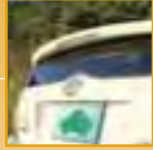


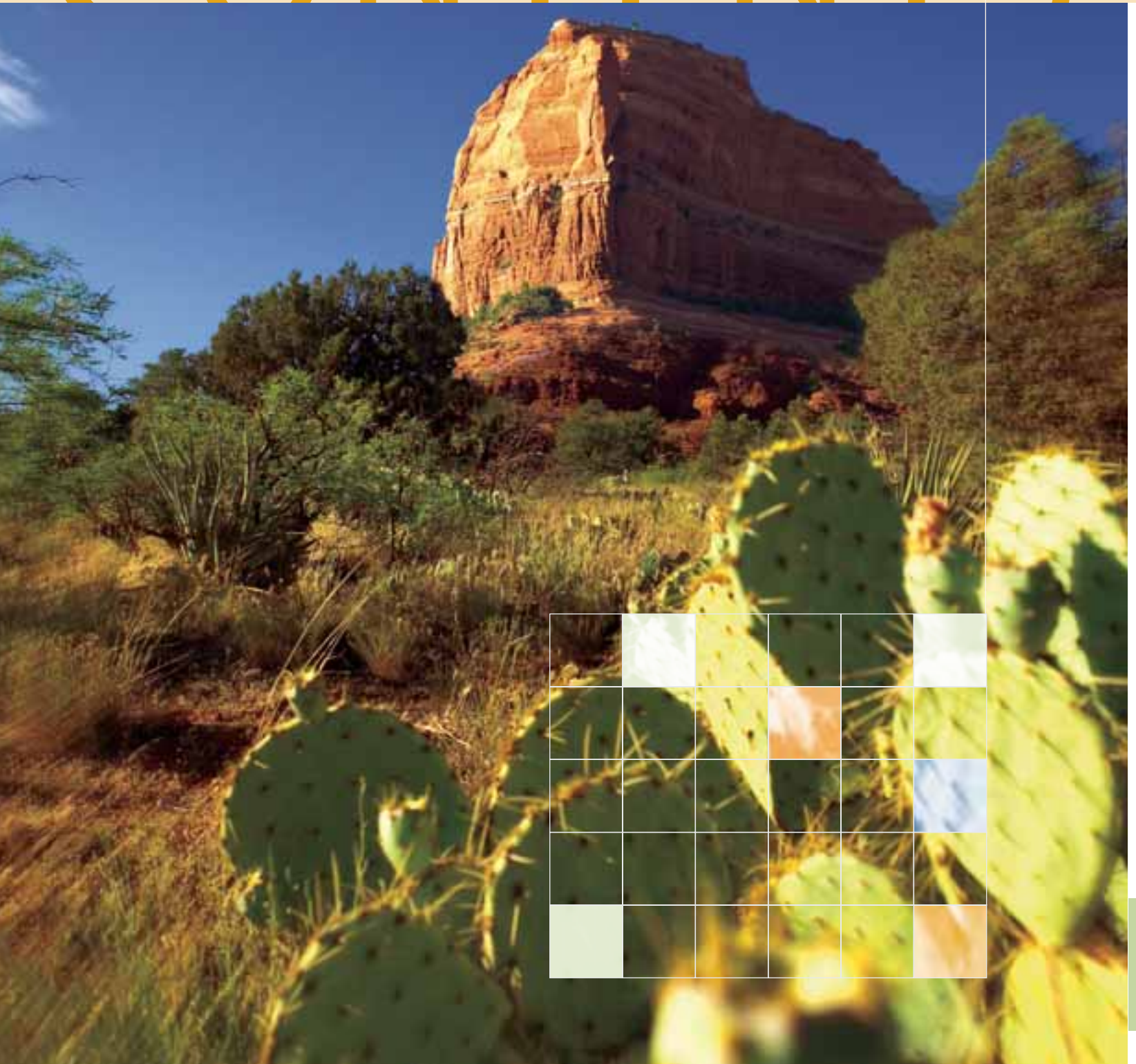
# TOYOTA

2004





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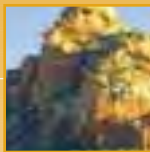
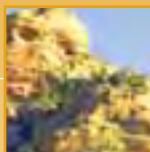
#### SCOPE OF THIS REPORT

The period covered in this North American Environmental Report is fiscal year 2004 (April 1, 2003 through March 31, 2004) and product model year 2004. If data are presented with different dates, this is clearly indicated. This report was published in November 2004.

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 correspond to the life cycle of our business, from design through manufacture, and sales and distribution to end-of-life management. We also provide information on how we engage with various stakeholders, internal and external to Toyota, on environmental issues, and on our company's overall economic investment and geographic presence in North America. The report covers activities across the North American region — the United States, Canada and Mexico.

This report is published in hard copy and on the Web in English (using United States spelling). French and Spanish versions are provided on the Web only. 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. A reader feedback form is provided on the Web and in this hard copy version. Please see the back cover of this report for our country Web sites and contact information.

**Cover:** The all-new Lexus RX 400h hybrid sport utility vehicle. The all-wheel-drive RX 400h, due out in the spring of 2005, will meet emissions standards for a Super Ultra Low Emission Vehicle and will have similar fuel economy to a compact sedan.



# DEAR READER

**We are pleased** to present our fourth annual Environmental Performance Report for Toyota North America. Our most notable environmental success this last year has been the second generation Toyota Prius. North American sales of the Prius, since its launch in July 2000 through September 2004, exceed 100,000 units. While this still represents a small portion of overall vehicle sales, Toyota is poised to introduce even more hybrid electric vehicles soon. We are pleased to see other vehicle manufacturers with their own plans to introduce hybrids. We expect consumer interest in our hybrid technology to increase over time, and we are working hard to meet the challenge of providing this clean, efficient technology to the motoring public. Ultimately, we view hybridization as a core technology for future sustainable mobility.

The environmental aspects of what we do run deeper than the Prius. This report also describes how we are managing environmental issues across the life cycle of automobile design, production, sales, distribution and recycling. Our Five-Year Environmental Action Plan lays out goals and targets in these areas, and we report on progress against meeting them. Here are some highlights from each stage of our business.

## DESIGN AND DEVELOPMENT

In our design function we need to meet North America's demand for trucks and high-performance vehicles, and

at the same time conform with our environmental principles. We announced two new sport utility vehicle (SUV) hybrids that will be launched in 2005: the Lexus RX 400h and the Highlander Hybrid. These will achieve the performance of a V-8 powered SUV with the fuel economy of a compact car. In addition, Toyota is ahead of the required compliance schedule for certification of its vehicles to the new Tier 2 and LEV II emissions standards.

## MANUFACTURING

In manufacturing we met several of our key environmental performance targets ahead of schedule: we reduced our volatile organic compounds (VOCs) emitted per vehicle produced by 40% from 1998 levels, to 20.5 g/m<sup>3</sup>; we reduced our average landfill waste per vehicle produced by 67% and our disposal of hazardous waste by 97%; and we reduced toxic air releases per vehicle produced from 1.7 kg/vehicle in 1997 to 0.81 in 2003. In all of these areas we announced new and more demanding performance targets for FY2006.

## SALES AND DISTRIBUTION

We have begun a process to measure and reduce greenhouse gases (GHGs) emitted during sales and distribution. We can now report that these activities were achieved with an overall reduction of 1.8% in our GHG emissions — or over 5,675 metric tons of CO<sub>2</sub>. We are



also pleased to report that all parts and vehicle distribution centers in both the U.S. and Canada have achieved ISO 14001 certification/registration and a sixth straight year of 100% compliance with regulations applicable to hazardous materials/dangerous goods.

### END-OF-LIFE/RECYCLING

Toyota has made a new commitment to voluntarily phase out the use of certain substances of concern in all Toyota, Lexus and Scion vehicles sold in North America. We are also working to achieve a 95% vehicle recovery rate by FY2015. Both commitments bring Toyota North America in line with more stringent regulatory trends in Japan and Europe.

### STAKEHOLDERS

Much of our activity is focused on the customer as stakeholder. Our customers tell us that they are

interested in our environmental investments and innovative technologies — if we can meet price and performance requirements as well. As this report shows, we are striving to achieve this balance. We also define in this chapter the broader constituency of our environmental stakeholders, and describe some of our partnerships and engagements with them.

Toyota is acutely aware that the significant social and economic benefits of the automobile cannot be sustained forever simply by producing more vehicles. Continued vehicle production at current levels will congest our cities and foul our air. That's why Toyota is working hard to make sustainable mobility a reality, both within the company and with a range of outside partners, with technical improvements and technology breakthroughs, globally and in North America.



David R. Baxter,  
Vice President,  
Toyota Technical Center, U.S.A., Inc.



Dennis C. Cuneo,  
Senior Vice President,  
Toyota Motor North America, Inc.



Kenji Tomikawa, President  
and Chief Executive Officer,  
Toyota Canada Inc.



Stephen Beatty,  
Managing Director,  
Toyota Canada Inc.



Kevin Butt, General Manager and  
Chief Environmental Officer,  
Toyota Motor Manufacturing North America, Inc.



Yasuhiko Ichihashi,  
President,  
Toyota Technical Center, U.S.A., Inc.



Hideaki "Harry" Otaka,  
President and Chief Executive Officer,  
Toyota Motor North America, Inc.



James E. Press, Executive Vice President  
and Chief Operating Officer,  
Toyota Motor Sales, U.S.A., Inc.



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



Atsushi "Art" Niimi, President and  
Chief Executive Officer, Toyota Motor  
Manufacturing North America, Inc.



# MANAGEMENT



Toyota Motor Manufacturing, Texas, Inc.  
Aerial View

# “Automobiles power prosperity. So our challenge is to make sure they continue to be a benefit and not a burden to humanity.”

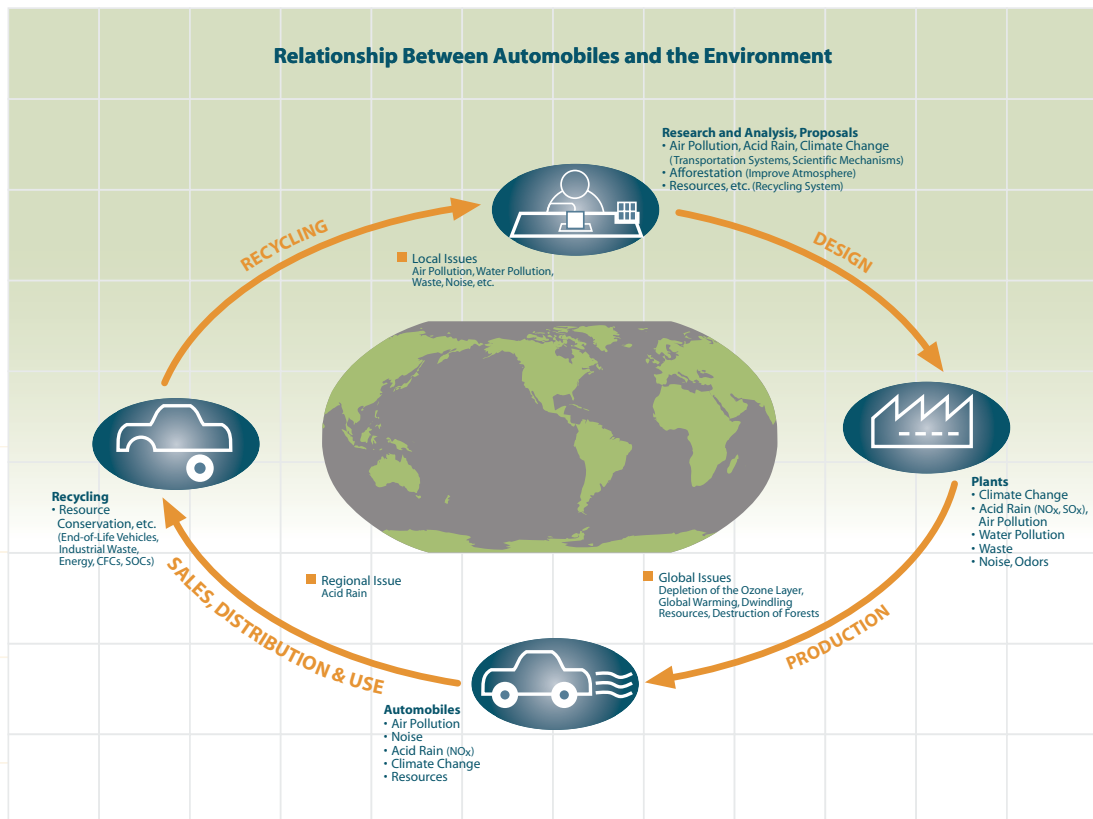
— Dian Ogilvie, Senior Vice President,  
General Counsel and Chief Environmental Officer,  
Toyota Motor Sales, U.S.A., Inc.

We may be living in the Information Age, but physical mobility — the ability of people, goods and services to move around — remains a key economic driver everywhere. To ensure that our vehicles continue to contribute to economic growth, Toyota has positioned the environment as a priority management issue. We are making a significant investment in environmental technologies and solutions, leading with our hybrid technology. We are putting hybrid powertrains in more

and more models, and are sharing the technology with other auto manufacturers. We are excited about hybrid technology as a practical and innovative means to address environmental issues and as a platform for the development of fuel-cell technology.

Of course, the production and use of automobiles can have positive as well as negative effects on society, human health and the environment. The figure below shows how Toyota manages environmental impacts of

Figure A



**Main:** As Toyota grows in North America, we are committed to greening our investments. New construction projects are designed to minimize environmental impact. Our new manufacturing facility in San Antonio, Texas, will be our most environmentally advanced facility. Construction is well under way and production is due to start in 2006. Here, David Crouch, General Manager, Production Control; Masafumi “Masa” Hamaguchi, Senior Advisor, Production Control; and Tom Knight, Site Work Coordinator stand at the construction site with a computer rendering of the completed project.

**Figure B 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.

**TOYOTA'S EARTH CHARTER (APRIL 2000)**

The Toyota Earth Charter, published in 1992 and updated in 2000, describes Toyota's Basic Action Policy and Action Guidelines regarding environmental improvements.

**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.

**II. Action Guidelines**

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

the automobile at many points: from design to development, manufacturing to distribution, and sales to product use and recycling. Our company in North America consists of a number of affiliates whose primary function corresponds to one of these life cycle stages. For more information on the affiliates, please refer to the Corporate Profile at the end of this report. This section includes information on our affiliates in North America, and our overall company investment to date in people and in capital infrastructure.

This report is organized around the life cycle stages of our vehicles. Issues specific to each life cycle stage are reported throughout the relevant chapters of this report. Others, such as greenhouse gas emissions, cut across many life cycle stages of the vehicle, and are better managed through cross-affiliate, regional coordination and planning among our various business units. These "regional cross-cutting issues" are reported on later in this chapter.

Many of the longer-term issues of sustainable transportation cannot be resolved by individual auto manufacturing companies on their own. It is therefore in the long-term interests of the automobile industry to work on sustainable long-term solutions with other

stakeholders. Our work with other stakeholders, from business partners to governmental agencies to local communities, is woven through the chapters of this report, and is the focus of the Engaging Stakeholders chapter as well.

We start this chapter by outlining the corporate principles that dictate how we conduct our business, the steps we are taking to reduce our environmental impact, and the processes we have in place to manage our progress.

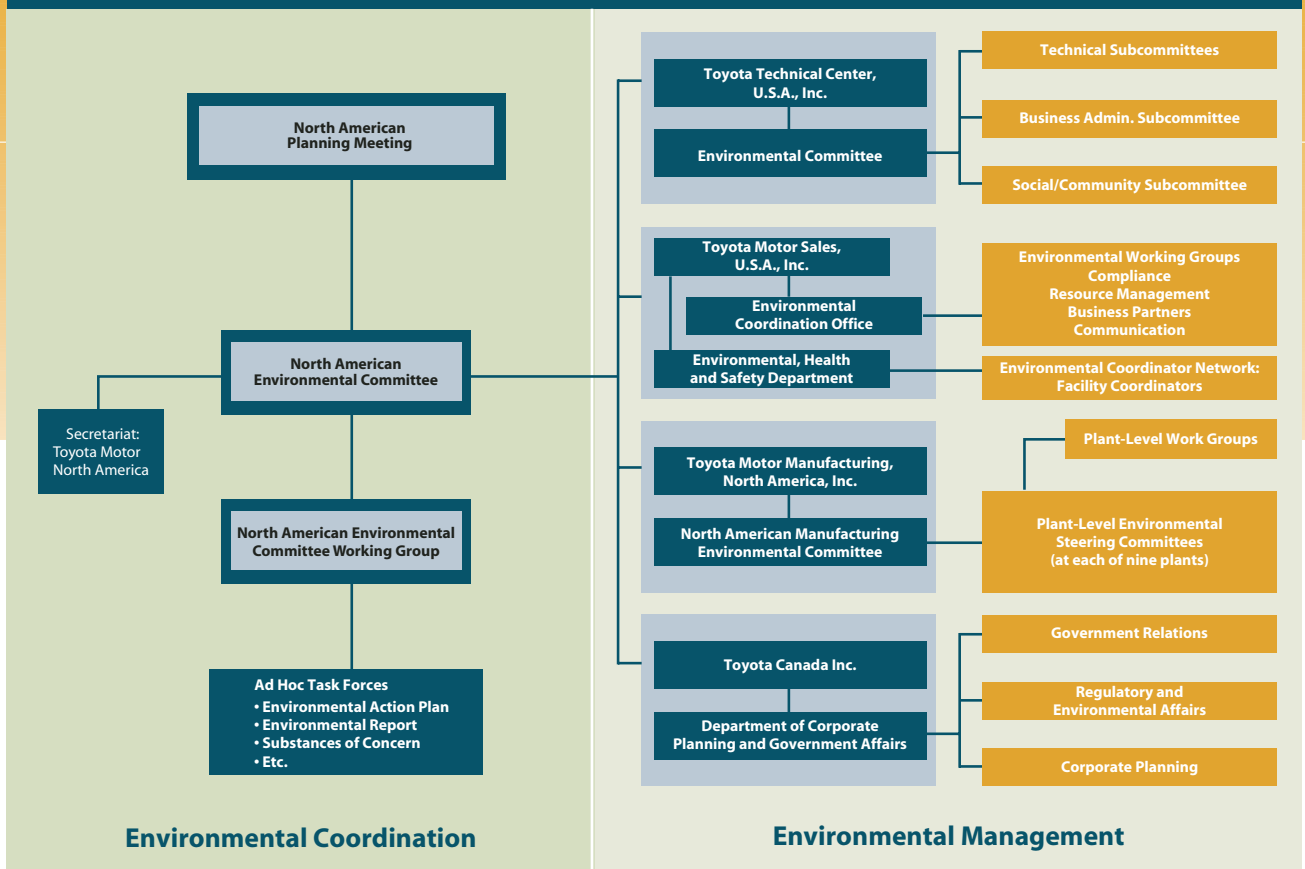
**GUIDING PRINCIPLES AND EARTH CHARTER**

Toyota's seven Guiding Principles serve as the fundamental management policy for all our operations. The principles reflect Toyota's commitment to providing clean, safe and innovative products, while respecting the environment and culture of the local communities in which we operate. The Guiding Principles form a foundation for Toyota's Earth Charter, which was adopted in April 2000. The Earth Charter describes our basic policy and action guidelines regarding concern for the environment and cooperation with society.



Figure C

## ENVIRONMENTAL COORDINATION AND MANAGEMENT IN NORTH AMERICA



### OUR ENVIRONMENTAL ACTION PLANNING PROCESS

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 achieve 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.

Each year, we report on our combined North American Action Plan in this report. We are on track to achieve some targets and we are pleased to report that we have achieved some of them early. In many cases where targets are met early, we set new and more challenging targets, and these are noted in our Action Plan.

The current Five-Year Action Plan runs from FY2001-FY2006, i.e., to March 2006. We have begun work on our next Five-Year Environmental Action Plan, which we expect to publish in our 2006 report. Once again, the plan will reflect broader global goals and targets as well as the goals and targets of our North American affiliate companies.

### ENVIRONMENTAL COORDINATION AND MANAGEMENT

While each Toyota affiliate has individual responsibility for environmental governance and management, the North American Environmental Committee (NAEC) serves as the high-level coordinating forum across North America. The committee comprises the Chief Environmental Officer from each North American affiliate, as well as key executive coordinators from Toyota Motor Corporation (please see Figure C).

The NAEC facilitates the development of the North American Five-Year Environmental Action Plan and the publishing of this report. Our Action Plan continues to be implemented at the affiliate level, but the NAEC ensures a more cohesive overall strategy among the affiliates.

