>
</tbody>
</table>

**TOYOTA-SPECIFIC ACRONYMS**

- CAPTIN: Canadian Auto Parts, Inc.
- EAN: Environmental Assistance Network
- EDS: Environmental Data Sheet
- HSD: Hybrid Synergy Drive
- NAEC: North American Environmental Committee
- NAPM: North American Planning Meeting
- NUMMI: New United Motor Manufacturing, Inc.
- PDC: Parts Distribution Center
- REF: Real Estate and Facilities Department
- TCI: Toyota Canada Inc.
- TFS: Toyota Financial Services
- TLS: Toyota Logistic Services
- TSH: Toyota Hybrid System
- TMA: Toyota Motor North America, Inc.
- TMC: Toyota Motor Corporation
- TMMAL: Toyota Motor Manufacturing, Alabama, Inc.
- TMMK: Toyota Motor Manufacturing, Kentucky, Inc.
- TMMI: Toyota Motor Manufacturing, Indiana, Inc.
- TMMR: Toyota Motor Manufacturing, Texas, Inc.
- TMMNA: Toyota Motor Manufacturing, North America, Inc.
- TMMIV: Toyota Motor Manufacturing, West Virginia, Inc.
- TMS: Toyota Motor Sales, U.S.A., Inc.
- TOSE: Toyota Super Olefin Polymer
- VDC: Vehicle Distribution Center

Please refer to the following Web sites for supplementary information:

- www.toyota.com/about/environment and www.toyota.ca/environment
- www.toyota.com/about/environment/news/index.html
- www.toyota.com/about/environment/technology/index.html
- www.toyota.com/about/environment/manufacturing/supplier.html
- www.toyota.com/about/community/index.html
- www.toyota.com/about/environment/awards/index.html

For additional information or comments, please contact TOYOTA MOTOR NORTH AMERICA, INC. – Environmental Report Manager - 1850 M Street NW, Suite 600

Washington, DC 20036 - Email: environmentalreport@tmm Toyota.com
Printed on recycled paper, 10 percent post-consumer waste. Lead, cadmium, mercury and hexavalent chromium are not used in our coating formulations.