CONSOLIDATED SUMMARY OF NORTH AMERICAN FIVE-YEAR ACTION PLAN

FY2006 Action Plan Goal <sup>1</sup>	Targets	Status <sup>2</sup> ● Achieved ○ On Track ⊗ Missed	Page
<b>Life Cycle Stage I: Development and Design</b>			
<b>Fuel Efficiency</b> • Achieve top levels of fuel efficiency in all vehicle classes	• Exceed CAFE/CAFC requirements for passenger cars and light-duty trucks.	●	p. 18
<b>Emissions Reductions</b> • Promote emissions reductions	• Meet Tier 2 and LEV II emissions requirements.	○	p. 20
<b>Clean Energy Vehicles</b> • Introduce cleaner energy vehicles	• Introduce additional new hybrid electric vehicles by 2005. • Demonstrate fuel-cell technology by evaluating prototype FCHVs beginning in 2001.	○ ●	p. 21 p. 24
<b>Life Cycle Stage II: Manufacturing</b>			
<b>Energy</b> • Implement aggressive plans to reduce energy consumption	• Reduce total energy usage by 15% per unit of production from a base year of 2000, resulting in a 15% decrease in CO <sub>2</sub> .	●	p. 28
<b>Substances of Concern</b> • Develop extensive reduction strategies to reduce emissions of concern	• Reduce body-painting emissions of VOCs to less than 22 g/m <sup>2</sup> for all paint shops. • <i>New Target:</i> Reduce body-painting emissions of VOCs to 20 g/m <sup>2</sup> for all paint shops. • Reduce toxic chemicals emitted to air by vehicle assembly plants to 0.7 kg/vehicle. • Continue R&D activities aimed at eliminating all VOCs and toxic chemicals from coolants and cutting oils used in unit plants.	● ○ ○ ○	p. 29 p. 29 p. 29 p. 30
<b>Waste Disposal</b> • Reduce waste and promote resource conservation activities	• Reduce landfill of all waste to 10 kg/vehicle from a base year of 1999. • <i>New Target:</i> Reduce landfill of all waste to 7 kg/vehicle from a base year of 1999.	○ ○	p. 30 p. 30
<b>Water Use</b> • Implement aggressive plans to reduce consumption of water	• Reduce total water usage by 15% per unit of production from a base year of 2000.	●	p. 31
<b>Environmental Management Systems</b> • Implement Green Supplier Guidelines	• Certify/register key suppliers to ISO 14001 by December 2003. • Comply with Chemical Ban List/Environmental Data Sheet. • Develop procedures that ensure compliance with hazardous materials/dangerous goods transportation guidelines.	⊗ ○ ○	p. 32 p. 32 p. 32
<b>Life Cycle Stage III: Sales, Distribution and Service</b>			
<b>Environmental Management Systems</b> • Establish an Environmental Management System	• Achieve ISO 14001 certification/registration at all parts and vehicle distribution centers by FY2005 in the U.S., and by FY2003 in Canada.	●	p. 38
<b>Hazardous Materials</b> • Promote excellence in handling and transporting hazardous materials ("dangerous goods" in Canada)	• Maintain 100% compliance with all applicable HAZMAT/dangerous goods regulations.	○	p. 38
<b>Waste</b> • Reduce waste and conserve resources	• Implement a nationwide waste-tracking program (United States only). • Reduce waste from sales and distribution operations. • Implement a returnable-packaging program at parts distribution centers. • Increase returnable-packaging and direct shipment programs to vehicle distribution centers.	● ○ ○ ●	p. 39 p. 39 p. 41 p. 41
<b>Energy</b> • Reduce energy use • Reduce greenhouse gases	• Reduce total energy consumption 15% by FY2006 (United States only). • Compile an inventory of greenhouse gases by FY2004 (United States only). • Reduce greenhouse gases.	○ ● ○	p. 41 p. 42 p. 42
<b>Dealers</b> • Promote environmental responsibility among dealers	• Enhance features of the Environmental Assistance Network (United States only). • Introduce Toyota Environmental Guidelines to the Toyota Canadian dealer network by 2004.	● ○	p. 43 p. 43
<b>Other</b> • Promote greener building construction and maintenance operations	• Achieve LEED® certification for the U.S. sales headquarters South Campus buildings by the end of 2003. • Develop sustainable operations standards for TMS, U.S.A., Inc., facilities.	● ○	p. 43 p. 43
<b>Life Cycle Stage IV: Recycling End-of-Life Vehicles</b>			
<b>Substances of Concern</b> • Manage substances of concern	• Gather North American baseline data for selected SOCs. • Develop North American substances of concern strategy.	● ○	p. 45 p. 45
<b>Vehicle Recyclability</b> • Develop recycling designs and promote expanded use of recycled materials	• Incorporate material and design strategies for increased vehicle recyclability.	○	p. 45
<b>Toyota's Environmental Contributions</b>			
<b>Environmental Communication</b> • Enhance environmental communication activities in each region/country	• Enhance environmental communication activities. • Promote environmental communication with community and key organizations.	○ ○	p. 47 p. 48

<sup>1</sup> Target dates in this action plan have not changed since the 2002 Environmental Report. We have converted all action plan goals and targets to a Financial Year calendar (April to March) for better comparability. Targets for FY2006 denote April 2005 to March 2006.

<sup>2</sup> Status indicated refers, in some cases, to progress toward achieving the five-year goal. In other cases, the status refers to an annual target in support of the five-year goal. Details are provided in the body of the report.

**“We can no longer afford to ignore the signs of global warming ... Environmentally sensitive cars will soon cease to be an option — they will become a necessity.”**

**— Josephine Cooper, Vice President,  
Government and Industry Affairs,  
Toyota Motor North America, Inc.**

### 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 sections discuss several areas where we have begun to coordinate activities among our affiliate companies and prepare integrated environmental responses across the different life cycle stages. Discussion of specific goals and targets can be found in the individual life cycle chapters.

### GREENHOUSE GASES

Despite continuing uncertainty surrounding the impact of human and industrial activities on the earth’s climate and the production of greenhouse gases (GHGs), we believe it is prudent to voluntarily minimize these emissions at all stages of the vehicle life cycle.

### Product

Customer use of our products — driving cars and trucks — accounts for the largest portion of GHGs from a vehicle’s life cycle. While we cannot control the usage patterns and driving habits of our customers, we can and do aim to provide them with efficient vehicle choices to minimize fuel usage and associated GHG emissions from vehicles. Figures D and E show that CO<sub>2</sub> emissions from Toyota’s new vehicles are below that of the industry as a whole in both the U.S. and Canada, for both cars and light trucks (including SUVs). Our specific goals and targets for vehicle fuel efficiency and advanced technology deployment are reported beginning on page 17 of this report.

For the future, Toyota’s engineers are researching every avenue to develop vehicles that emit fewer emissions (both smog-forming pollutants and greenhouse gases), while satisfying customer expectations for safety, durability, performance and cost.

Hydrogen fuel cells have the potential to provide practical, reliable and affordable zero-emission propulsion, but we recognize that true commercialization of hydrogen-based transportation is years away. Significant scientific breakthroughs are needed in several areas, including cold weather

Figure D

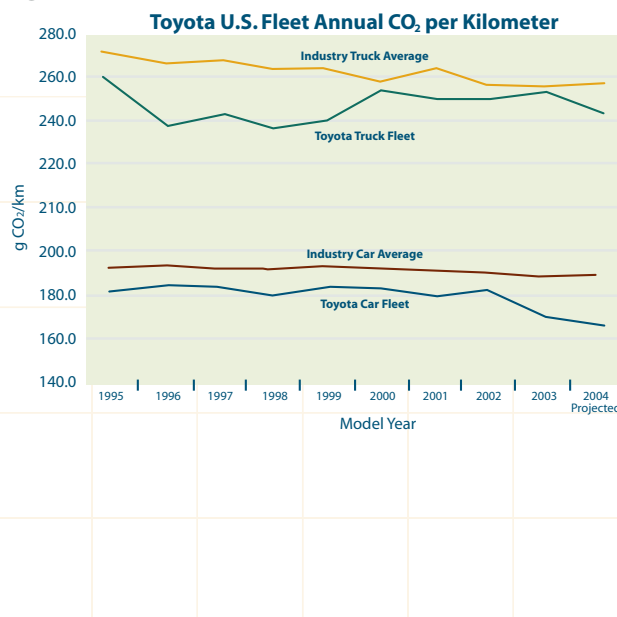
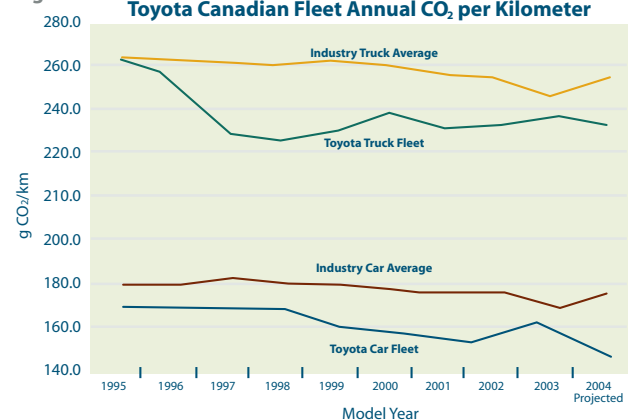


Figure E





Numerous sustainable features were incorporated into the renovation of our Lexus headquarters in Torrance, California. The existing structure was used to minimize the environmental impact of construction and to conserve resources. We've reduced water usage by 20% through the use of more efficient systems and fixtures and the use of drought-tolerant plants in landscaping. We used low or no VOC adhesives, paints and carpets; recycled over 80% of our construction waste; and donated old furniture. Within the building, 10% of all materials are made from 44% recycled content and are 100% recyclable.

performance, onboard hydrogen storage, hydrogen supply and production, cost reduction and durability. In addition, global codes and standards must be enacted and a hydrogen infrastructure developed in coordination with vehicle development. Toyota is actively participating in many of these development activities, including:

- U.S. Department of Energy-sponsored fuel-cell vehicle and hydrogen infrastructure demonstration program with Honda, BMW, Nissan and Air Products Inc.;
- Society of Automotive Engineers working groups to develop building codes and standards;
- Canadian Transportation Fuel Cell Alliance (CTFCA) involving government, automotive, fuel and technology sectors.

While we are investing heavily in the promise of fuel cells, we must not turn our backs on what we can do today. We remain committed to hybrid electric internal combustion engine (ICE) technology, which can deliver superb well-to-wheel CO<sub>2</sub> efficiency and very low smog-forming emissions in a compact and flexible package. Figure F shows that the 2004 Prius, with Hybrid Synergy Drive (HSD), achieves the same overall efficiency as the current Fuel-Cell Hybrid Vehicle (FCHV). In fact, we view hybrid technology development as a critical step to the realization of the full potential of fuel-cell vehicles through hybridization. Our progress on hybrid vehicle development is outlined in more detail starting on page 21.

**Manufacturing**

Toyota, along with other members of the Alliance of Automobile Manufacturers, participates in the U.S. Department of Energy (DOE) Climate VISION program. Member companies have committed to reducing the level of GHGs emitted from their U.S. manufacturing operations by 10% per vehicle produced by 2012, compared to a 2002 baseline. This commitment complements Toyota's existing efforts at our manufacturing sites to reduce energy use, and thus CO<sub>2</sub> (please see page 27 for more details). In addition, we submit an annual report documenting our manufacturing GHG emissions to DOE's 1605(b) greenhouse gas registry as a transparent means to track our progress.

Figure F  
**Comparing the Fuel Efficiency of a Range of Automobile Technologies**

	Fuel Efficiency (%)	Vehicle Efficiency (%)	Overall Efficiency (%)				
			0	10	20	30	40
Average 2003 Car	79	18	14%				
1998 Prius	79	27	21%				
2003 Prius	79	31	24%				
2004 Prius with HSD	79	37	29%				
Toyota FCHV	58	50	29%				
	Natural gas — hydrogen						
FCHV Target	70	60	42%				

Based on U.S. market fuels and U.S. combined fuel economy

### Sales and Distribution

Toyota's U.S. sales and distribution operation has produced a GHG inventory for the past three years, measuring tons of GHG emissions from electricity use, natural gas use and indirect sources such as business travel, fleet vehicles, employee commuting and logistics and supply activities. As our logistics facilities process and deliver cars and parts across the U.S. via road, rail and air transport, a large proportion of the emissions in our inventory are from logistics. We track these emissions, both from the trucks we own and from the railroads, airplanes and trucks owned by transport companies. We encourage and support the transport companies in reducing their emissions.

Another significant source of emissions from U.S. sales and distribution is the energy required to run our buildings and other operations. We are working to reduce these emissions through energy efficiency projects, and we are looking for ways to reduce GHGs from other sources as well. For more details, please see page 42.

### GREENING INVESTMENT

Toyota is committed to investments that make economic and environmental sense. To make our investment decisions in North America more environmentally friendly, we developed standard features for the construction of all Toyota buildings to minimize their impact on the environment. We've established goals for water, recycling, energy and indoor air quality for construction and renovation projects.

### TOYOTA WORKS WITH RAIL CARRIERS TO REDUCE GHG EMISSIONS

Toyota is working with rail carriers to evaluate efficiencies in rail transportation that could lead to measurable GHG reductions. Our sales and distribution division held a fact-finding meeting in March 2004 with major rail carriers to learn about their initiatives, including fuel efficiency measures, fleet replacement and GHG emissions tracking.



### Expanding Sustainable Building Design and Operation

As reported last year, Toyota's 624,000-square-foot South Campus Headquarters Complex in Torrance, California, was designed to demonstrate that energy-efficient buildings made with a significant percentage of recyclable materials do not necessarily have to cost more than ordinary office developments. The South Campus grand opening took place in April 2003 and is performing well above expectations (please see page 43 for more information).

Toyota is using what we learned from our South Campus project to make construction and renovation projects of our sales and logistics facilities across North America more eco-friendly. One example is the new vehicle distribution facility in Portland, Oregon. The Portland project team plans to incorporate numerous sustainable features into the building design, such as



In addition to the training that Toyota provides its employees, there are a number of other activities that are supported by the company in an effort to increase environmental awareness within the communities where our facilities are located. These photographs show a National Public Lands Day (NPLD) event near our manufacturing headquarters in Erlanger, Kentucky. NPLD is the largest hands-on volunteer program in the U.S. Please see page 51 for more information on Toyota and the NPLD program.

harnessing stormwater for nonpotable uses, managing stormwater runoff quality, using high efficiency fixtures to reduce potable water usage, and providing our associates with access to natural daylight. At least 50% of construction waste will be recycled. In addition, the facility is restoring a riparian zone that buffers and filters pollutants and stormwater runoff.

In Canada, Toyota is also committed to investing in sustainable building. Plans for our new vehicle processing center in Toronto, Ontario were developed using ISO 14001 to help us define environmental building processes and features. Use of recycled building materials, energy efficient halide lighting (versus fluorescent fixtures) and the utilization of an environmental contractor during design and construction phases reaffirm Toyota's commitment to green environmental investment.

Further advantages are likely to be gained from our experience with the Leadership in Energy and Environmental Design (LEED®) Green Building Rating System program and greening our construction process. Every year, Toyota works to reduce the environmental impact of our manufacturing plants, employing the principle of *kaizen*, Japanese for "continuous improvement." Now, we have established eco-plant targets for our new facilities in Mexico and Alabama to

### ENVIRONMENTALLY SENSITIVE LAND USE

We plan our development projects with minimal damage to the surrounding land and environment. Evidence of this may be found at two facilities constructed in Ann Arbor, Michigan during this past year: a Satellite Design Studio and a Check Road. In both cases, we worked closely with local and state agencies to minimize our imprint on the environment. We planted close to 4,000 trees and shrubs to replace woodlands lost during construction, and gave a conservation easement to the township of over 16 acres. We surveyed for endangered species, as required by the state, and determined none to be located on our sites. Our efforts enhanced a wildlife corridor and mitigated a half-acre of wetland.

ensure that we include our past learning from the start of operations. Texans will also be able to see Toyota's commitment to the environment at our new manufacturing 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.

We refer later in this report to our ongoing efforts to balance ecological considerations with our activities at the Toyota Arizona Proving Ground (please see page 17); the sidebar above shows another example in our research function.

**“We are known for expecting our suppliers to share our high quality standards. Now we are asking them to join us in becoming environmental leaders.”**

**— Atsushi (Art) Niimi, President and Chief Executive Officer,  
Toyota Motor Manufacturing North America, Inc.**

### **NEW SOC STRATEGY**

Toyota has made a new voluntary commitment to phase out substances of concern (SOCs), including mercury, cadmium, lead and hexavalent chrome, in North America in all vehicles and parts. This new commitment is not required by regulations in North America. Instead, it is inspired by legislation in Europe and Asia that seeks to ban the use of certain SOCs in products due to their potential impacts to the environment and to human health. Toyota’s operations in Europe and Japan are complying with this legislation.

A cross-affiliate SOC committee convened in the fall of 2003 and approved a strategy for eliminating, replacing or reducing SOCs. The SOC strategy involves working with suppliers to identify components that contain SOCs and develop a timetable to phase out the SOCs. A working group of representatives from manufacturing and purchasing is working on implementing the strategy.

During FY2005, Toyota will be working closely with suppliers to set up checks and balances to help ensure SOCs have been eliminated, replaced or reduced from all parts.

### **DEALER AND SUPPLIER ENVIRONMENTAL EDUCATION**

Across our affiliates, we encourage those we work with to reduce their environmental impact. We work with our dealers to build awareness about the impacts on the environment of distributing and servicing vehicles. We talk more about these efforts on pages 42-43.

Toyota’s manufacturing plants provide an ISO 14001 Guidance Manual to our suppliers — a training guide for Toyota suppliers who are trying or required to obtain ISO 14001 certification/registration.

In Canada, we advise all contractors and suppliers who have regular business with us of our environmental management system (EMS) and make them aware of our

### **2004 ENVIRONMENTAL COORDINATORS CONFERENCE**

Our annual Environmental Coordinators Conference at Toyota Motor Sales, U.S.A., Inc. was held in Torrance, California from March 1-4, 2004. Environmental and HAZMAT/dangerous goods coordinators attended from our parts distribution sites, logistics, research and development, and AirFlite divisions, as well as sales affiliates and suppliers. Separate annual conferences are held for environmental and HAZMAT/dangerous goods coordinators at our manufacturing plants.

At this four-day conference, we presented environmental training classes on various topics, including HAZMAT facility coordinator responsibilities, hazardous waste management, chemical inventories and enhanced auditing techniques. In addition, we held numerous panel discussions covering supplier environmental programs and best practices. Two cross-functional break-out sessions required participants to determine and rank the environmental impact of adding a new operation to a fictitious sales and distribution facility.

ISO registration. Potential business partners are notified at the outset that conformance with our ISO program is a condition of doing business with Toyota, and we expect them to respect Toyota’s environmental philosophy.

In addition, we invite suppliers to various conferences and meetings to help them better understand our environmental initiatives and to provide guidance on their own environmental programs. A number of our accessory and parts suppliers attended our annual Environmental Coordinators Conference, held in Torrance, California in March 2004 (please see sidebar on this page). We also addressed the senior executives of all our key suppliers at the Suppliers Association meeting in Laguna Niguel, California in the fall of 2003.



In December 2003, Toyota produced and distributed the environmental brochure pictured above to Toyota dealers in Canada. This brochure, along with an environmental poster and other materials, is educating dealers and their employees on how to address and respond to environmental incidents, concerns and issues within their Service Areas.

**EMPLOYEE ENVIRONMENTAL EDUCATION**

At Toyota, environmental education is an important way that we enhance environmental awareness and encourage environmental action by our employees. We have created employee environmental education programs that serve as an important basis for continually enhancing our environmental performance. One example of an educational tool used in our North American sales and distribution organizations is a Web-based environmental newsletter that keeps associates current with Toyota’s environmental programs and progress.

**Environmental Compliance and EMS Training**

Toyota provides classroom training for over 1,000 sales associates on a number of subjects, including hazardous materials (referred to as HAZMAT in the United States and called “dangerous goods” in Canada), hazardous waste disposal, spill response and stormwater management.

Graduates of our hazardous materials training can now take part in a new program designed in the form of a board game. Teams of employees compete to answer questions related to hazardous materials, arranged in four levels of increasing difficulty. At the annual ECO conference, awards were given to the past year’s three top performing teams.

At our manufacturing plants, new employees are provided with general awareness training that provides them with a basic understanding of Toyota’s potential impacts to the environment and the measures that are being taken to minimize those impacts. Depending on an individual’s role within the company, additional specialized training may be required such as:

- ISO 14001 training — management procedures training required beyond general awareness training for persons with certain roles and responsibilities;
- Emergency responders training — for those employees who may have to respond in the event of an environmental emergency;
- Hazardous waste training — for those individuals who are managing waste materials within their daily jobs;
- Significant environmental equipment and aspect training — specific training related to a particular job function.

In addition to training, every associate in Canada’s sales and distribution operations is given a business-card sized “What Everyone Should Know About TCI’s Environmental Program.” The card includes the basics of Toyota’s environmental policy, significant environmental aspects, environmental objectives, everyone’s individual role and an environmental purchasing procedure.



# At Toyota, environmental education is an important way that we enhance awareness and encourage environmental action by our employees.

To further address the challenge of bringing environmental awareness to employees without substantial business disruption, Toyota implemented a mandatory ISO 14001 quiz in 2003 for all associates in Canada's sales and distribution operations. The ISO quiz — created through Toyota University and made available through the Intranet — is made up of 15 questions. So far, 90% of employees have received a passing grade, while 33% have received a perfect score. Further internal audits have demonstrated an increased comfort and awareness of Toyota's EMS and the ISO program.

## COMPLIANCE AND AUDITS

Leadership involves more than remaining in compliance with applicable local, provincial, state and federal regulations. Elsewhere in this report, we discuss ways in which we voluntarily go "beyond compliance," such as our initiative to phase out SOCs and our activities to reduce our GHG emissions. But at the same time, as we aim to go beyond compliance, we must have systems in place to check that our activities comply with all federal, state and local requirements.

### Compliance

At our manufacturing facilities across North America, Toyota achieved our goal of zero violations. At our distribution sites, we also achieved our target of zero

environmental violations and zero violations pertaining to hazardous materials. We have now completed six consecutive years without any HAZMAT/dangerous goods violations.

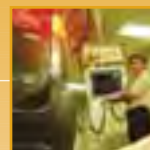
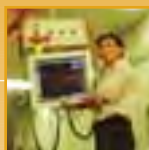
### Audits

We conduct regular audits of our manufacturing, processing and distribution sites across North America. In 2003, five of Canada's sales and distribution sites were audited by an independent third party, and all passed. Regular, ongoing compliance audits are also conducted at other Toyota facilities across Canada by employees who are trained as internal auditors.

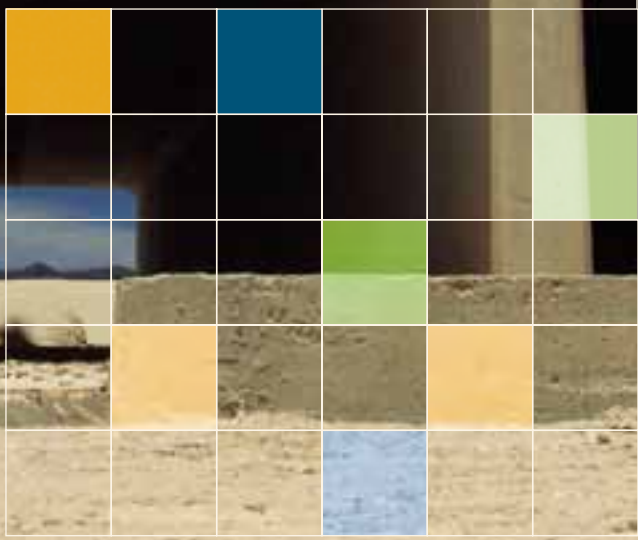
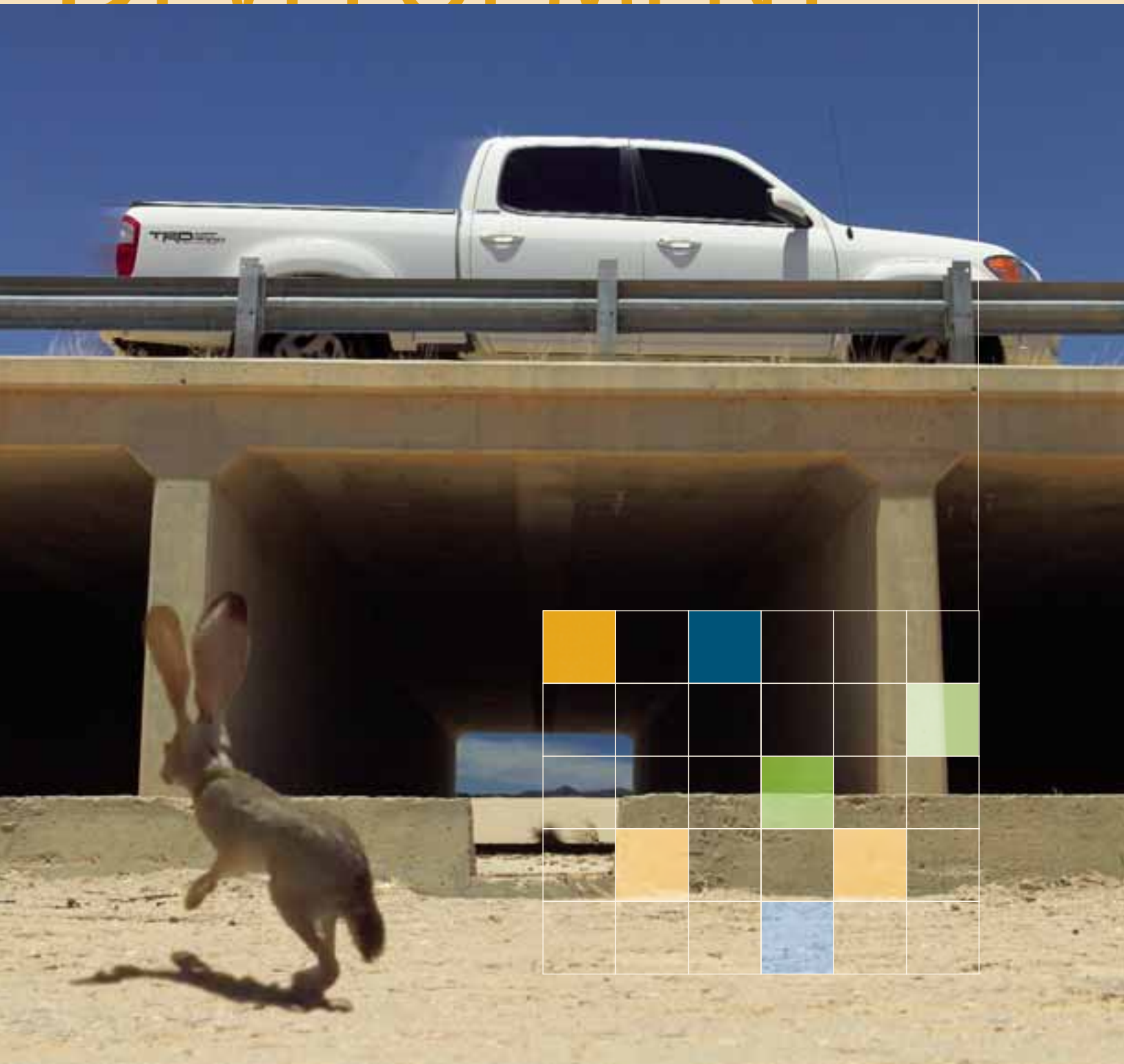
In 2003, our U.S. sales operations and corporate environmental staff completed 35 facility environmental and HAZMAT/dangerous goods compliance audits, in addition to the various government agency inspections that occurred. If the facility has been ISO certified, it is subject to additional internal audits and an annual third-party ISO conformance review.

## ENVIRONMENTALLY RELATED LEGAL SETTLEMENTS AND LIABILITIES

Toyota has no new environmentally related legal settlements or liabilities to report.

# DEVELOPMENT AND DESIGN



**“Our engineers focus on developing innovative and practical technologies that meet customer demands while minimizing environmental impacts.”**

**— Yasuhiko Ichihashi, 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 cleaner and more fuel-efficient vehicles. Our engineers focus on developing innovative and practical technologies that meet customer demands while minimizing environmental impacts. However, this can be difficult in a market where customers demand ever-increasing engine power and vehicle utility.

We address this challenge by continuing to make significant investments in research and development to reduce emissions and improve fuel economy. The success of our hybrid technology is testament to these efforts. We are following the launch of our second generation Prius with two hybrid SUVs in 2005: the Lexus RX 400h and the Highlander Hybrid. We believe that our continuing ability to better manage environmental issues in automobile design is crucial to the future of the environment, the future of Toyota and the future of the auto industry as a whole. Following is our report on our performance against our five-year environmental goals and targets.

**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 vehicle classes throughout North America. As shown in Figure G, Toyota offers conventional gasoline-powered vehicles in North America that are among the most fuel efficient in their class. The 2004 Model Year Fuel Economy Guide, published jointly by the U.S. Environmental Protection Agency (EPA) and the U.S. Department of Energy

**2004 SIENNA FUEL EFFICIENCY & EMISSIONS**

An example of our strong fuel efficiency and emissions performance may be seen in the all-new, completely redesigned 2004 Toyota Sienna minivan. Compared to the previous generation Sienna, the 2004 model is larger, more powerful, and has more features and greater functionality. At the same time, we improved the EPA-rated combined fuel economy by 5% versus the previous version. Additionally, the new Sienna received a class-leading federal emissions certification of Tier 2, Bin 5, which is equivalent to the ULEVII standard in California.

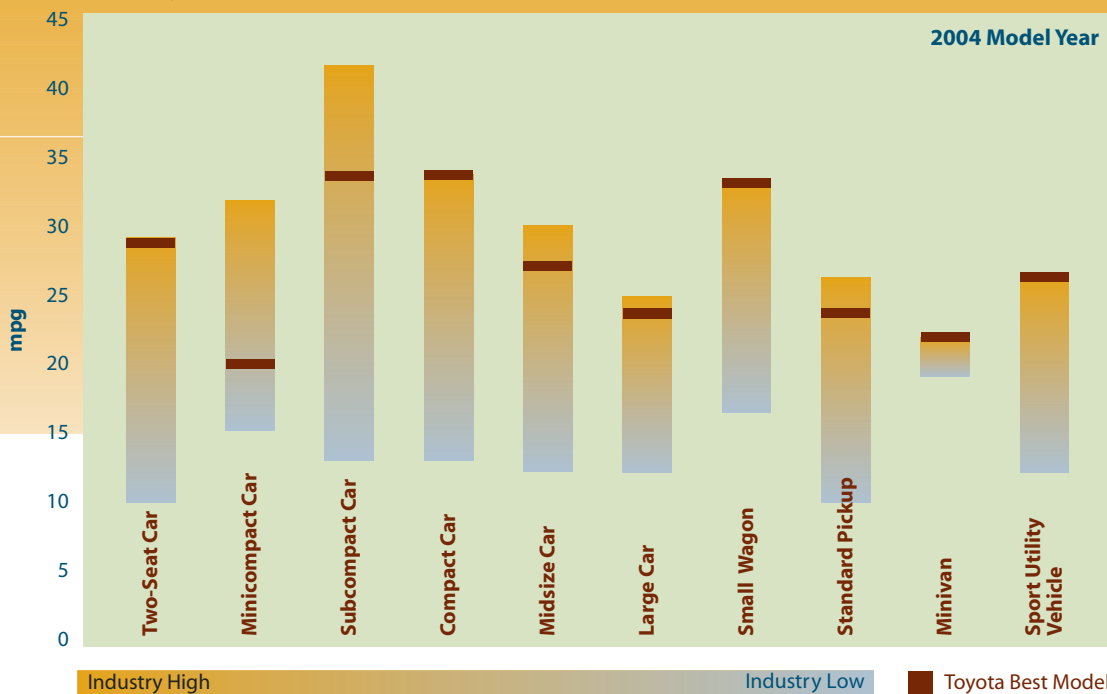


(DOE), rated three 2004 Toyota vehicles — Prius, RAV4 2WD manual transmission and RAV4 2WD automatic transmission — as class fuel economy leaders based on U.S. EPA fuel economy mileage estimates. In addition, the EnerGuide, published by Natural Resources Canada (NRCan), ranks three 2004 Toyota models — Prius, Echo and Corolla Matrix manual transmission — as most fuel efficient. While there is no formal fuel

**Main:** In the desert sun of northwest Phoenix, engineers at the Toyota Arizona Proving Ground (TAPG) evaluate and test Toyota, Lexus and Scion vehicles to confirm their performance and suitability for the North American market. During TAPG’s construction, Toyota worked with the U.S. Environmental Protection Agency to ensure that the various test courses, including the 10 mile, high-speed oval track, had minimal impact on the desert environment. Evidence of this may be found in the wide culverts constructed under the oval track, allowing wildlife, like the jack rabbit, to move safely around the property.

Figure G

**Toyota Gasoline Vehicles Are Among the Most Fuel Efficient in Their Class**



**Note:** United States only. Data and classes are based on EPA Adjusted Combined Fuel Economy ratings from the Model Year 2004 Fuel Economy Guide available at [www.fueleconomy.gov](http://www.fueleconomy.gov). Diesel and hybrid electric vehicles are excluded. The chart shows only those classes where Toyota offers products. The minicompact car model shown is the Lexus SC430 — a luxury coupe with an efficient V-8 engine.

economy program in Mexico such as 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 continuously improved fuel economy through application of technologies such as variable valve timing, 4-valve cylinder heads, and 5- and 6-speed automatic transmissions, and by consistently applying these technologies sooner and in greater volumes than most of our competitors. For example, we have applied variable valve timing on 100% of our cars sold in North America. Beyond these gasoline engine technologies, we will continue to develop advanced technology vehicles in order to maintain our vehicles’ fuel efficiency leadership.

**TARGET: EXCEED CAFE/CAFC REQUIREMENTS FOR PASSENGER CARS AND LIGHT-DUTY TRUCKS**

In the United States, automobile manufacturers are required to comply with Corporate Average Fuel Economy (CAFE) standards for passenger cars and light trucks. CAFE standards are expressed in miles per U.S. gallon (mpg); the higher the number the better the fuel economy (please see Figures H and I). In Canada, Toyota has joined with other manufacturers in agreeing to meet

voluntary Corporate Average Fuel Consumption (CAFC) limits. CAFC limits are expressed in liters of fuel burned per 100 kilometers traveled; in this case, the lower the number the better the fuel consumption (please see Figures J and K). For the 2004 Model Year, we will meet our target to exceed CAFE standards and CAFC voluntary limits for both passenger cars and light-duty trucks.

In recent years, consumers in both the United States and Canada have displayed a growing preference for trucks. Toyota’s product offerings have expanded to keep pace with this demand, yet we have also maintained fuel economy performance above that of the industry as a whole. 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 advanced technology hybrid vehicles to our truck fleet in the near future.

**GOAL: PROMOTE EMISSIONS REDUCTIONS**

The Tier 2 Emissions Certification Program is the latest effort by the U.S. EPA and Environment Canada to improve air quality through further emissions reductions from vehicles. Under Tier 2 regulations, emissions standards for cars and light trucks converge over a period of time where, by 2009, 100% of all cars and light

Figure H

### U.S. Car Corporate Average Fuel Economy, or CAFE

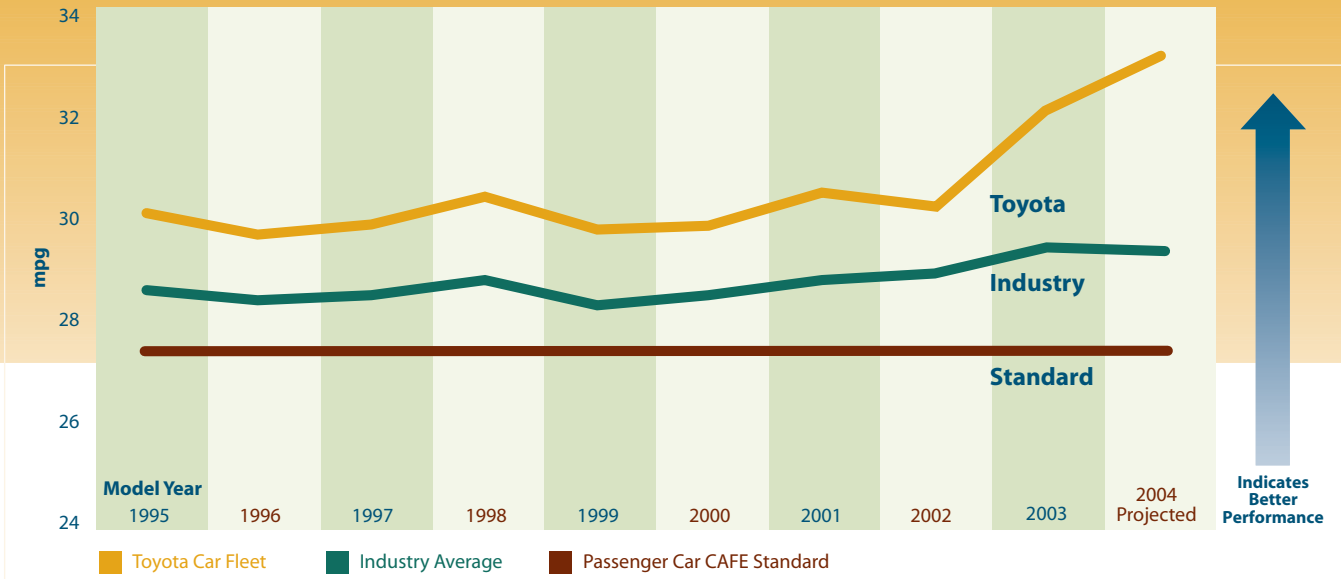
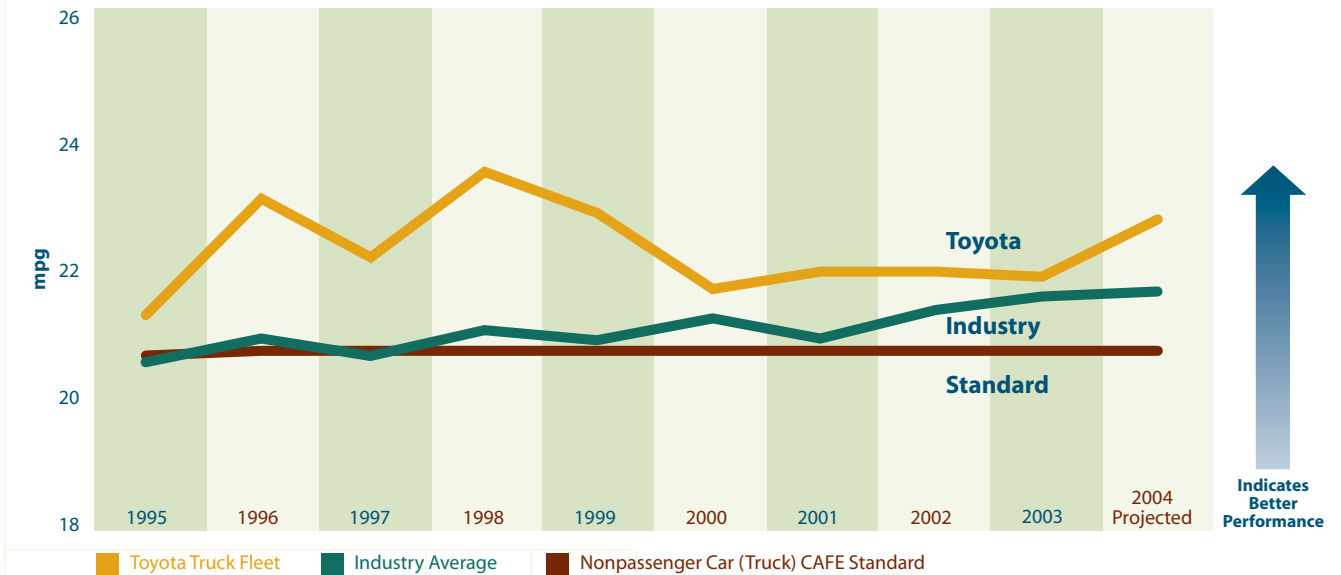


Figure I

### U.S. Truck Corporate Average Fuel Economy, or CAFE



NOTE: 2004MY Toyota data are projected based on midmodel year CAFE estimates reported to the National Highway Traffic Safety Administration. The 2004MY industry estimate is projected by the National Highway Traffic Safety Administration.

trucks must meet the new standard. A very important component of the Tier 2 program is the reduced sulfur levels in gasoline that will be necessary to achieve these further reductions in vehicle emissions over time.

In addition, effective for the 2004 Model Year, California has amended its existing Low Emission Vehicle (LEV) Program, now called LEV II. Like the federal Tier 2

program, this LEV standard regulates nonmethane organic gas (NMOG), CO, NO<sub>x</sub>, HCOH and PM. However, LEV II is primarily focused on NMOG reductions, while the federal Tier 2 standard is more focused on NO<sub>x</sub> reductions.

Figure J

Canadian Car Company Average Fuel Consumption, or CAFC

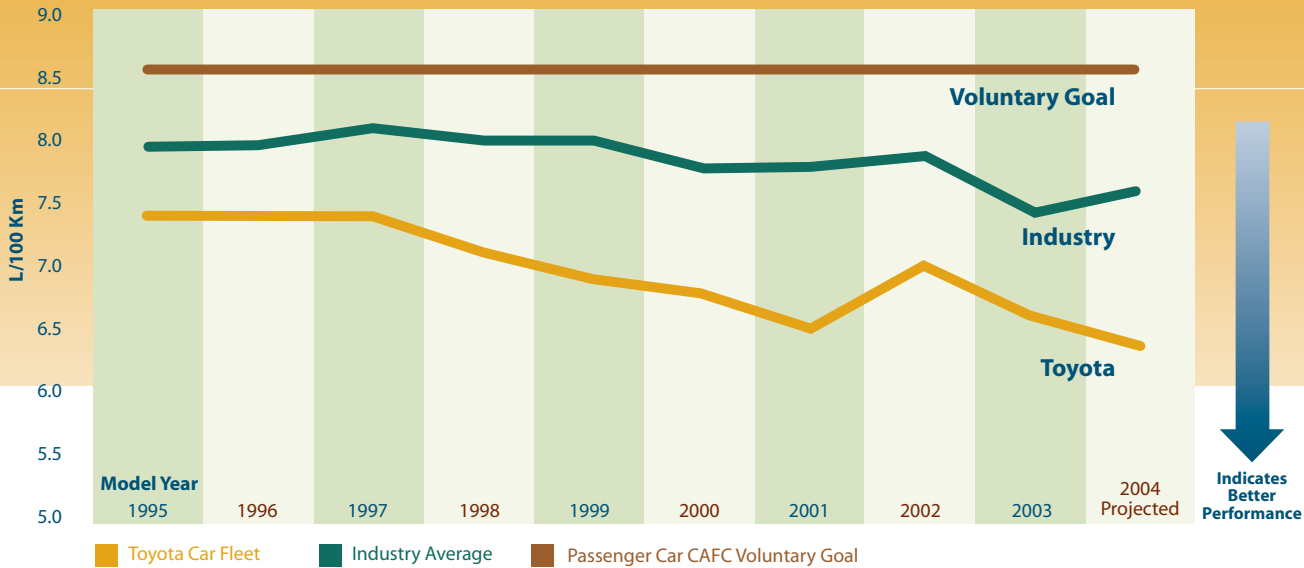
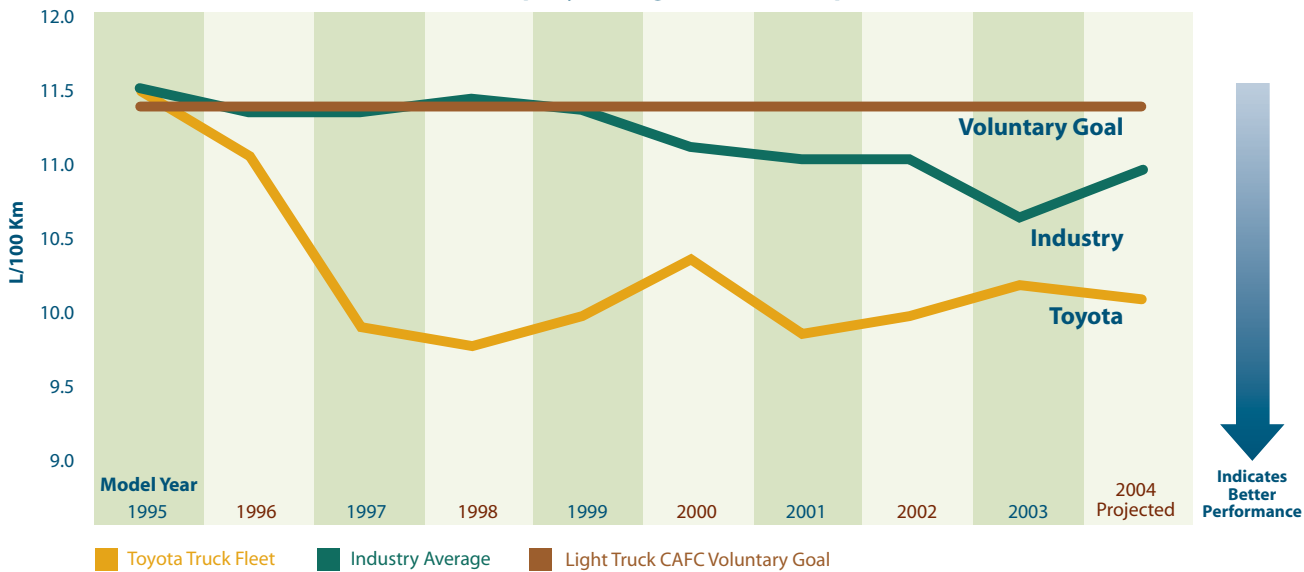


Figure K

Canadian Truck Company Average Fuel Consumption, or CAFC



NOTE: 2004MY Toyota data are projected based on CAFC estimates reported to Transport Canada. The 2004MY industry estimates are projected by Transport Canada.

**TARGET: MEET TIER 2 AND LEV II EMISSIONS REQUIREMENTS**

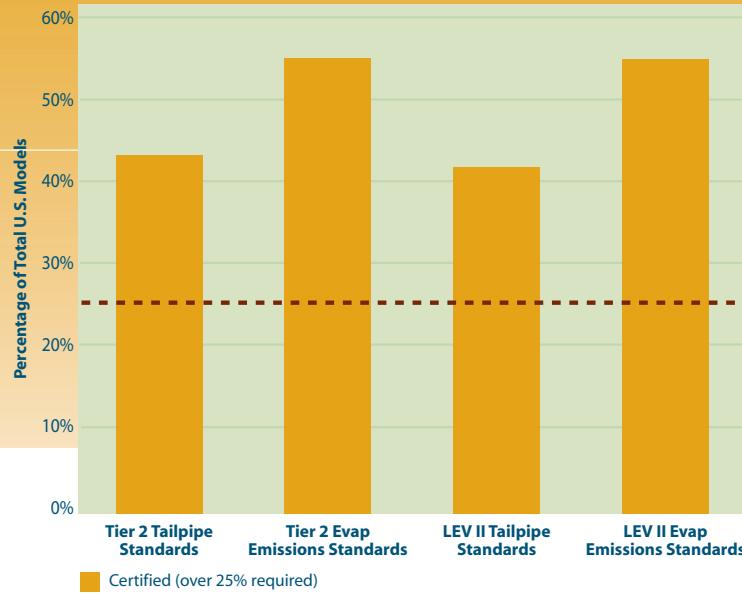
Toyota is ahead of the required compliance schedule for certification of its vehicles to these new emissions standards. As shown in Figure L, for the United States and California, we have consistently certified more vehicles than required for the 2004 Model Year to Tier 2 and LEV II. Our performance in Canada follows a similar track, as Environment Canada has implemented a Tier 2 program (similar to the EPA's program), and the vehicles we sell there have the same emission control technologies.

Additionally, for the 2004 Model Year, we have reached the following accomplishments:

- The 2004 Prius is certified as an AT-PZEV (Advanced Technology Partial Zero Emission Vehicle) in California and states adopting California standards, and as EPA Tier 2, Bin 3 in the rest of the country. The new Prius emits 30% fewer emissions than the previous model. That equates to producing nearly 90% fewer smog-forming emissions than a conventional internal combustion engine vehicle;
- The 2004 Camry is certified as a PZEV in California and states adopting California standards. It is as clean as the Prius.

Figure L Toyota's 2004 Model Year Tier 2 and LEV II Models

NOTE: California LEV II tailpipe certifications are shown for the combined Toyota fleet. For actual certification, the vehicles are divided into two categories, PC + LDT1 (Passenger Car and Light-Duty Truck Category 1) and LDT2 (Category 2). In these categories for the 2004MY, Toyota has reached 34% and 58% certification, respectively.



- Toyota's in-use emissions compliance leads most major industry manufacturers;
- All Lexus cars with V-8 engines – the LS 430 flagship sedan, the SC 430 hardtop convertible and the GS 430 sports sedan – will continue to be rated Ultra Low Emission Vehicles (ULEV). In addition, the ES 330 luxury sedan and RX 330 SUV with V-6 engines are certified as ULEVs.

Toyota's 2004MY vehicles are also subject to the phase in for the U.S. EPA's Supplemental Federal Test Procedure (SFTP) requirements, which represent enhanced emissions control while operating the vehicle over a more severe drive cycle. Vehicles are required to meet the phase in this year. Toyota is on schedule with the phase in, as all (100%) of our passenger cars, light-duty trucks and heavy light-duty trucks already meet these requirements.

### SHARING EMISSIONS REDUCTION TECHNOLOGY

Toyota and Ford Motor Company have concluded an agreement that covers licensing a number of each company's emissions purification technology patents for lean-burn engines, centering on NO<sub>x</sub> reduction. Toyota patents licensed to Ford and Ford group companies involve Toyota's NO<sub>x</sub> storage reduction three-way catalytic converter system applicable to lean-burn engines, such as direct-injection gasoline engines or diesel engines. Ford patents licensed to Toyota and Toyota group companies involve NO<sub>x</sub> control and Direct Injection Spark Ignition (DISI) technology.

### GOAL: INTRODUCE CLEANER ENERGY VEHICLES

As we look to the future, development of automobiles that utilize advanced technologies beyond today's gasoline-powered vehicles, will be the key to energy efficient transportation. Toyota is committed to pursuing a variety of these advanced technologies as part of our overall product environmental strategy, and in pursuit of the "ultimate ECO car."

### TARGET: INTRODUCE ADDITIONAL NEW HYBRID ELECTRIC VEHICLES BY 2005

During this past year, Toyota made a number of product announcements for hybrid vehicles. We also established a target of putting 300,000 hybrid vehicles on roads around the world, annually, by mid-decade.

#### ACEEE GREEN BOOK

The Best of 2004 list in the Green Book, published by the American Council for an Energy Efficient Economy (ACEEE), includes 18 Toyota cars, trucks, minivans and SUVs — more than any other brand. In addition, Toyota and Scion have more vehicles than any other manufacturer among the top 10 gasoline-powered vehicles in the book's Greenest Vehicles of 2004 list. They are: Prius, Echo 5-speed with manual transmission, Corolla 5-speed with manual transmission and Scion xA with automatic transmission. Green Book ratings are based on measurements of tailpipe emissions that are thought to threaten public health and adversely affect climate change. Green Book lists are available on the Web at [www.greencars.com/bestof.html](http://www.greencars.com/bestof.html).



The driving force behind all of our hybrid vehicles is our second-generation hybrid system called the Hybrid Synergy Drive (HSD). This system features a high-voltage power circuit combined with a more powerful and efficient electric motor, offering superior power, performance and fuel economy. HSD is currently used in the 2004 Prius.

### Lexus RX 400h Luxury Hybrid SUV

The Lexus RX 400h will go on sale in the spring of 2005 with a version of the Hybrid Synergy Drive (HSD) configured to meet the needs of SUV owners: a 3.3 liter V-6 gasoline engine plus hybrid batteries and motors twice as powerful as those in Prius.

The HSD system in the all-wheel-drive RX 400h features powerful and efficient electric motors. Its front motor produces 165 horsepower and its rear motor produces 67 horsepower, operating at up to 650 volts. With this power, plus improved low-end torque from the drive motors, a significant boost in acceleration performance (compared to the Lexus RX 330) will be possible in the new RX 400h. Overall, it will develop a peak system output of approximately 270 horsepower. The system is a "full hybrid," meaning that the RX 400h is capable of operating in electric mode only, as well as a mode that combines power from both the gas engine and electric motors.

The all-wheel-drive RX 400h will meet Super Ultra Low Emission Vehicle (SULEV) emissions standards and will have similar fuel economy to the current EPA average for a compact sedan, which is almost 28 miles per gallon.

Like the Prius, the RX 400h uses a regenerative braking system. When the vehicle is coasting or the brakes are applied, the electric motor functions as a generator,

### THIRD-PARTY RECOGNITION OF TOYOTA HYBRIDS

- Prius won the 2003 "North American Car of the Year Award."
- Prius was the 2004 Motor Trend Car of the Year.
- Prius was *Automobile Magazine's* 2004 "Design of the Year".
- Prius was the 2004 SAE Best Engineered Car of the Year.
- Toyota Prius and Lexus RX 400h were named two of the "Top 10 Most Technically Sophisticated Cars for 2003" by *IEEE Spectrum*, the trade magazine published by the Institute of Electrical and Electronic Engineers, Inc.
- Hybrid Synergy Drive won "International Engine of the Year 2004" at the Engine Expo 2004.

capturing kinetic energy that would normally be lost as heat through the brakes and converting it into useable electricity to recharge the batteries.

### Highlander Midsize Hybrid SUV

Toyota will also introduce a hybrid version of its popular Highlander midsize SUV in mid-2005. It will be the third vehicle in Toyota's lineup to be powered by Hybrid Synergy Drive, and is expected to deliver the fuel economy of a compact sedan. In fact, it will have the highest fuel efficiency in its class while meeting the California Air Resources Board (CARB) SULEV standard.

Like the RX 400h, the Highlander Hybrid system will feature a larger-capacity battery and an all-new high-speed electric motor. With combined peak-system power projected at approximately 270 horsepower, the new system will improve upon the V-6 Highlander's already impressive zero-to-60 acceleration time.



While hybrid vehicles are making history, they're also sparking some mystery. As the public discovers and investigates hybrids, many questions are being asked about the new technology. Below are some of the questions that have been raised about hybrid vehicles, as well as the answers.

**DO HYBRIDS NEED TO BE PLUGGED IN?**

There is no need to plug in hybrid vehicles. They have electric motors and gasoline engines, which work together to provide power. The batteries for the electric motor are recharged by energy captured as the driver applies the brakes or coasts in the car.

**DO HYBRIDS MEET THEIR EPA/NRCAN FUEL RATINGS?**

Governments in both Canada and the U.S. require manufacturers to post fuel consumption or fuel economy estimates on new vehicle window stickers to aid consumers in comparing relative fuel efficiency between vehicles and making informed purchase decisions. Toyota strongly supports this type of consumer information program.

Drivers of hybrid vehicles, just like drivers of other vehicle types, are likely to experience a range of actual fuel consumption or fuel economy performance. Factors such as driving speed, road terrain (hills), ambient



temperature (winter versus summer), vehicle maintenance, and more, can all greatly impact a particular vehicle's fuel consumption or fuel economy — this is no different for hybrid vehicles.

Toyota maintains close communication with relevant government agencies in both Canada and the U.S., and we will continue to work cooperatively with them to ensure that consumers have access to the best information upon which to make environmentally informed purchase decisions.

In summary, Toyota is committed to hybrid technology, and it is our intention to apply hybrid technology across our vehicle lineup. We strongly believe that hybrid technology, as manifested in our Hybrid Synergy Drive system, is the key to energy efficient transportation, with immediate benefits for the environment. Today's hybrids also give us a head start in developing future hybrid vehicles, including those that will employ fuel cells.

**CAN EMERGENCY WORKERS GET SHOCKED BY A HYBRID THAT'S BEEN INVOLVED IN AN ACCIDENT?**

In the Prius, there are numerous safeguards to help ensure safe operation for drivers and protection of emergency response professionals in the event of an accident. High-voltage cables are located away from areas that workers might access, are colored orange, are shrouded in metal and have specific automatic disablement mechanisms to ensure the lines have no voltage in them if an accident occurs.

Additionally, beginning with the first-generation Prius, Toyota has developed manuals and assisted in training exercises to ensure proper information is disseminated. These manuals are available on-line to all emergency response personnel. Most importantly, Prius hybrids have been on U.S. roads for five years and Toyota is not aware of any personal injury in the U.S. related to hybrid or EV electrical systems.

**IS THERE A RECYCLING PLAN IN PLACE FOR HYBRID ELECTRIC VEHICLE BATTERIES?**

Toyota has a comprehensive battery recycling program in place and has been recycling nickel-metal hydride batteries since the RAV4 Electric Vehicle was introduced in 1998. Every part of the battery, from the precious metals to the plastic, plates, steel case and the wiring, is recyclable. To ensure that batteries come back to Toyota, each battery is labeled with a phone number to call for recycling information and dealers are paid an incentive of \$150-\$200 for each battery.



**SHARING HYBRID TECHNOLOGY**

In order to have the greatest environmental impact, environmentally advanced technologies should be widely available. In order to achieve this, cooperation among vehicle manufacturers and related stakeholders is necessary.

Our leading hybrid technology-licensed patents are being shared with other automakers. Ford Motor Company has purchased licenses for 20 Toyota patents on hybrid systems and control technology for its hybrid vehicle development program and for the Ford Escape hybrid (the scope of the agreement does not include the supply or use of Toyota hybrid powertrain components).

# We view hybridization as a core technology for future sustainable mobility.

Additionally, we will provide hybrid system components to Nissan Motor Corporation, and we have offered to make our hybrid technology available to other manufacturers.

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

Toyota has continued making significant progress in the development, evaluation and refinement of fuel-cell powered vehicles. By utilizing the same hybrid technology as in the Prius, our engineers have been able to focus on independent development of a Toyota-proprietary fuel-cell system.

At this time, our primary fuel-cell powered vehicle is the fuel-cell hybrid vehicle (FCHV), a hybrid 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 is combined with oxygen, generating a peak of 90 kilowatts of electricity. The electricity from the fuel cell is used to power the 109-hp (194 lbs-ft of torque) electric motor and to charge the vehicle's nickel-metal hydride batteries, which also feed power-on-demand to the electric motor. Only water vapor is emitted through the vehicle's tailpipe.



In North America, our real world FCHV evaluation is being conducted in conjunction with the California Fuel Cell Partnership project, of which Toyota has been a member since 2000, and as part of the California Fuel Cell Community.

Toyota's delivery of two FCHVs to the University of California, Irvine and the University of California, Davis in 2002 was the first step in establishing California fuel-cell "communities." We continue to develop this concept of a fuel-cell community by establishing partnerships with government, business and academe to tackle product, infrastructure and consumer challenges. The success of the community depends on the development and expansion of hydrogen-refueling infrastructure. Toward that end, we are working with the state's California Air Resources Board (CARB) and South Coast Air Quality Management District (SCAQMD), as well as corporations such as Stuart Energy and Air Products. The fuel-cell communities in California had a network of six refueling stations (including a new station at Toyota Motor Sales national headquarters) up-and-running within the first six months. With a current maximum range of approximately 180 miles, the southern fleet of Toyota FCHVs will have a driving range capable of covering most of Los Angeles and Orange counties.

A total of 10 Toyota FCHVs are on the road in the United States, including one leased by Stuart Energy. Toyota also delivered a third FCHV to the National Fuel Cell Research Center at the University of California, Irvine. It is leased by Horiba Instruments, Inc., a manufacturer of analytical and engine measurement instruments and systems. Horiba's daily driving of the FCHV provides real world data on its capabilities and functionality.


Figure M

2004 MODEL YEAR PRODUCT DATA FOR SELECTED MODELS<sup>1</sup>

	North American Model	Engine	Transmission	Fuel Economy/ Fuel Consumption <sup>2</sup>		Emissions Standard		Notes
				City mpg (l/100 km)	Hwy mpg (l/100 km)	U.S. and Canada Federal	California	
	Toyota Prius (U.S. & Canada only)	1.5 L	See Note 3	60 (4.0)	51 (4.2)	Tier 2, Bin 3	AT-PZEV	2004 Model Year EPA/DOT Fuel Economy Guide leader among midsize Cars and 2004 NRCan EnerGuide most fuel-efficient vehicle
	Toyota RAV4 2WD (U.S. only)	2.4 L	5 M/T	24	30	Tier 2, Bin 9	ULEV	2004 Model Year EPA/DOT Fuel Economy Guide leader among M/T SUVs
			4 A/T	24	29	Tier 2, Bin 9	ULEV	2004 Model Year EPA/DOT Fuel Economy Guide leader among A/T SUVs
	Toyota Corolla Matrix (2WD XR)	1.8 L	5 M/T	29 (7.7)	36 (6.0)	Tier 2, Bin 9	ULEV	2004 NRCan EnerGuide most fuel-efficient vehicle
	Toyota Echo	1.5 L	5 M/T	35 (6.7)	43 (5.2)	Tier 2, Bin 9	LEV	2004 NRCan EnerGuide most fuel-efficient vehicle
	Toyota Sienna (2WD)	3.3 L	5 A/T	19 (12.2)	27 (8.1)	Tier 2, Bin 5	ULEV II	Completely redesigned for 2004MY
	Toyota Sienna (AWD)	3.3 L	5 A/T	18 (13.1)	24 (9.0)	Tier 2, Bin 5	ULEV II	Completely redesigned for 2004MY
	Toyota Solara (5 MT U.S. only)	2.4 L	5 M/T	24	33	Tier 2, Bin 5	ULEV II	Completely redesigned for 2004MY
			4 A/T	23 (10.1)	32 (6.7)	Tier 2, Bin 5	ULEV II	
	Toyota Solara (& Convertible)	3.3 L	5 A/T	20 (11.5)	29 (7.5)	Tier 2, Bin 5	ULEV II	Completely redesigned for 2004MY
	Toyota Tundra D-Cab (2WD) (U.S. & Canada only)	4.7 L	4 A/T	14 (16.6)	18 (12.3)	Tier 1	ULEV	New Model for 2004MY
	Toyota Tundra D-Cab (4WD) (U.S. & Canada only)	4.7 L	4 A/T	14 (16.7)	17 (12.5)	Tier 1	ULEV	New Model for 2004MY
	Scion xA (U.S. only)	1.5 L	5 M/T	32	38	Tier 2, Bin 9	LEV	New Model for 2004MY
			4 A/T	32	38	Tier 2, Bin 9	LEV	
	Scion xB (U.S. only)	1.5 L	5 M/T	31	35	Tier 2, Bin 9	LEV	New Model for 2004MY
			4 A/T	30	34	Tier 2, Bin 9	LEV	
	Lexus RX 330 (2WD) (U.S. & Canada only)	3.3 L	5 A/T	20 (12.0)	26 (8.5)	Tier 2, Bin 5	ULEV II	New Model for 2004MY
	Lexus RX 330 (AWD) (U.S. & Canada only)	3.3 L	5 A/T	18 (12.8)	24 (9.0)	Tier 2, Bin 5	ULEV II	New Model for 2004MY
	Lexus ES 330 (U.S. & Canada only)	3.3 L	5 A/T	20 (11.6)	29 (7.5)	Tier 2, Bin 5	ULEV II	New 3.3L Engine for 2004MY
	Lexus LS 430	4.3 L	6 A/T	18 (13.2)	25 (8.6)	Tier 2, Bin 9	ULEV	New 6-speed A/T for 2004MY

**Notes:** (1) This chart shows 2004 models that are new, redesigned, or have new powertrain options; and models that were identified in the U.S. EPA/DOT 2004 Model Year Fuel Economy Guide or the Natural Resources Canada EnerGuide as class fuel economy leaders. (2) Fuel economy estimates are determined by averaging numbers gathered through tests conducted by the U.S. EPA and Environment Canada. Vehicles are tested in a controlled setting, and the results are adjusted to suit real world driving conditions. The fuel economy ratings for the United States and the fuel consumption ratings for Canada may not be equal when converted to the same units. The test cycles and correction factors used in generating these ratings take into account the aerodynamic efficiency, weight, rolling resistance and drive mode of different vehicles. Other adjustments are made to reflect the average fuel consumption of vehicle models that offer different configurations/options, based on their sales mix in each country. These averaging steps may lead to slightly different ratings in Canada and the United States based on differences in vehicle sales by class and configuration. In addition, U.S. ratings will also differ from Canadian ratings data, as the U.S. gallon is smaller than the imperial gallon used in Canada. (3) Prius does not have a traditional automatic or manual transmission. Prius has a continuously variable transmission.



# MANUFACTURING



# “We achieved our five-year environmental targets in manufacturing early in five areas: reduction of energy and water usage, VOC emissions, toxic releases and landfill waste.”

— Dennis Cuneo, Senior Vice President,  
Toyota Motor North America, Inc.

**We recognize** that our operations have environmental impacts. Our Five-Year Environmental Action Plan demands that we achieve the highest level of environmental performance in the automotive industry — and that we go beyond routine compliance in many aspects. The Action Plan incorporates specific stretch targets to reduce impacts from manufacturing in the most significant areas, including energy and water usage, emissions of volatile organic compounds and toxic chemicals, and waste generation and disposal. It also sets goals to achieve 100% compliance with all federal, state, provincial and local regulations that apply to our facilities. It requires that we continue activities aimed at reducing long-term environmental risk. These include enhanced environmental management activities and ISO 14001 certification/registration at our manufacturing facilities, and due diligence audits at waste management companies. Finally, it sets targets for suppliers of raw materials and components to our manufacturing facilities.

Toyota’s commitment to the highest level of environmental performance in the automotive industry extends in particular to our new plants. This year we opened an engine manufacturing facility in Huntsville, Alabama; we continued construction on our new truck and components plant in Baja California; and we continued planning for both our new truck plant in San Antonio, Texas and our new casting plant in Jackson, Tennessee. We are using lessons learned from other construction projects to make these facilities into the most environmentally friendly in North America. For example, our Alabama engine plant has achieved zero waste-to-landfill — defined as a 95% or greater reduction in landfill waste — since it started production in 2001 (please see page 34).

Toyota’s manufacturing facilities have made significant progress over the past year in reducing energy usage, water usage and emissions of volatile organic compounds (VOCs). In fact, we are pleased to report that we achieved our five-year targets for energy and water usage and emissions reductions ahead of schedule.

## ADDRESSING GLOBAL WARMING AND ENERGY USE

Toyota has realized for many years that our manufacturing operations can have a potentially significant impact on the environment, and so requires each of the worldwide companies to consider technologies that will minimize these potential impacts. In the section that follows, we explain our efforts to reduce the consumption of energy and the resulting emissions of carbon dioxide.

## GOAL: IMPLEMENT AGGRESSIVE PLANS TO REDUCE ENERGY CONSUMPTION

Associates throughout our operations are committed to reducing our energy usage. Model plants have been established to evaluate potential energy reduction techniques and opportunities. The ideas developed from these model plants are being used in the development of eco-plant targets for new plants and projects at existing plants.

**At Toyota Motor Manufacturing, Alabama, Inc., in Huntsville, Alabama, an upgrade of the HVAC computerized control system has reduced energy usage significantly. The plant no longer burns natural gas for heating.**



**Main:** Toyota is utilizing waterborne paints and high efficiency robotics in its paint shops. This combination, used on Sienna minivans at the new East Plant at Toyota Motor Manufacturing, Indiana, Inc. in Princeton, Indiana, significantly reduces VOC emissions from painting operations. Environmental innovation like this has allowed Toyota to achieve an overall 42% reduction in emissions of volatile organic compounds from our base year of 1998.



Mr. Fujio Cho, President of Toyota Motor Corporation (TMC), visited Toyota Motor Manufacturing North America (TMMNA) in early August 2004. He spoke to the employees about Toyota's Global 2010 Vision, and what an important role the North American Manufacturing Companies (NAMCs) play in Toyota's future. Increasing sales and profits aside, Toyota is constantly striving to keep up with environmental issues. "TMC recognizes the efforts being made by TMMNA and the NAMCs to make sure our manufacturing facilities reduce their impact on the environment as much as possible," Mr. Cho remarked.

**TARGET ACHIEVED: REDUCE ENERGY USAGE BY 15% PER UNIT OF PRODUCTION, RESULTING IN A 15% DECREASE IN CO<sub>2</sub>**

Even with our expansion activities, we continue to focus on our overall energy management organization and our *kaizen* activities. As you can see in Figure N, we achieved our FY2006 Action Plan target of 15% energy reduction two years ahead of schedule. The achievement of this energy reduction target resulted in a corresponding reduction in emissions of carbon dioxide. Regardless of this, we will continue to focus on additional reductions.

Some examples of the *kaizens* that helped us achieve our goal include:

- Developing waste-heat recovery systems in our paint shops;
- Installing new lighting fixtures, controllers and energy efficient bulbs;

- Implementing a "treasure hunt" program to identify best practice sharing;
- Enhancing HVAC operating procedures to control outside air requirements;
- Continuing development of energy-usage guidelines for nonproduction periods (weekends, holidays, between shifts, etc.);
- Creating energy model plants in order to develop best practices that can be applied to other facilities.

As an Energy Star Partner, Toyota continues to work with the U.S. EPA for best practice sharing and energy program enhancements to support our reduction efforts.

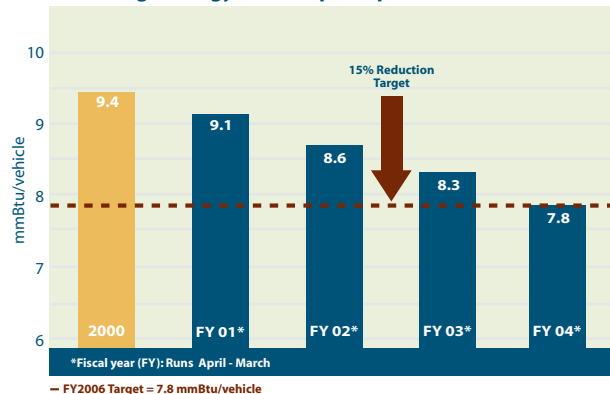
**SUBSTANCES OF CONCERN**

As with any manufacturing industry, activities associated with automobile manufacturing result in the release of a variety of emissions into the atmosphere. Volatile organic compounds (VOCs) from painting operations are the most significant emissions. Some of these VOCs are also listed in the U.S. Environmental Protection Agency's Toxic Release Inventory (TRI) and Environment Canada's National Pollutant Release Inventory (NPRI). In this section, we discuss steps that we are taking to minimize the emissions of these substances from our activities.

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

Toyota's Environmental Action Plan includes requirements for each of its worldwide companies to take a proactive approach to the reduction of substances

Figure N **Average Energy Consumption per Vehicle Produced**



**“I like to think of it as enlightened self-interest. If automakers don’t reduce smog-forming emissions, greenhouse gases and the need for petroleum, we won’t be in business.”**

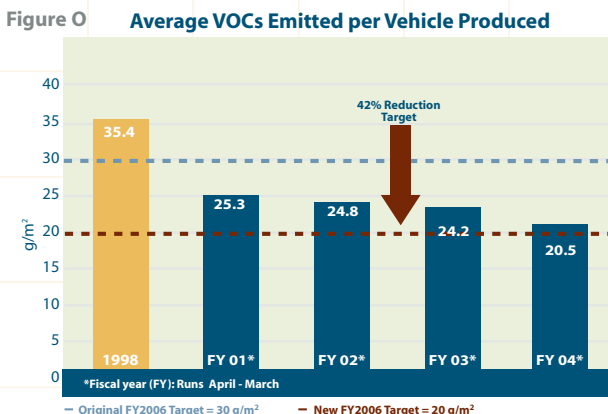
— Fujio Cho,  
President, Toyota Motor Corporation

of concern. In North America we developed a Toxic Chemical Release Reduction (TCRR) Strategy that allows us to make continued reductions. The steps in the TCRR program include:

- Introducing efficient robotics and spray equipment for optimization of spray efficiencies;
- Researching and developing low VOC and low HAP (Hazardous Air Pollutant) paints and solvents;
- Improving production line management practices for paints and solvents;
- Improving data collection and management techniques to quickly identify possible trends and easily check the progress of improvement plans.

**NEW TARGET: REDUCE BODY-PAINTING EMISSIONS OF VOLATILE ORGANIC COMPOUNDS TO 20 G/M<sup>2</sup> FOR ALL PAINT SHOPS**

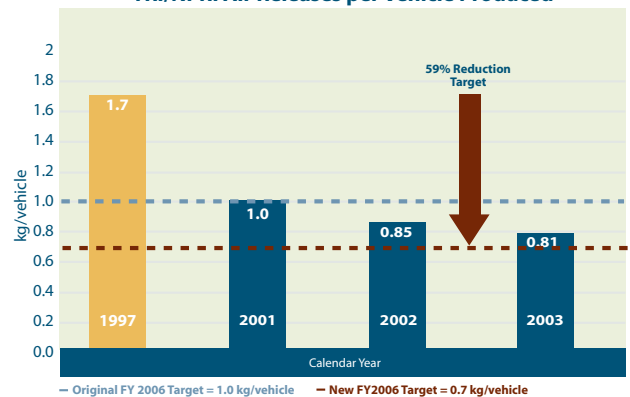
Volatile organic compounds are a category of chemicals that can photochemically react in the atmosphere to form ground level ozone — a primary component of smog. In our initial 2000 report, we set a goal to reduce emissions of these substances to 30 g/m<sup>2</sup> as an average for all paint shops in North America. Last year we reconfirmed this target and stated that due to our overall success, we would be lowering our target to 22 g/m<sup>2</sup> as



an average for all auto body paint shops in North America. This year we are pleased to report that we have achieved this lower target (please see Figure O). As a result of this success we set a new FY2006 target of 20 g/m<sup>2</sup>. In order to achieve this target we will again rely on a variety of reduction techniques, including:

- Reducing the usage of cleaning solvents;
- Introduction of new robotics and painting technology to improve spray efficiencies and reduce solvent emissions;
- Removing/streamlining painting operations.

**Figure P TRI/NPRI Air Releases per Vehicle Produced**



**NEW TARGET: REDUCE TOXIC CHEMICALS EMITTED BY VEHICLE ASSEMBLY PLANTS TO 0.7 KG/VEHICLE**

We utilized many of the same practices used to reduce VOC emissions to help us reduce toxic chemical emissions. In 2000, we achieved our initial FY2006 Action Plan target of 1.0 kg/vehicle. Due to our success in reducing toxic chemical emissions, we announced a new target of 0.7 kg/vehicle last year. As shown in Figure P, we continue to make progress in reducing emissions and are well on our way to achieving the revised target.

### TARGET: CONTINUE R&D ACTIVITIES AIMED AT ELIMINATING ALL VOCs AND TOXIC CHEMICALS FROM COOLANTS AND CUTTING OILS USED IN UNIT PLANTS

While the potential impacts from machining coolants, cutting oils and washing chemicals are minimal when compared to other materials utilized in the production of automobiles, we are continuing to look for opportunities to minimize those impacts. At Toyota, we are continuing to work with our suppliers to develop and implement newer, longer-life coolants that emit reduced amounts of VOCs.

### WASTE DISPOSAL

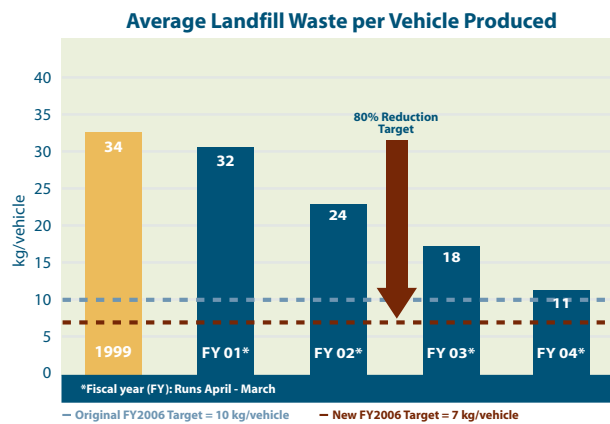
At Toyota, we continuously strive to reduce waste. The elimination of waste, or *muda*, is one of the founding principles of the Toyota Way. We continue to utilize a variety of innovative *kaizens* to reduce the amount of waste disposed in landfills.

### GOAL: REDUCE WASTE AND PROMOTE RESOURCE CONSERVATION ACTIVITIES

The Toyota 5Rs program continues to be the key to our waste reduction efforts. The 5R steps include:

- Refine — To utilize techniques and materials that allow for the implementation of the remaining 5R techniques;
- Reduce — To design the process to reduce or eliminate the amount of waste generated;
- Reuse — To find innovative ways to reuse the materials that might otherwise be waste in the same process;
- Recycle — To reclaim the waste materials for use in a different way;
- Retrieve Energy — To recover energy from the waste as a last resort (i.e., if the waste cannot be reused or recycled).

Figure Q



### NEW TARGET: REDUCE LANDFILL OF ALL WASTE TO 7 KG/VEHICLE

In the 2003 report, we revised our target and committed to reducing the land disposal of all types of waste by 70% (or to 10 kg/vehicle). Since we first announced our FY2006 Action Plan three years ago, we have reduced disposal of hazardous wastes by 97%. Overall, our land disposal of waste has declined by nearly 68% as seen in Figure Q. With this success, we are again stretching our target. Our new target is to reduce landfill waste by 80%, to 7 kg/vehicle.

In order to achieve this success we have relied on fundamentals of the Toyota Way, including *yokoten*, which means to spread an existing *kaizen* to a new location. There have also been some new *kaizens*, including:

- Composting cafeteria wastes at some of our manufacturing plants;
- Eliminating Styrofoam™ and other types of materials that can be difficult to recycle when contaminated with food wastes;
- Recycling sludge that can be used as a raw material in the production of cement;



# “We are pleased that three of Toyota’s North American plants — in British Columbia, Alabama and West Virginia — have now achieved zero landfill status.”

— Kevin Butt, General Manager and Chief Environmental Officer, Toyota Motor Manufacturing North America, Inc.

- Recycling sludge that can be mixed with recycled plastic to form parking blocks, railway ties and landscape timbers;
- Increasing segregation of recyclable materials at line side;
- Converting trash to energy at waste-to-energy plants.

## WATER USE

Painting operations account for the largest usage of water at a vehicle manufacturing plant. However, water is used in significant amounts throughout most areas of the vehicle manufacturing process. Water reduction is one of our more challenging goals; but, as you will see in this report, we continue to make good progress. In fact, in just the third year of our Five-Year Action Plan, we have achieved our original five-year target.

## GOAL: IMPLEMENT AGGRESSIVE PLANS TO REDUCE CONSUMPTION OF WATER

Engineers and technical staff throughout North America remain committed to reducing our consumption of water. Water task force groups have been formed to evaluate potential water reduction techniques, including those from similar processes at Toyota’s best plants throughout the world and those of competitor companies. We are also using these best plant ideas in the development of eco-plant targets for both new projects at existing plants and activities at new plants.

## TARGET ACHIEVED: REDUCE TOTAL WATER USAGE BY 15% PER UNIT OF PRODUCTION

Our North American Environmental Action Plan requires a 15% reduction in water usage by the end of FY2006 while using a baseline year of 2000.

Figure R shows that we achieved our 15% reduction target in just the third year of our Five-Year Action Plan.

In order to achieve this reduction we implemented a number of successful improvements, including:

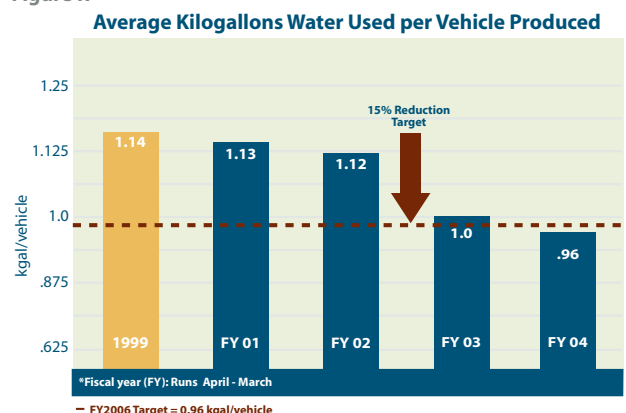
- Implementing new treatment technologies for cooling tower systems;
- Developing Water Task Force groups to evaluate new technologies across all plants;
- Installing industrial water recycling systems to significantly reduce the amount of water purchased from utility companies;
- Installing waterless urinals that reduce water usage.

## GREEN SUPPLIER GOAL: IMPLEMENT GREEN SUPPLIER GUIDELINES

In June 2000, Toyota issued Green Supplier Guidelines that promote “greener” purchasing activities. Under these guidelines, we have been working with our suppliers to promote a number of activities that will help protect the environment.

Please visit our Web site at [www.toyota.com/about/environment/manufacturing/supplier.html](http://www.toyota.com/about/environment/manufacturing/supplier.html) to learn more about this program.

Figure R





Toyota Motor Manufacturing Canada, Inc. (TMMC) donated \$50,000 to the Grand River Conservation Authority to establish the "Toyota Way" trail at the Shades Mill Conservation Area. During Earth Week, over 250 TMMC employees and their families volunteered to build birdhouses to be placed throughout Shades Mill.

**TARGET: CERTIFY/REGISTER KEY SUPPLIERS TO ISO 14001 BY DECEMBER 2003**

Our Green Supplier Guidelines required that existing suppliers of raw materials and/or parts and components develop and implement their own ISO 14001 certified/registered environmental management system by the end of December 2003. We developed an ISO 14001 guidance manual to assist suppliers in certifying/registering their programs. To date, more than 91% of required suppliers have achieved certification/registration. An additional 7% are in the process of obtaining certifications or demonstrating that the certification has been obtained. By the end of 2004, Toyota believes that 98% or more of the suppliers will be compliant with this requirement. Toyota is now focusing its efforts on the remaining 2%.

**TARGET: COMPLY WITH CHEMICAL BAN LIST/ENVIRONMENTAL DATA SHEET**

Our Green Supplier Guidelines require that North American suppliers eliminate the use of chemicals or chemical categories included on Toyota's global chemical ban list in new and reformulated materials. Before a material can be shipped to any of our manufacturing facilities, the ingredients are compared against a series of databases that contain our chemical ban list and other regulatory lists.

Reformulation of a material can take many years. First, a substitute ingredient has to be found that performs basically the same function as the original ingredient; then, the performance of the reformulated material must be evaluated.

Despite these obstacles we are pleased to report that significant progress is being made. For example, our Georgetown assembly plant, our largest in North America, has already achieved a 97% reduction in banned substances.

**CHILDREN LEARN ABOUT THE ENVIRONMENT AT TOYOTA'S MANUFACTURING PLANT IN KENTUCKY**

At the Toyota Childcare Center, located on-site at the Toyota manufacturing plant in Georgetown, Kentucky (TMMK), children of Toyota employees learn to recycle paper, plastic bottles, aluminum cans, paperboard, cardboard and glass baby food jars. The children are doing a wonderful job of recycling in the cafeteria and in their classrooms.

In addition to recycling, we provide monthly environmental activities to keep the children excited about recycling and to increase their overall environmental awareness. So far this year, we have used a Prius and an electric RAV4 to show the kids how Toyota as a company is making strides in creating environmentally sensitive vehicles. On Earth Day, we planted butterfly gardens to teach the children how to care for a garden. We provided them with t-shirts to decorate with environmental designs. They also contributed pictures for displays and bulletin boards within the facility about what the environment means to them.



**TARGET: DEVELOP PROCEDURES THAT ENSURE COMPLIANCE WITH HAZARDOUS MATERIALS/DANGEROUS GOODS TRANSPORTATION GUIDELINES**

All Toyota employees with responsibility for handling and/or transporting hazardous materials/dangerous goods at our North American facilities are provided with

training on the applicable regulations. To further ensure compliance and safe handling of these materials, we require our suppliers and contractors to put their own compliance systems in place.

### **PLANT ACTIVITIES**

Toyota facilities throughout North America are continuously looking for ways to improve their environmental performance. Some key examples of ongoing activities at our North American manufacturing plants are presented below. Please refer to page 55 for a description of Toyota's operations.

#### **BODINE ALUMINUM, INC.**

At our aluminum foundry in St. Louis, shop floor employees participate in three Quality Circles that focus on environmental performance improvements. Working as teams, the employees developed and implemented methods to further reduce the volume of foundry sand being put into the landfill and to reduce the volume of gas consumed for heating the dyes used to produce castings. The employees also implemented line side collection of plastic sheeting, paper and cardboard for recycling. This team is now working on finding companies to recycle abrasive grinding belts and disks, old gloves and other less commonly recycled materials.

The St. Louis plant received an Industrial Wastewater Pretreatment Gold Award from the Missouri Water Environmental Association in recognition of the plant's full compliance with all wastewater treatment discharge and reporting requirements, pollution prevention program, and history of good relations with the nominating city or sewer district.

#### **CANADIAN AUTOPARTS TOYOTA, INC. (CAPTIN)**

CAPTIN has achieved zero landfill status since 2003, and continues to look for ways to improve its environmental performance. Recent efforts have led to a 20% reduction

in (nonlandfill) solid waste disposal. This was accomplished through improved segregation and by finding recycling opportunities for shot blasting dust and waste powder coating.

CAPTIN installed a new chip melting furnace that requires only half of the natural gas than the previous one did and features reduced NO<sub>x</sub> emissions. Chips formerly sent off-site for remelting into ingot are now melted internally, which reduces emissions from transportation and the melting and remelting of aluminum ingots. These activities have reduced air emissions in the Greater Vancouver area by an estimated 3.2 tons per year.

#### **NEW UNITED MOTOR MANUFACTURING, INC. (NUMMI)**

This year, NUMMI implemented numerous energy *kaizens* that totaled 4.5 million kwh in reductions. The largest *kaizen* was a lighting upgrade that reduced energy usage by 2.5 million kwh.

NUMMI also continued efforts to reduce waste. In 2004, NUMMI diverted waste plastic and cardboard from landfills or other means of disposal by disassembling parts boxes to separate the materials. In recognition of these efforts, NUMMI won the California Integrated Waste Management Board's Waste Reduction Award Program (WRAP) Award for the 11<sup>th</sup> consecutive year.

#### **TABC, INC.**

Over the past year, TABC has worked on a number of initiatives for improving environmental performance. TABC achieved its FY2006 water reduction target ahead of schedule and continues to look at methods to further reduce consumption. TABC implemented a zero landfill waste program: Currently, no wastes are being sent to landfills for disposal. Wastewater sludge from the two on-site wastewater treatment systems is being sent to a cement kiln for recycling as a raw material in the

production of cement. These efforts helped TABC win their ninth Waste Reduction Award Program (WRAP) Award.

Additionally, implementation of a non-VOC solvent in the paint department resulted in a reduction of 14 tons of VOC emissions per year. Energy reduction activities continue to be a priority, such as installation of a cyclone air system to replace the use of compressed air for cooling purposes, installation of body weld cooling tower variable frequency drives and installation of new high output T-8 fluorescent lighting fixtures. Total annual energy savings are estimated to be over 708,000 kwh.

**TOYOTA MOTOR MANUFACTURING, ALABAMA, INC. (TMMAL)**

TMMAL, a North American engine production plant, has maintained a record of zero landfill waste since it began operations in 2003. This is the result of incorporating environmental impact reduction measures into the production process from the planning stage. For example, in order to promote the recycling of the mixture of metal and oil discharged when polishing metals, machinery was introduced to separate the metal and oil. Currently, TMMAL is involved in efforts to reduce waste that is incinerated for thermal recovery. TMMAL won the Alabama Department of Environmental Management 2003 Achievement Award for pollution prevention based on their waste reduction efforts in achieving the zero landfill initiative.

**TOYOTA MOTOR MANUFACTURING, CANADA, INC. (TMMC)**

TMMC recently introduced compostable coffee cups and take-out containers in plant cafeterias. Composting activities from the cafeterias, washrooms and team member rooms have resulted in a diversion of 4,000 kg of waste per month from the landfill.

Recycling of sludge has diverted approximately 20% of TMMC's total waste from the landfill. This includes recycling of paint sludge into parking blocks and railway

**TOYOTA MOTOR MANUFACTURING, WEST VIRGINIA, INC. (TMMWV) PRESERVES HISTORIC WETLAND**

During the construction of the West Virginia manufacturing plant, several small wetland areas were filled. As a means of mitigating the impacts of the project, TMMWV, American Electric Power and the West Virginia Department of Environmental Protection reached an agreement to preserve a large area of wetlands known locally as the Winfield Swamp. Under the agreement, an adjacent lowland hardwoods area was also preserved. The two areas are protected from development, thereby providing many types of wildlife with a safe place to nest and raise young.

The Winfield Swamp is a significant historic wetland where many plant and animal species thrive. Local schools, colleges and universities conduct frequent trips to the site for educational purposes.

Since the initial preservation activity, TMMWV has been working to develop boardwalks and other observation areas to accommodate the many visitors from academia that visit the swamp each year. During this past year that goal was achieved. These facilities allow visitors to see a natural eco-system without creating a disturbance.



ties and recycling wastewater sludge and phosphate sludge in the production of cement. Optimization of HVAC units has resulted in an additional 5% reduction in natural gas consumption.

TMMC received a Platinum Award from the Recycling Council of Ontario for reducing resource and energy requirements, waste, and air and water pollution.

# Toyota Motor Manufacturing Canada, Inc., in Ontario, Canada, received a Platinum Award from the Recycling Council of Ontario for reducing resource and energy requirements, waste, and air and water pollution.

## TOYOTA MOTOR MANUFACTURING, KENTUCKY, INC. (TMMK)

TMMK initiated a number of activities aimed at waste reduction and recycling. These included transferring wastewater sludge to a kiln for production of cement, and composting nearly one ton of cafeteria wastes per day. In all, TMMK reduced the amount of materials being sent for landfill disposal by 55% in 2003.

In addition to the ongoing waste reduction activities, Energy Management Organization (EMO) groups meet to share ideas on reducing energy consumption at the plant. Once proven, these ideas will be transferred to other plants.

TMMK has implemented a number of *kaizens* to reduce the volume of water consumption by nearly five million gallons. These include air-cooled chillers, nonchemical cooling water treatments and soft water makeup systems. In addition to these ongoing *kaizens*, the successful pilot of a wastewater recycling process was completed, and TMMK installed a permanent system in early 2004.



Toyota Motor Manufacturing, Kentucky, Inc., in Georgetown, Kentucky, tested a new wastewater recycling system during 2003, and found the results so positive that a permanent system was installed in early 2004. The new system significantly increases wastewater recycling at the plant, which reduces the amount of water that must be purchased from utility companies.

On Earth Day 2004, TMMK received an award from the Kentucky Environmental Quality Commission for strong environmental performance within the company and for supporting environmental initiatives.

## TOYOTA MOTOR MANUFACTURING, INDIANA, INC. (TMMI)

Utilizing the efforts of the ISO Action Team, Energy Management Organizations and TMMI team members, the following reductions have been achieved since 1999:

- Natural Gas Usage — 16% per vehicle;
- Electrical Consumption — 27% per vehicle;
- Water Usage — 24% per vehicle;
- VOC Emissions — 58% per vehicle;
- Hazardous Waste Generation — 8% per vehicle;
- Nonhazardous Waste Generation — 42% per vehicle.

As a result of these pollution prevention and resource conservation efforts, TMMI received the Governor's Award for Environmental Excellence in 2003.



# SALES AND DISTRIBUTION



# “We are finding increasing demand for Prius vehicles among Certified Used customers. After all, what environmentalist could resist a ‘recycled’ Prius?”

— Don Esmond, Senior Vice President and General Manager, Toyota Motor Sales, U.S.A., Inc.

**Our sales and distribution organizations** in the United States (Toyota Motor Sales, U.S.A., Inc.), Canada (Toyota Canada Inc.) and Mexico (Toyota Motor Sales de México) are responsible for sales, marketing, distribution, service and parts support for Toyota, Lexus and Scion\* products in North America. The North American sales and distribution organizations actively promote the sale of environmentally sensitive vehicles, such as the 2004 Prius, and continually seek to minimize our environmental impacts — including emissions, packaging wastes and consumption of water and energy. The following section discusses the progress made in these areas over the past year.

## PROMOTING GREENER VEHICLES

We believe that there is now an overall awareness that hybrids are no longer in the pioneering stage and are becoming mainstream vehicles. Toyota’s Prius is being driven across North America. In fact, used Prius are being sold under Toyota’s Certified Used program.

Toyota uses the Prius as a learning tool to build momentum for its hybrid vehicles in North America. We do this in a number of ways, including the following:

### ENGINES OF CHANGE TOUR

Through a promotional and educational event called the Engines of Change Tour, Toyota provided information and test-drives to over 600 people at 20 events in 15 U.S. cities. The tour exposed opinion leaders, including governmental representatives, environmental organizations, educators, analysts, philanthropic partners, fleet managers, nonautomotive media and Prius enthusiasts to Toyota’s commitment to the environment through the 2004 Prius.

\*Scion is only sold in the United States

## RED CARPET, GREENER CARS

For the second year, Toyota, in conjunction with Global Green USA, provided Prius to celebrities and movie industry professionals who attended the annual Academy Awards ceremony in Los Angeles.

## WEB-BASED INFORMATION

Toyota provides information on hybrids in general, and the Prius specifically, at [www.toyota.com/prius](http://www.toyota.com/prius) and [www.toyota.ca](http://www.toyota.ca) (“Vehicles”).

Through our active promotion of environmentally sensitive vehicles, we have achieved a significant level of hybrid sales in North America. Since the Prius was introduced into the North American market in 2000, we have sold over 100,000 units (as of the end of September 2004). In calendar year 2004, we expect to sell over 50,000 Prius in North America and double that in 2005.

In Mexico, where Toyota has only recently entered the marketplace, we raised awareness by donating 10 Prius to the Mexican government to use for a full year.

In addition to promoting greener vehicles, we focus on minimizing the direct impact to the environment from our sales and distribution activities. The following sections present both ongoing and new goals, targets and performance in FY2004.

Main: Toyota Motor Sales de México was established in 2001 in Mexico City to provide sales, marketing and service operations in Mexico. Here, sales associates Patricia Cordero, Ernesto Rea, Pilar Esparragoza and Alan Drake stand on the showroom floor at the Toyota Interlomas dealership, one of 25 Toyota dealerships operating in Mexico.



**Yellow Cab, Greener Car:** The Prius was introduced in Canada in 2000. A Vancouver taxi driver was the world's first and, until recently, only Toyota Prius taxicab driver. He logged over 300,000 km (186,000 miles) on his 2001 Prius before exchanging it for a 2004 model Prius.

**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.

**TARGET ACHIEVED: ACHIEVED ISO 14001 CERTIFICATION/REGISTRATION AT ALL PARTS AND VEHICLE DISTRIBUTION CENTERS BY FY2005 IN THE U.S. AND BY FY2003 IN CANADA**

In the United States and Canada, we set and achieved our ISO 14001 certification/registration goal. In the U.S., all 17 parts and vehicle distribution centers were ISO 14001 certified — a task completed a year ahead of our target date. Seven regional sales offices were also certified, as they are co-located with parts distribution centers. Now that all distribution centers in Canada have been registered, we are going beyond that goal to register administration/office facilities by FY2006.

Beyond our own operations, we are actively encouraging our business partners to achieve either ISO 14001 certification/registration or implement an environmental management system wherever possible. For instance, 74% of our direct accessory and after-sales parts suppliers have achieved ISO 14001 certification/registration, with 12% in process and 4% either intending to certify/register, or studying the option.

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

As part of our normal day-to-day operations, we receive, store and ship a variety of automotive parts that are considered hazardous materials (HAZMAT) in the U.S. and dangerous goods in Canada. HAZMAT/dangerous goods are articles that pose a risk to the public's health, safety, property or the environment, and as such are regulated for transportation. Articles typically received or shipped from our facilities include parts such as air bag modules, seat belt pretensioners and batteries, and products such as paint, gasoline and refrigerant. To minimize the risk in transportation of these regulated articles, they must be properly classified, packaged, marked, labeled and documented for shipment.

Our comprehensive HAZMAT/dangerous goods compliance plan aims to keep us 100% in compliance and to establish the best practices in our industry, while protecting our customers, associates, the community and the environment. Over 1,000 Toyota associates have been trained and tested in HAZMAT security, general awareness, function-specific topics and related subjects.

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

In 2003, we set a target to maintain 100% compliance with all applicable HAZMAT/dangerous goods regulations. We achieved this target, for the sixth consecutive year, in both Canada and the United States.



# We achieved 100% compliance with all HAZMAT/dangerous goods regulations in both the U.S. and Canada for the sixth consecutive year.

## GOAL: REDUCE WASTE AND CONSERVE RESOURCES

Reducing waste and conserving resources are high priority concerns. Achievement of the following targets help us meet our goal.

### TARGET ACHIEVED: IMPLEMENT NATIONWIDE WASTE TRACKING PROGRAM

We have implemented a Web-based waste tracking system in the United States that makes it easier to collect and analyze data. The electronic system generates automatic email reminders each month requesting waste and recycling information from each parts and vehicle 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 levels.

### TARGET: REDUCE WASTE FROM SALES AND DISTRIBUTION OPERATIONS

In the United States, we established waste reduction targets for our major divisions in FY2004 and began implementation. As noted in earlier environmental reports, many of our facilities have set individual facility targets, and are meeting their objectives. These are being incorporated into a comprehensive waste reduction program in FY2005.

Toyota received Bay Area Green Business Certifications for the Fremont, California vehicle distribution center and for the San Francisco parts distribution center and regional sales office. To be certified, a business must have achieved exceptional pollution prevention and conservation of resources, as well as be in compliance with all applicable regulatory requirements. Inspections were conducted by regulatory agencies to verify compliance, and the facilities held meetings with recyclers and water and energy providers to help us chart a path beyond compliance.

## Headquarters

Our U.S. sales and distribution headquarters office campus was generating approximately 95,000 pounds of landfill office waste every month. In response, we created an office waste reduction program called “Think Green!” that includes such efforts as:

- Providing education programs about waste reduction and green purchasing, including a recycling Web page on our intranet;
- Providing hand towels and toilet paper that are chlorine-free and made of 100% recycled paper, hand soaps that are biodegradable in environmentally friendly packaging, and cleaning products that are safer and more environmentally responsible.

Due to these efforts, we recycled 35% of our waste stream in FY2004. We continue to look for ways to improve.

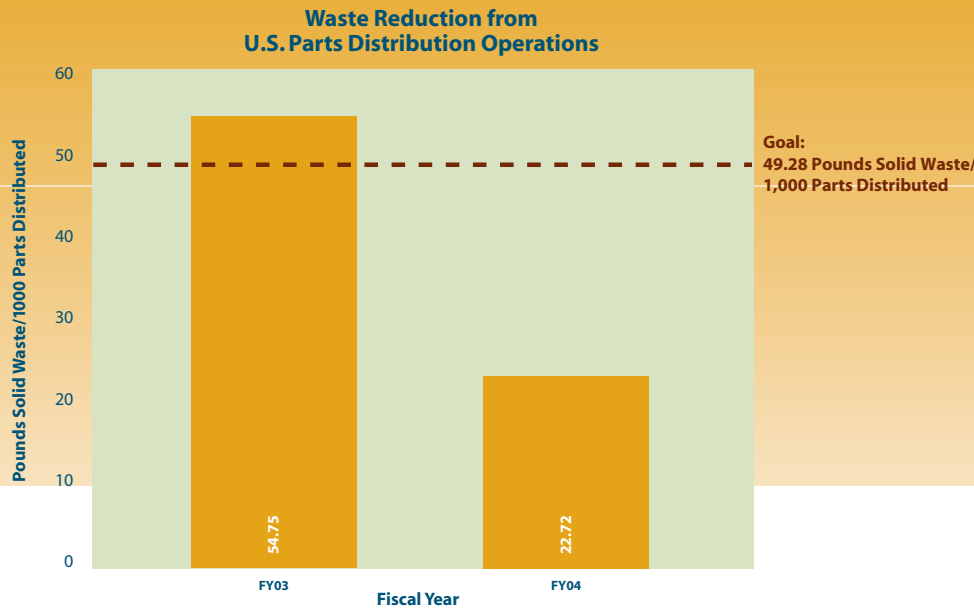
## Parts Distribution

Last year, our U.S. parts distribution facilities set a goal to reduce solid waste by 10% per million dollars of parts distributed, over the FY2003 baseline. We decided it would be more accurate to track this goal based on the number of parts shipped, rather than the value of those



Our Los Angeles parts distribution center replaced approximately 300 gallons of hydraulic fluid with vegetable oil in trash compactors and forklifts. Here, associate Johnny Haire is seen driving one of these forklifts.

Figure S



parts. So we revised the goal as follows: Reduce the amount of solid waste generated by 10% per thousand parts shipped, over the FY2003 baseline. We achieved that goal, and at the end of FY2004, we had reduced our solid waste generation per thousand parts distributed by 58% (please see Figure S). We also were able to reduce our total solid waste generation, despite an increase in the total number of parts we distributed. Below are some examples of facilities that achieved this target.

Our Portland parts distribution center achieved a 60% reduction of waste-to-landfill between April 2003 and April 2004. The facility received recognition from the Business Recycling Awards Group (BRAG), which recognizes distinguished members for their efforts in preventing waste, buying recycled products and recycling.

Toyota's North American Parts Center in California (NAPCC) achieved a solid waste-to-landfill diversion rate of 65% for calendar year 2003, and a 73% recycle/donate diversion rate for scrap parts. NAPCC received the 2003 "WRAP of the Year" Award by the California Integrated Waste Management Board, an agency of the California Environmental Protection Agency (CalEPA), for outstanding achievement in waste reduction, recycling and resource conservation. The award is a special distinction made from among hundreds of outstanding businesses that earn WRAP awards from the state's Integrated Waste Management Board. NAPCC also won a 2004 WRAP award, as did the San Francisco parts distribution center and regional sales office.

### Vehicle Logistics

Toyota's vehicle logistics division recycled nearly four million pounds of waste during FY2004. In calendar year 2004, we have a target to increase recycling by 5% to 2.9 lbs/vehicle, and reduce landfill waste by 5% to

0.49 lbs/vehicle. We are on track to meet both of these targets. The Long Beach and Fremont vehicle distribution centers both won WRAP awards in 2004 for their efforts to reduce waste.

Although most of our vehicles are distributed by external contractors, we are actively looking for opportunities to reduce air emissions from our own fleet. Toyota Transport has equipped its entire fleet (45 vehicle transporter trucks) with the "Rentar Fuel Catalyst" that removes harmful particulate emissions. Testing of this catalyst on our fleet shows decreased emissions of hydrocarbons, carbon monoxide, nitrous oxides and carbon dioxide.

### Recycling and Resource Conservation

In FY2004, our nationwide "Keep IT Green" computer recycling program recycled 15,082 items weighing 624,420 pounds. Since the inception of the "Keep IT Green" program, almost 1.6 million pounds of information technology equipment, including desktops, laptops, monitors, servers, printers and other miscellaneous electronic equipment have been kept from landfills. The program has resulted in the recovery of more than \$345,490 from the proper recycling of information technology equipment.

In addition to computer equipment, Toyota's sales offices also recognized the need to evaluate the environmental impact of our paper and cardboard usage. In 2003, we joined the cross-sector Paper Working Group organized by Metafore, a nonprofit organization that collaborates with leaders in business and society to create innovative, market-based approaches that support both forests and communities. We continued this collaboration in 2004 to evaluate environmentally preferable paper products. In Canada, Toyota set a target in 2003 to reduce usage to 5,448,600 sheets of paper — over two million sheets less

# Over 15,000 items were recycled through our nationwide “Keep IT Green” computer recycling program.

than the previous year. We surpassed this target by 300,000 sheets.

## TARGET: IMPLEMENT A RETURNABLE PACKAGING PROGRAM AT PARTS DISTRIBUTION CENTERS

In 2003, Toyota’s parts distribution centers saved over \$1.2 million in packaging costs. In FY2004, we exceeded our targets for reducing consumption of wood and cardboard in packaging. Using returnable shipping units, Toyota’s NAPCC facility alone saved 1,254,000 pounds of wood and 164,000 pounds of cardboard, with total savings from its conservation efforts reaching approximately \$1.4 million.

Our gross packaging savings for FY2004 was nearly \$2.3 million. Since the inception of this program in 2000, we have saved over 4.5 million pounds of wood, 1.5 million pounds of cardboard, and over \$3.5 million.

In FY2004, we began the implementation of an expanded returnables program that enables us to link more facilities across different regions, adding considerably to the use of returnable packaging across the organization. The implementation of this program is expected to be completed at the end of December 2004.

In Canada, our head office, vehicle processing center and the Toronto parts distribution center have sourced new recycling contractors who will recycle 99% of all packaging and parts, especially wood, cardboard, steel and auto parts made out of composite materials.

## TARGET ACHIEVED: INCREASE RETURNABLE PACKAGING AND DIRECT SHIPMENT PROGRAMS TO VEHICLE DISTRIBUTION CENTERS

Last year, three direct shipment programs were created using returnable containers for the distribution of carpet mats used in the Camry, Sienna and RAV4. At that time, we also made improvements in bulk shipments and packaging for vehicle distribution centers, saving more

than 92,000 pounds of cardboard, 77,000 pounds of wood and more than \$250,000. Through March 2004, we implemented direct shipments to vehicle distribution centers utilizing returnable containers for five different model floor mat/trunk/cargo mat programs. These five programs will save approximately 200,000 pounds of wood and 110,000 pounds of cardboard annually.

## GOAL: REDUCE ENERGY USE

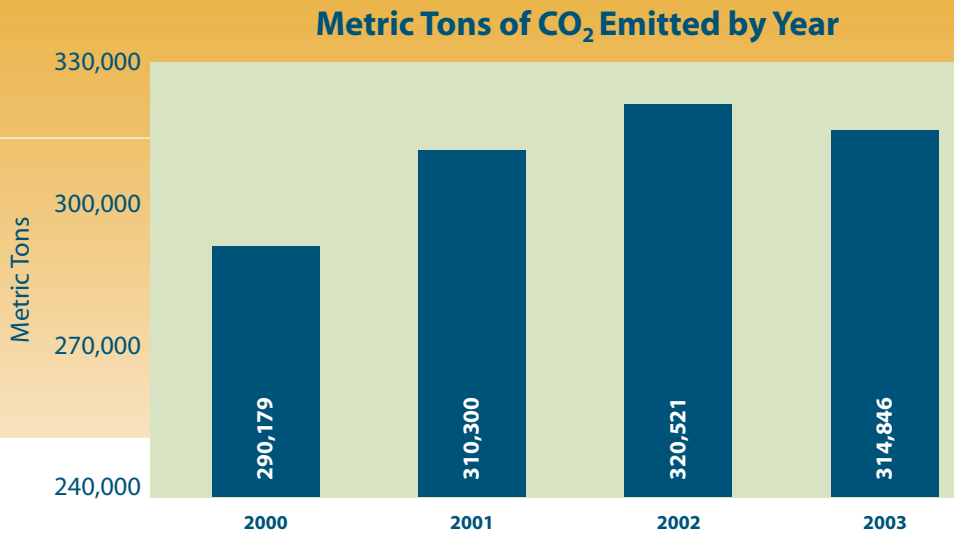
Toyota is strongly committed to reducing energy use throughout our sales and distribution network. As a first step, we established an energy usage database, updated monthly, for all sales and distribution facilities (as well as several locations occupied by different Toyota affiliates). This is now an integrated, sustainable energy management program that results in ongoing and long-term energy and operations savings for these facilities, reducing our footprint on the environment. Our strategy includes the following:

- Applying improved equipment and systems technologies and environmentally sensitive approaches for all design/construction projects and daily operations;
- Installing automated controls for primary building systems to provide consistent and efficient operation;
- Evaluating and, where appropriate, employing alternative energy sources (i.e., solar power and fuel cells);
- Evaluating the energy performance of existing buildings, and, where appropriate and cost effective, replacing selected building systems/components with ones which are more energy efficient.

## TARGET: REDUCE TOTAL ENERGY CONSUMPTION 15% BY FY2006 (U.S. ONLY)

We continue to make progress toward this target. By March 2004, we decreased energy consumption (electricity and natural gas use) in sales and distribution

Figure T



operations by 11.1% from the baseline established in FY2000. We saved over 18 million kwh of electric energy, 707,000 therms of natural gas, and avoided costs of over \$2.8 million. We accomplished these savings by means of many *kaizens*, including the installation of energy-efficient equipment and lighting, and better control systems and devices, such as occupancy sensors that turn room lights on or off when a person enters or leaves.

**GOAL: REDUCE GREENHOUSE GASES**

**TARGET ACHIEVED: COMPILE AN INVENTORY OF GHGS BY FY2004**

In 2002, Toyota’s U.S. sales and distribution operation set a target of compiling an inventory of GHGs by FY2004. We achieved this target, using a protocol developed by the World Resources Institute and the World Business Council on Sustainable Development.

The greenhouse gas inventory developed by Toyota’s sales and distribution division measures total tons of GHG emissions, tons of GHG emissions per vehicle distributed, and tons of GHG emissions per auto part distributed. The scope of the inventory includes GHG emissions from electricity use, natural gas use and indirect sources such as business travel, employee commuting, and logistics and supply activities.

**TARGET: REDUCE GHGS**

Toyota continues to track GHG emissions from our U.S. sales and distribution operations on an ongoing basis (please see Figure T). We are also investigating ways to reduce those emissions. Most of the GHG emissions from these operations stem from transport of vehicles and parts by third parties. A smaller portion of our

GHG emissions comes from purchased energy (electricity and natural gas for our buildings and other activities). Between 2002 and 2003, we observed an overall reduction in GHG emissions of 1.8% or 5,675 metric tons of CO<sub>2</sub>. This reduction was due mainly to the following factors:

- We worked with our rail carriers to determine a Toyota-specific rail emission factor (we formerly used the year 2000 industry average) that would more accurately account for our indirect emissions from rail transport.
- In 2003, our MPL operation (manufacturing parts logistics) was transferred from Toyota Motor Sales to Toyota Motor Manufacturing North America.

**GOAL: PROMOTE ENVIRONMENTAL RESPONSIBILITY AMONG DEALERS**

There are more than 1,400 Toyota and Lexus dealerships in the United States, 259 across Canada and 22 in Mexico — all independently owned and operated franchises. Our dealers are required to comply with all applicable federal, state, provincial and local environmental and safety regulations. We support and encourage their efforts in pursuing environmental excellence.

For example, Power Toyota Irvine, in California, has several energy saving systems, including one that operates its lighting and air conditioning. It stores energy from nonpeak times to use during peak periods, and has saved them more than 15% a month on their electricity bill. All of Power Toyota Irvine’s lighting has also been changed to high efficiency fixtures and bulbs.

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# Through March 2004, our Torrance South Campus Complex used 22 million gallons of recycled water — some 90% of our water use.

## TARGET ACHIEVED: ENHANCE FEATURES OF THE ENVIRONMENTAL ASSISTANCE NETWORK

In January 2001, we launched the Environmental Assistance Network (EAN) Web site in the United States to provide our dealers with up-to-date compliance and environmental waste stream information. We developed this free Web-based resource in conjunction with the Coordinating Committee for Automotive Repair (CCAR). The EAN Web site, hosted by CCAR, provides dealers with an easy-access resource and planning tool that supplies information from federal, state and many local regulatory agencies in one convenient location.

In 2003, we began to focus on tracking and expanding dealer use of the Web site. In 2004, we continued this work and began to develop the EAN Web site by adding new content, additional Spanish language documents and expanded coverage of state and local resources. Service and parts managers tell us they use the EAN site regularly to determine critical storage requirements for coolants, chemicals and oils, and as a tool to identify requirements for equipment, such as environmentally safe vehicle hoists and paint booths.

## TARGET: INTRODUCE TOYOTA ENVIRONMENTAL GUIDELINES TO THE CANADIAN DEALER NETWORK BY 2004

In December 2003, Toyota produced informational materials for dealers in Canada to assist them with the task of responsible environmental management (please see page 14 for an example of one of our brochures). Lexus dealers received similar information in the first quarter of 2004. Toyota dealers with body shops will receive another version of the poster specifically addressing environmental concerns and compliance issues in automobile paint and body repair operations.

As noted in last year's report, Toyota also offers dealers assistance in running environmentally sound businesses. We provide general information to dealers on the proper

procedures for transporting, handling, storing and disposing of dangerous goods. We run an oil recovery program in a number of provinces to collect and recycle used oil, oil filters and oil containers from dealerships. We also run a nationwide collection and recycling program for lead-acid batteries and nickel-metal hydride batteries from Prius hybrid vehicles. Dealers are paid an incentive of \$150-\$200 for each battery.

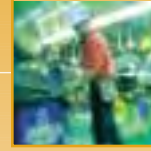
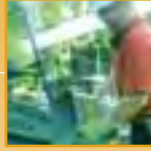
## GOAL: PROMOTE GREENER BUILDING CONSTRUCTION AND MAINTENANCE OPERATIONS

### TARGET ACHIEVED: ACHIEVED LEED CERTIFICATION FOR THE U.S. SALES HEADQUARTERS SOUTH CAMPUS BUILDINGS BY THE END OF 2003

As discussed in our last report, our South Campus received the Gold-level Leadership in Energy and Environmental Design (LEED) Award from the U.S. Green Building Council in April 2003. As a result of startups and move-ins, the South Campus Complex just achieved "steady state" conditions in January 2004. We are currently monitoring our savings and optimizing the systems within the Complex. Through March 2004, we had used 22 million gallons of recycled water — some 90% of our water use, and our photovoltaic system had produced 691,931 kwh — enough energy to power 500 homes. We are expecting further savings in FY2005.

## TARGET: DEVELOP SUSTAINABLE OPERATIONS STANDARDS FOR TMS, U.S.A., INC. FACILITIES

Toyota's sales and distribution division developed "Process Green" to ensure that all sales offices and logistics sites use practices and products that are sustainable, address end-use cost and meet business needs in a socially responsible manner. The process addresses building systems and materials, as well as products used by the custodial staff.



# RECYCLING

## END-OF-LIFE VEHICLES



**TOYOTA**  
AUTOMATIC TRANSMISSION  
ASSEMBLY INCLUDING  
TORQUE CONVERTER  
IMPORTANT INFORMATION ENCLOSED

Remanufacture  
Application & Reference

# We intend to meet the Substances of Concern targets in the EU ELV Directive for all Toyota, Lexus and Scion products sold in North America.

**The automobile is one of the most** highly recycled durable products on the market today. The Toyota Recycle Vision presents our worldwide commitment to recycling end-of-life vehicles and phasing out SOC.

Globally, the European Union (EU) Directive on End-of-Life Vehicles (ELVs) and The Law on Recycling of ELVs in Japan set targets for automakers in terms of future vehicle-recovery rates and SOC usage. In North America, despite the absence of similar laws, Toyota is working to achieve a 95% vehicle-recovery rate and to phase out our use of certain substances of concern. Please visit [www.toyota.co.jp/en/environment/recycle](http://www.toyota.co.jp/en/environment/recycle) for more information on the Toyota Recycle Vision, the EU ELV Directive and the Japanese Law.

## GOAL: MANAGE SUBSTANCES OF CONCERN

Worldwide concern and legislation challenge automakers to reduce or eliminate various SOC from their vehicles. Numerous states and provinces continue to pass new laws focusing on mercury, lead, hexavalent chrome and cadmium. Toward this, Toyota has established a global technical standard, designated TSZ0001G, which governs SOC management and usage in our products. Members of Toyota's North American affiliates collaborate through the SOC Task Force to implement our SOC reduction and elimination plan.

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

During this past year, we completed a confirmation analysis of the SOC content of a 2004 Toyota Camry, focusing on North American-supplied parts. This,

together with previous analyses on the Camry and Solara, are being used to revise targets for SOC management in future North American vehicles.

## TARGET: DEVELOP NORTH AMERICAN SUBSTANCES OF CONCERN STRATEGY

In 2002, we set targets specific to our North American vehicles to eliminate, replace or reduce our use of critical SOC, including arsenic, hexavalent chrome, cadmium, mercury and lead. We recently updated these targets as part of our overall SOC phase out plan.

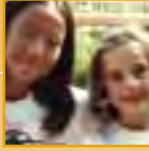
We intend to meet the EU targets for all Toyota, Lexus and Scion products sold in North America. To do so, we will work closely with our suppliers to complete development of alternative technologies.

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

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

The Toyota Recycle Vision, in an effort to achieve a 95% vehicle-recovery rate, calls for expanded use of used parts — remanufactured parts for after-market vehicle service applications. We sold over 250,000 remanufactured parts in 2003, and we are aggressively expanding our offerings by introducing over 100 new part numbers covering seven product lines. We have also bolstered our marketing efforts with enhanced promotional materials and a new remanufactured parts logo.

**Main:** Recycling is becoming a bigger part of Toyota's business operations. In line with our voluntary commitment to achieve a 95% vehicle-recovery rate, we have expanded our sales of used parts that are remanufactured for after-market vehicle service applications. Toyota associates at the Los Angeles parts distribution center display a range of remanufactured parts. From left to right: Leonardo Zevallos, Product Planning Development Manager; Joe Stempkowski, National Parts and Service Marketing Manager; Kathy Capozza, Senior Product Administrator.



# STAKEHOLDERS





# “Customer first: More than a statement — it becomes the ‘first commandment’ for the company, its products and its people.”

— Sakichi Toyoda, Founder of Toyota

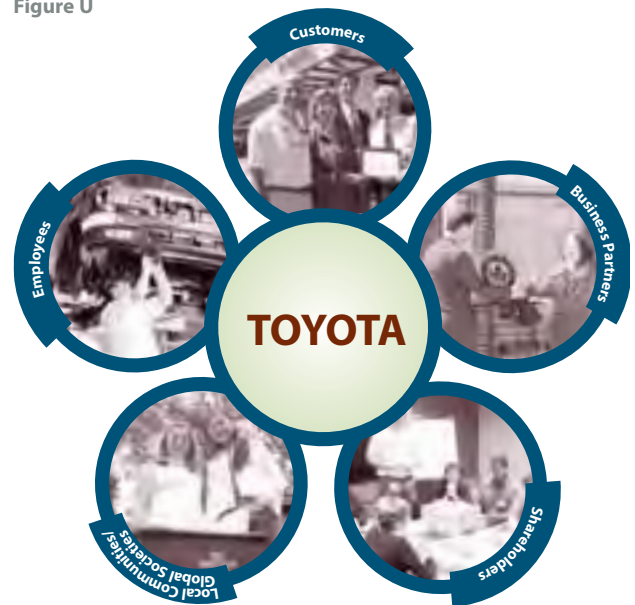
**Toyota operates under a global** Earth Charter that promotes environmental responsibility within our company and in the communities in which we do business. We see collaboration among our stakeholders as a pathway to a better Toyota and a better world, so we invest in long-term quality relationships with our customers, employees, shareholders, business partners and society at large.

Our primary Action Plan goal and target is to promote and enhance our environmental communication activities across North America, particularly among communities and key organizations. Earlier in the report, we described some of the ways that we work toward that goal by building strong relationships with our team members and business partners. In this section, we highlight various ways that we engage customers, shareholders, society and employees to cultivate programs with positive environmental impact. For an in-depth listing of Toyota’s outreach activities, please visit [www.toyota.com/community](http://www.toyota.com/community) and [www.toyota.ca](http://www.toyota.ca) (“What’s New, Environment”).

## CUSTOMERS

Since our founding, Toyota has put customers at the heart of everything we do. Our business is to build dependable, reliable vehicles that consumers want to drive. Our growth in North America is a direct result of our success in providing a full range of quality products. We have worked hard to meet our customers’ needs, and have been rewarded for this effort by being named the top-ranked automobile corporation in the United States for the fifth consecutive year in the J.D. Power and Associates 2004 Initial Quality Study™. This Study measures vehicle problems within the first year of

Figure U



ownership. Overall, J.D. Power and Associates awarded Toyota and Lexus top honors in seven categories — more than any other corporation.

But building vehicles takes more than just making a dependable and reliable car or truck. It requires that we balance the needs of our customers with the needs of our environment. Other chapters of this report discuss our efforts to reduce the environmental impact of our vehicles during all stages of their life cycle. As we show, Toyota addresses environmental issues not only in manufacturing but also in development and design — and our customers’ preferences play a large role in this effort. Each year, we conduct many focus groups and surveys with North American consumers. We talk to

**Main:** Each year, The GLOBE Foundation and The Globe and Mail (Canada’s national newspaper) recognize outstanding achievement in environmental stewardship with the GLOBE Awards for Environmental Excellence. This year, Toyota in Canada won the GLOBE Award for Corporate Competitiveness. Our winning entry was a joint submission by Toyota Canada Inc., Toyota Motor Manufacturing Canada, Inc., Canadian Autoparts Toyota, Inc. and Toyota Credit Canada Inc.



Children enjoyed the festivities at the Audubon Nature Center at Debs Park in Los Angeles, California, which celebrated its grand opening in the fall of 2003 (please see page 50).

people across the U.S., Canada and Mexico who represent many income levels, ages and geographic locations to discover what consumers want in a vehicle.

Frankly, the findings present a challenge. As a company seeking to promote environmental vehicle technologies and products, we are marketing to many consumers whose top concern is their household finances, not the state of the environment. This concern carries over into vehicle purchasing, where the vehicle’s price and performance are considered higher priorities than the level of greenhouse gas emissions or fuel efficiency. In fact, our research continues to show that the majority of consumers will not compromise performance for environmental benefits, and are not inclined to pay a premium for an environmentally sensitive vehicle.

This puts the onus on the manufacturer to design and build environmental products with as few compromises as possible and sometimes in advance of market signals or regulatory requirements. As this report shows, Toyota remains committed to developing environmentally sensitive technologies for today and the future.

**SHAREHOLDERS**

It is important to us that our shareholders view us positively. Toyota pays close attention to our position in various ratings by financial analysts, including those from the Socially Responsible Investor (SRI) community.

Toyota was added to the Dow Jones Sustainability Index (DJSI) for the first time in 2003, and earned the leading position in the automobile industry on the DJSI World Index (please see [www.sustainability-indexes.com](http://www.sustainability-indexes.com)).

Our ranking was due to strong eco-efficiency performance, a proactive GHG mitigation strategy and high corporate average fuel economy. We also exhibited best practices in managing lower-carbon technologies,

such as hybrid and fuel-cell technology, and maintaining a strong life cycle management of our products.

**LOCAL COMMUNITIES/GLOBAL SOCIETIES**

As a stakeholder group, this category includes governments, nongovernmental organizations, the communities in which we live and operate and the environment.

Toyota engages with governments at the local, provincial, state, national and international levels. Some of these initiatives are discussed elsewhere in this report. We work with communities and government bodies when constructing new manufacturing and research and development sites, such as the plant under construction in San Antonio, Texas and the design studio in Ann

**DIVERSITY**

Business success can be measured by revenue; but business leadership requires us to take our role in global society seriously as well. To that end, we have made diversity one of our top 10 business initiatives, and developed a Diversity Strategy in the U.S. that aims to increase minority representation in senior management and address the under-representation of minorities in retail management positions. This is a 10-year, multibillion dollar commitment to minority participation in Toyota. We are devoting substantial resources (both human and financial) to ensure that all aspects of the plan are fully staffed and fully financed. Further, Toyota is taking the lead in fostering diversity throughout the automotive industry. Our programs address systemic issues in the retail sector and will bring genuine, tangible and widespread economic benefits to minority communities. Please visit [www.toyota.com/diversity](http://www.toyota.com/diversity) for more information on our Diversity Strategy.

**“Toyota is pleased with the overwhelming response to our efforts to reduce the impact of car ownership on the environment. Our goal is to build vehicles that significantly reduce fuel consumption and pollution, and that people want to own because they’re fun to drive and easy to live with.”**

**— Kenji Tomikawa, President and Chief Executive Officer,  
Toyota Canada Inc.**

Arbor, Michigan. We also work with government agencies on regulatory issues, both independently and through trade associations.

Toyota supports a variety of environmental conservation initiatives in North America. This section describes our donations of Toyota products and corporate and foundation grants to communities, nongovernmental organizations and government agencies.

### **DONATING PRODUCTS**

We are frequently asked by environmental groups to donate vehicles to support environmental programs and awareness. In February 2004, we auctioned a new Prius on eBay to raise funds for World Wildlife Fund Canada’s conservation and awareness-building activities. The sidebar at right showcases hybrid vehicles at work with the U.S. National Park Service.

Toyota donated four electric RAV4 EV SUVs to Tufts University of Boston, Massachusetts in the fall of 2003. One is used by the campus mail service, one is used by the campus security service, and two are part of Zipcar’s car-sharing program — one on Tufts’ main campus and one at the medical school. Zipcar is a membership-based shared-vehicle company that rents fuel-efficient vehicles to its members for short-term use in urban areas. The

Toyota/Zipcar project is part of an effort managed by the Tufts Climate Initiative to reduce the University’s greenhouse gas emissions. Toyota also funded a part-time research assistant for the 2003-2004 school year, who worked at the Tufts Institute for the Environment to measure the costs and fuel savings of the program.

We also loaned Zipcar two RAV4 EVs for their car-sharing programs in metropolitan Boston and at Harvard University.

### **TOYOTA HELPS NATIONAL PARKS GREEN TRANSPORTATION**

In collaboration with the National Park Service’s Green Energy Parks program and the Department of Energy’s Clean Cities program, Toyota is partnering with several national parks in their efforts to promote more sustainable transportation.

In 2004, Toyota donated seven RAV4 EVs and four Prius hybrids to the parks. We are also helping the parks educate visitors about the parks’ “greening” efforts and actions visitors can take in their own lives to address environmental issues.

This summer, for example, Yellowstone National Park rangers drove four Prius that are painted with pictures of bison, bears and Old Faithful. As the rangers interacted with visitors, the colorful cars created an opportunity for the rangers to talk about sustainable transportation.

Other parks that are working with Toyota, Green Energy Parks and Clean Cities are: Santa Monica Mountains National Recreation Area, Point Reyes National Seashore, Grand Teton National Park, Wilson’s Creek National Battlefield and Hagerman Fossil Beds National Monument.



**Toyota donated a 2003 Tundra to Tree Musketeers, a youth organization in El Segundo, California. The truck is used to help the students plant trees in the community.**

**SUPPORTING PROGRAMS THAT HELP THE ENVIRONMENT**

Each year, we contribute millions of dollars through corporate contributions, as well as through the Toyota USA Foundation and the Toyota Canada Foundation. These contributions reflect our commitment to environmental protection, to education and to natural resource conservation. Please visit [www.toyota.com/foundation](http://www.toyota.com/foundation) for more information about the Toyota USA foundation.

Toyota partners with leading organizations that educate children and their families about creating a cleaner, greener and healthier world. In the United States, we have contributed \$2 million since 2000 to Audubon’s Endowment Fund for Environmental Education for the organization’s first urban nature centers in New York and

Los Angeles. The centers provide children and their families with hands-on nature and education experiences.

In Canada, Toyota provided Earth Day scholarships to high school students, and has pledged over CAN\$4.1 million since 2000 to Evergreen, an organization that distributes grants to schools for the purchase of native trees, shrubs and plants to turn asphalt school grounds into natural play and learning spaces. Toyota’s CAPTIN facility also supported the Orphaned Wildlife Rehabilitation Society (OWL) in Vancouver, British Columbia, a sanctuary dedicated to the rescue and rehabilitation of injured and endangered birds. Trained volunteers care for over 350 birds per year and teach programs designed to educate the public about these birds.

**TAPESTRY GRANTS SUPPORT ENVIRONMENTAL SCIENCE PROJECTS IN SCHOOLS ACROSS THE U.S.**

In partnership with the National Science Teachers Association, the Toyota TAPESTRY program provides 50 grants of up to \$10,000 each and at least 20 mini-grants of up to \$2,500 each to K-12 science teachers nationwide in a number of science categories, including environmental science. Since 1990, TAPESTRY has provided more than \$6 million to 673 teams of science teachers.

For the 2003-2004 school year, 22 large grants and 11 mini-grants were given in the environmental science category. The projects covered a full range of activities, including designing an artificial reef, constructing a wetland, breeding and raising animals, and designing habitat restoration plans. Through TAPESTRY, students learned important technical skills, from how to conduct field studies to how to use GIS technology. They also learned about environmental health issues, such as the effects of radon in homes.

**TAPESTRY PROJECTS ADDRESS REAL LIFE ISSUES**

- A teacher in West Branch, Iowa asked his sixth and seventh grade students to explore methods for disposing used oil filters. The students conducted a survey in their community,

and found that used filters were being disposed without first being drained. The project determined the implications for landfill management and groundwater protection. The students shared their findings with the community and state legislators.

- Students at Billings Middle School in Seattle, Washington collaborated with students at Hiroshima Junior High in Japan to study relationships between air quality indicators and to trace air pollutant "flow" from Japan to Washington. Students at both schools took daily measurements for various air pollutants, relative humidity, temperature, barometric pressure, precipitation, and wind direction and speed. Results were reported during videoconferences and on a student-created project Web site. The students also shared their methodology with schools in Morocco, El Salvador and India.

The project also taught students about biodiesel as a means of improving air quality. One of Billings’ school buses was converted to biodiesel, and a biodiesel production lab was built in the school garage.



For the fourth year in a row, Toyota sponsored the Friends of the Rouge Watershed, a community-based conservation group in Scarborough, Ontario near the Toyota Canada Head Office. Over 200 Toyota employees donated their time to help the group rehabilitate the Beare Road Landfill, a former dumpsite located beside the environmentally sensitive Rouge Valley.

## EMPLOYEES

Across North America, Toyota employees volunteer their time to a number of organizations and events that help protect the environment. Our volunteer efforts range from large nationwide events such as Earth Day, to smaller local efforts, such as advising a Waterloo, Ontario school board's energy committee on how to track and reduce energy use. In all cases, our employees donate their knowledge, their time and their hard work to educate others about our world and to protect our parks and open spaces.

One of Toyota's largest volunteer initiatives in the United States is National Public Lands Day (NPLD), which we sponsored for the sixth consecutive year in partnership with the National Environmental and Education Training Foundation (NEETF) in September 2003. NPLD is the largest one-day volunteer effort to renew and restore public lands in the U.S. In all, almost 80,000 volunteers worked at 550 sites in all 50 states. Public lands were improved through trash pick-up, painting, trail cleanup and planting.

More than 2,200 Toyota employees volunteered at 24 sites nationwide in communities where Toyota has a major presence, like Union, Kentucky. "Toyota continues to be a shining beacon of support to our park," reports the park manager of Big Bone Lick State Park in Union, where 230 Toyota volunteers collected 500 pounds of trash; removed 60 pounds of invasive species; dismantled, moved and rebuilt a Native American structure; and improved several miles of trail.

Toyota employees in southeastern Michigan also participated in NPLD. In partnership with the Huron River Watershed Council (HRWC), employees joined local volunteers and entomologists for the Fall River

## THIRD GRADE INDIANA STUDENTS LEARN ABOUT THE ENVIRONMENT AT CAMP

Toyota's manufacturing plant in Indiana, TMMI, has been observing Environmental Month since 2000. The goal was to expand Earth Day from an internal, single-day celebration into a month-long community involvement activity. Earth Aware Camp is the centerpiece of TMMI's Earth Month activities. With the coordination of the Gibson County School Corporation, 450 Gibson County third grade students were brought to YMCA's Camp Carson in 2003. Camp Carson is a picturesque recreational area located outside of Princeton, Indiana, the perfect setting for a half-day of fun and learning about the environment.

Once at Camp Carson, students were split into three groups and rotated through a number of activities, including:

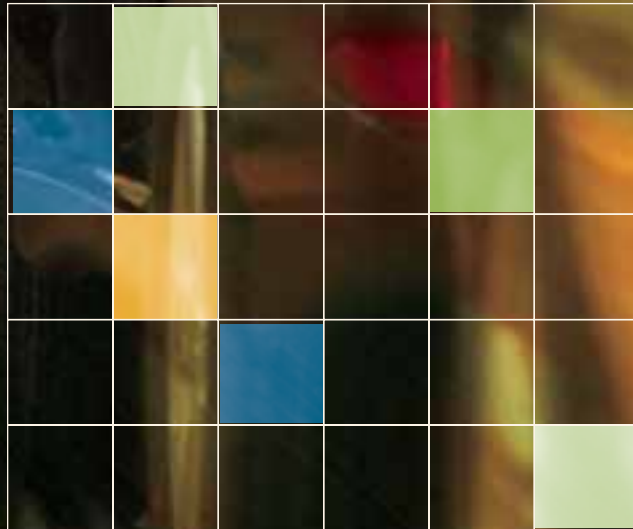
- Sorting trash into the correct recycling containers;
- Visiting ORSANCO Aquarium to learn about aquatic life in the Ohio River and ways to reduce stormwater pollution;
- Watching a magic garden show;
- Cleaning toys that had been tainted by pollution to simulate wildlife that has been contaminated by exposure to pollution.

RoundUp to measure the quality of the river and surrounding land. The event was the latest activity in our nearly 10-year relationship with HRWC. Toyota regularly consults HRWC for its recommendations to ensure that our site management activities do not endanger the wetlands or native species found in Flemming Creek, a Huron River tributary that runs adjacent to one of Toyota's facilities.

In recognition of our joint role in NPLD, the Natural Resources Council of America awarded Toyota and the NEETF the 2003 Conservation Partnership Award.



# TOYOTA IN NORTH AMERICA



**“Protecting the environment is much bigger than any one company, industry or nation. We’re talking about the survival of our planet ... and we will all play a vital role.”**

**— Jim Press, Executive Vice President and Chief Operating Officer, Toyota Motor Sales, U.S.A., Inc.**

**In 2003, Toyota was the third-largest** automotive manufacturer by sales and the eighth-largest company in the world by revenue. This section provides some information supplementary to the environmental data and information provided in the body of this report. It is our hope that our company’s contribution to the North American economic and social fabric will continue to increase as we further expand our business.

**SALES**

In North America, we became the third-largest automaker, selling over two million vehicles in 2003. Our Toyota and Lexus brands are more popular than ever. The Toyota Prius remains the top-selling hybrid vehicle in the world and in North America. In the United States, Toyota is the third best-selling brand, and the Toyota Camry is once again the best-selling car. In Canada, Toyota is the fourth best-selling brand, and the number one selling passenger car nameplate. Lexus continues to be the leading luxury brand in the U.S.

This past year in the United States, we introduced an entirely new line of vehicles called Scion, made available in California in 2003 and in the rest of the U.S. in 2004. The Scion brand allows us to attract new customers and helps ensure Toyota’s continued growth in the 21<sup>st</sup> century.


**ECONOMIC INVESTMENT**

Toyota’s growth in North America has brought with it significant contributions to the economies in the region. Originally an importer of vehicles, our North American plants produce over 1.2 million of the two million vehicles we sell. Toyota created over 1,900 jobs in 2003. Our direct payroll is now over \$2.4 billion.

Toyota’s employment impact in North America is over 190,000 — including direct employment of over 36,000 and over 164,000 related jobs at independently-owned parts and materials suppliers and Toyota/Lexus/Scion dealerships. Cumulatively, our investment in the region is well over \$15 billion. We now have more than 30 vehicle assembly plants, component plants and various offices and engineering facilities in over 25 locations in the U.S., Canada and Mexico.

**GEOGRAPHIC AND FUNCTIONAL PRESENCE**

The charts on the following page illustrate Toyota’s growth in North America, year after year. We also include a list of Toyota’s North American Affiliate Companies, and a map showing our locations across North America.

**Main:** Toyota’s reputation is built on a strong commitment to quality, detail and continuous improvement or *kaizen*. Here, at the final assembly line at Toyota Motor Manufacturing in Cambridge, Ontario, team member Brian Myskiw checks a Lexus RX 330 — one of over 1.2 million vehicles Toyota manufactured in North America in 2004.



Team members Eric Johnson (left) and Stephen Lynn work on assembling V-8 engines for the Tundra at Toyota Motor Manufacturing, Alabama, Inc., Huntsville, Alabama.

Figure V

**Annual North American Sales and Production**

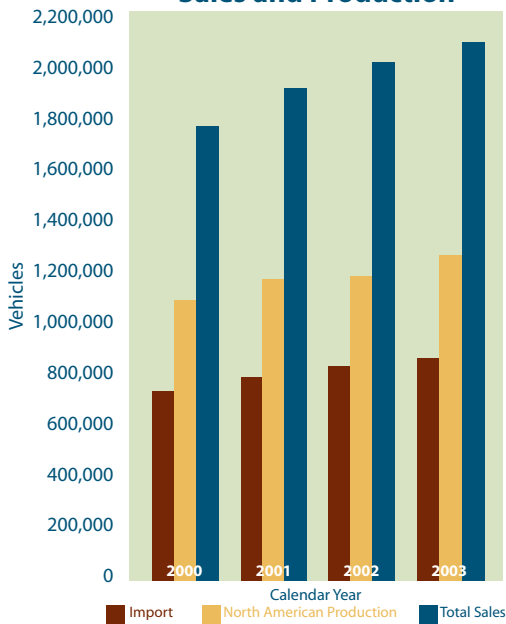


Figure X

**Direct North American Payroll**

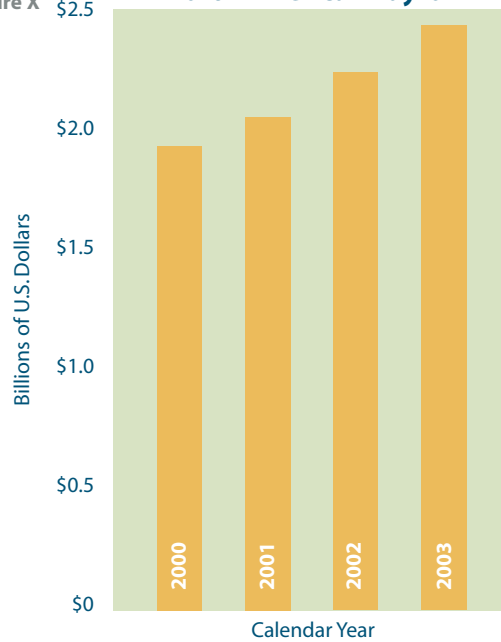


Figure W

**Direct North American Employment**

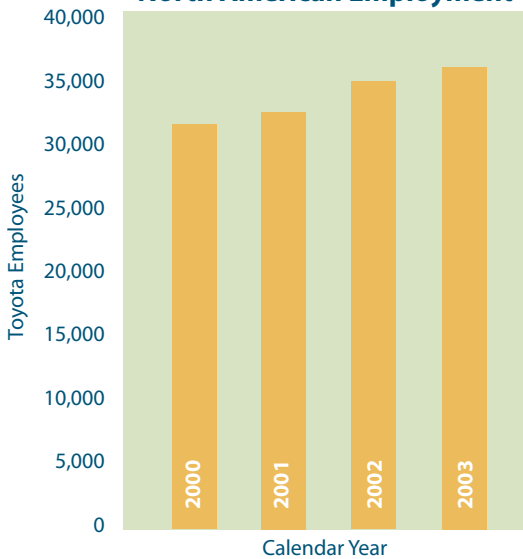
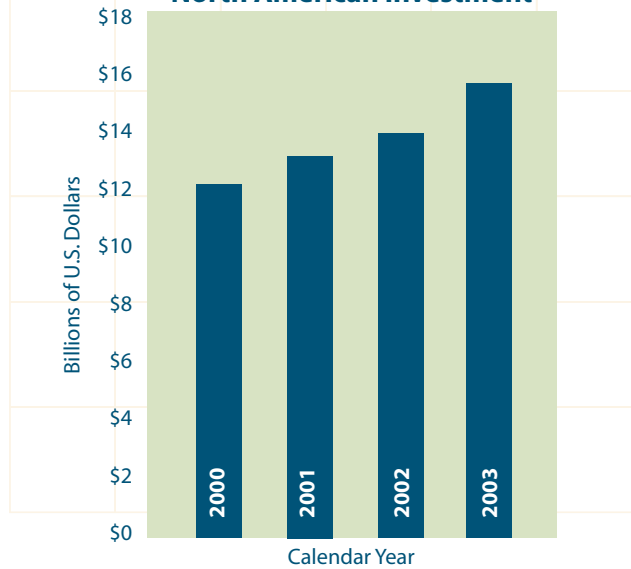


Figure Y

**Direct North American Investment**





# TOYOTA NORTH AMERICAN AFFILIATES

## HOLDING COMPANY

**Toyota Motor North America, Inc.** — Headquartered in New York, New York. Branch offices in Washington, D.C. and Florida. Established in 1996.

Wholly owned by Toyota Motor Corporation (TMC) in Japan, TMA is the holding company for Toyota's U.S. sales and North American manufacturing companies. Direct functions include: corporate communications; investor relations; corporate advertising; federal government, industry and regulatory affairs; market, economic and auto industry research; and the Toyota USA Foundation. In addition, TMA coordinates the corporate planning, diversity and business activities of all Toyota companies in North America.

## SALES & SERVICE

**Toyota Motor Sales, U.S.A., Inc.** — Headquartered in Torrance, California. Regional sales offices in California, Colorado, Illinois, Maryland, Massachusetts, Missouri, New Jersey, Ohio, Oregon and Puerto Rico. Private distributor offices in Florida and Texas. Established in 1957.

TMS, Toyota's U.S. sales and marketing arm, oversees sales and other Toyota operations in 49 states. TMS regional offices coordinate Toyota and Scion vehicle sales, service and parts for dealers in 10 regional areas, with two additional regions being served by private distributors. Of the 1,210 Toyota dealers located throughout the U.S., 497 also sell Scion vehicles. By the end of June 2004, there will be approximately 740 Scion dealerships nationwide.

**Lexus** — Headquartered in Torrance, California. Area sales offices in California, Georgia, Illinois and New Jersey.

The Lexus Division directs sales and operations for 207 Lexus dealers located throughout the U.S. through four area offices.

**Toyota Logistics Services, Inc.** — Headquartered in Torrance, California. Operations in Arizona, California, Indiana, Kentucky, New Jersey, Oregon and Texas.

TLS has six Vehicle Delivery Centers in the U.S. and manages Toyota and Lexus logistics operations, planning and administration. TLS manages all North American vehicle export operations and Toyota's in-house trucking company.

**North American Parts Operations** — Headquartered in Torrance, California. Parts Distribution Centers located in California, Oregon, Ohio, New York, Missouri, Illinois, Maryland and Massachusetts. Third party facilities in Florida and Texas. Established in 1993.

NAPO was established to improve local parts sourcing and manage a parts distribution network that supplies all North American Toyota distributors, as well as U.S. Toyota and Lexus dealers. Additionally, U.S. parts are exported to parts centers in Japan and Europe for worldwide distribution.

**AirFlite, Inc.** — Headquartered in Long Beach, California.

AirFlite is a fixed-base operation providing a full range of services to corporate and general aviation craft at Long Beach Airport.

**Aviation Business Development Office** — Headquartered in Torrance, California.

ABDO is responsible for exploration of new business opportunities in the general aviation field, including aircraft and power plant development.

**Toyota Financial Services** — Headquartered in Torrance, California. Customer Services Centers in Arizona, Iowa and Maryland. Began operation in 1983.

TFS provides finance and insurance products and services to Toyota, Lexus and Toyota industrial equipment dealers and their customers through Toyota Motor Credit Corporation and Toyota Motor Insurance Services, Inc. There are 30 dealer sales and service offices nationwide as well as one branch office in Puerto Rico.

**TSSC, Inc.** — Headquartered in Erlanger, Kentucky. Established in 2002.

TSSC is a resource for companies across North America interested in the Toyota Production System (TPS) as a way to strengthen the quality and efficiency of their production systems.

**Toyota Canada Inc.** — Headquartered in Scarborough, Ontario. Zone offices in Richmond, British Columbia; Calgary, Alberta; Scarborough, Ontario; Montreal, Quebec; and Dartmouth, Nova Scotia. Established in 1964.

TCI oversees all divisions of Toyota's sales, marketing, parts, service, Lexus and Industrial Equipment operations in Canada. TCI zone offices coordinate Toyota vehicle sales, parts and services for dealers in 10 provinces and three territories. There are 259 Toyota dealers located throughout Canada, of which 231 are exclusively Toyota, and 29 are Toyota/Lexus.

**Lexus** — Offices in Scarborough, Ontario. Began operation in 1990.

The Lexus division of TCI directs sales, parts and service operations for 28 dealers in seven provinces of Canada. Eight dealerships are exclusively Lexus, and 20 are Toyota/Lexus.

**Industrial Equipment** — Offices in Scarborough, Ontario. Began operation in 1970.

The IE division of TCI sells industrial equipment and parts to seven dealers through 32 branch locations in nine provinces of Canada.

**Toyota Credit Canada Inc.** — Headquartered in Markham, Ontario. Branch offices in Richmond, British Columbia; Markham, Ontario; Montreal, Quebec; and Dartmouth, Nova Scotia. Established in 1990.

TCCI provides financial services for Toyota, Lexus and Hino dealers, as well as their customers across Canada.

**Toyota Motor Sales de México, S. de R.L. de C.V.** — Headquartered in Mexico City, Mexico. Established in 2001.

Toyota Motor Sales de México is responsible for sales, marketing and service operations for Toyota vehicles in Mexico.

**Toyota Services de México, S.A. de C.V.** — Headquartered in Mexico City, Mexico. Began operation in 2002.

Toyota Services de México provides finance products to Toyota dealers and their customers. There are currently 25 dealerships in Mexico.

## MANUFACTURING

**Toyota Motor Manufacturing North America, Inc.** — Headquartered in Erlanger, Kentucky. Established in 1996.

TMMNA serves as headquarters for Toyota's growing manufacturing activities in the U.S., Canada and Mexico.

**TABC, Inc.** — Manufacturing plant in Long Beach, California. Established in 1972.

TABC, Toyota's first U.S. manufacturing plant, produces truck beds, sheet metal components, steering columns, catalytic converters and coated catalytic substrates for Toyota's North American manufacturing facilities and for export to Japan and Canada. In late 2004, truck bed production shifts to TMMBC. TABC will assemble commercial trucks for Hino Motors to be sold in North America.

**New United Motor Manufacturing, Inc.** — Manufacturing plant in Fremont, California. Established in 1984.

NUMMI, a Toyota/General Motors joint venture, manufactures the Corolla and Tacoma for Toyota and the Pontiac Vibe for General Motors.

**Toyota Motor Manufacturing, Kentucky, Inc.** — Manufacturing plant in Georgetown, Kentucky. Established in 1986.

TMMK, Toyota's largest manufacturing facility outside of Japan, builds the Avalon, Camry, Camry Solara and Camry Solara convertible as well as 4-cylinder and V-6 engines and powertrain parts.

**Bodine Aluminum, Inc.** — Manufacturing plants in St. Louis and Troy, Missouri. Established in 1912 and purchased by Toyota in 1990.

The St. Louis plant manufactures engine brackets and carrier covers. The Troy plant manufactures cylinder heads, cylinder blocks, intake manifolds, surge tanks and engine brackets for the Avalon, Camry, Camry Solara, Corolla, Sienna, Matrix, Tundra and Pontiac Vibe. Bodine is building a third plant in Jackson, Tennessee to produce aluminum engine blocks. The Jackson plant will start production in 2005.

**Toyota Motor Manufacturing, Indiana, Inc.** — Manufacturing plant in Princeton, Indiana. Established in 1996.

TMMI produces the Tundra full-size pickup, the Sequoia full-size sport utility vehicle and the Sienna minivan.

**Toyota Motor Manufacturing, West Virginia, Inc.** — Manufacturing plant in Buffalo, West Virginia. Established in 1996.

TMMWV manufactures 4-cylinder engines for the Corolla, Matrix and Pontiac Vibe; V-6 engines for the Sienna and Lexus RX 330; four-speed automatic transmissions for the Camry; and five-speed transmissions for the Sienna and RX 330.

**Toyota Motor Manufacturing, Alabama, Inc.** — Manufacturing plant in Huntsville, Alabama. Established in 2001.

TMMAL manufactures V-8 engines for the Tundra. It is the first Toyota plant outside of Japan to build a V-8 engine. In 2005, TMMAL will begin production of V-6 engines for the Tacoma and Tundra.

**Toyota Motor Manufacturing, Texas, Inc.** — Manufacturing plant in San Antonio, Texas. Established in 2003.

In 2006, TMMTX will begin production of the Tundra full-size pickup.

**Canadian Autoparts Toyota, Inc.** — Manufacturing plant in Delta, British Columbia. Established in 1983.

CAPTIN manufactures aluminum alloy wheels for the North American and Japanese markets.

**Toyota Motor Manufacturing Canada, Inc.** — Manufacturing plant in Cambridge, Ontario. Established in 1986.

TMMC builds the Corolla, Matrix and Lexus RX 330 for North America. Four-cylinder 1.8-liter engines for the Corolla and Matrix are also assembled at TMMC. It is the first plant outside Japan to produce Lexus vehicles.

**Toyota Motor Manufacturing de Baja California, S. de R.L. de C.V.** — Manufacturing plant in Baja California, Mexico. Established in 2002.

TMMBC produces Tacoma truck beds for NUMMI. In late 2004, TMMBC began assembly of Tacoma pickup trucks for the Mexico market.

## RESEARCH & DEVELOPMENT

**Toyota Technical Center, U.S.A., Inc.** — Headquartered in Ann Arbor, Michigan. Major operations in Arizona and California. Incorporated in 1977.

TTC is responsible for Toyota's North American engineering design, development, certification and research, and for Toyota's Arizona Proving Ground (TAPG).

**Toyota Racing Development, U.S.A., Inc.** — Headquartered in Costa Mesa, California. Established in 1979.

TRD, a division of TMS, designs, assembles and develops engines to support Toyota's racing programs, and coordinates the development and sale of high-performance aftermarket parts for Toyota cars and trucks.

**Toyota InfoTechnology Center, U.S.A., Inc.** — Headquartered in Palo Alto, California. Branch office in New York. Established in 2001.

ITC researches, evaluates and develops new information technologies, devices and software.

**Cold Research Centre** — Test facility located in Timmins, Ontario. Built by TCI in 1998.

Toyota's first cold weather facility outside Japan is used primarily to test the operation of Toyota products in subzero conditions.

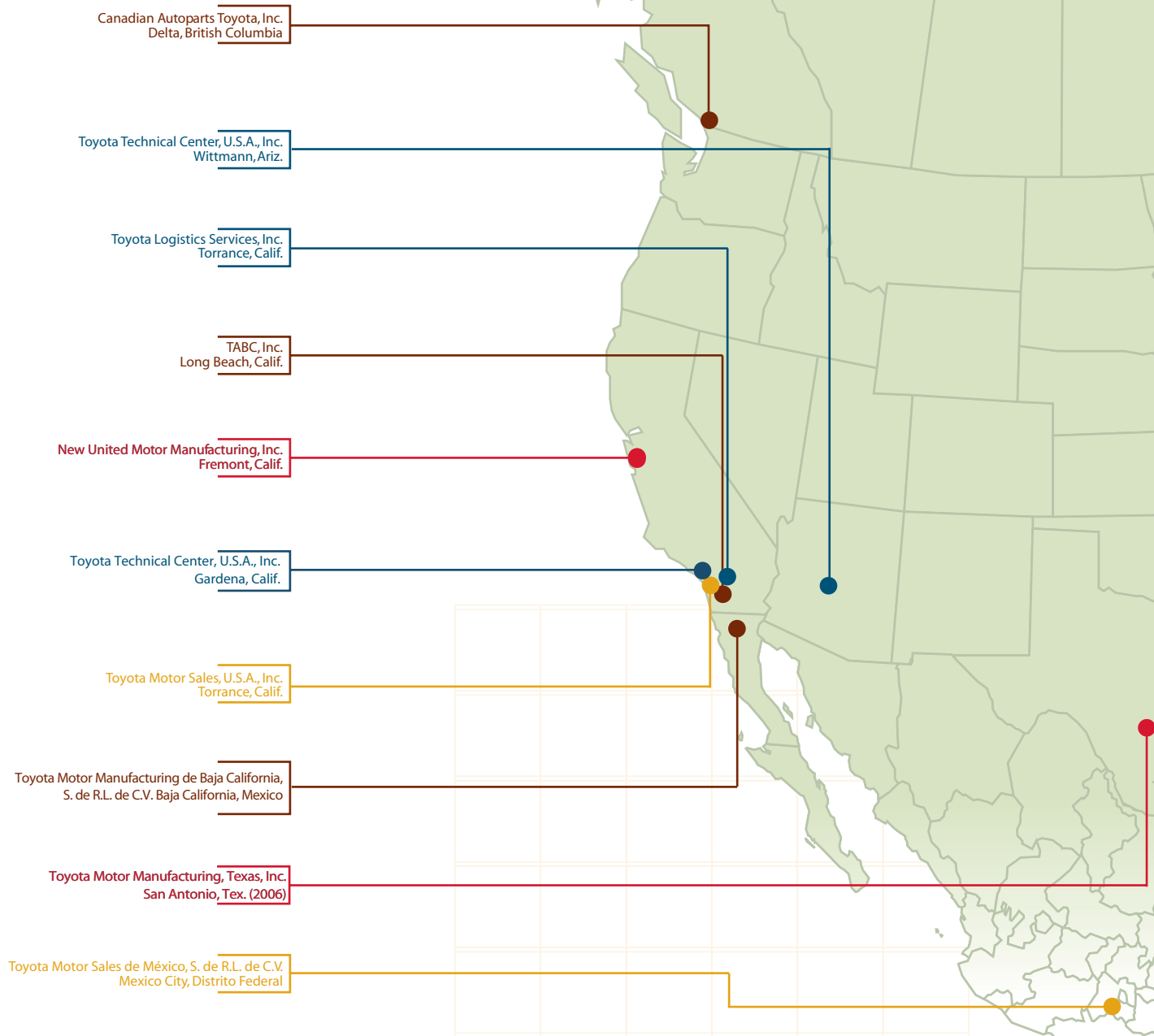
## DESIGN

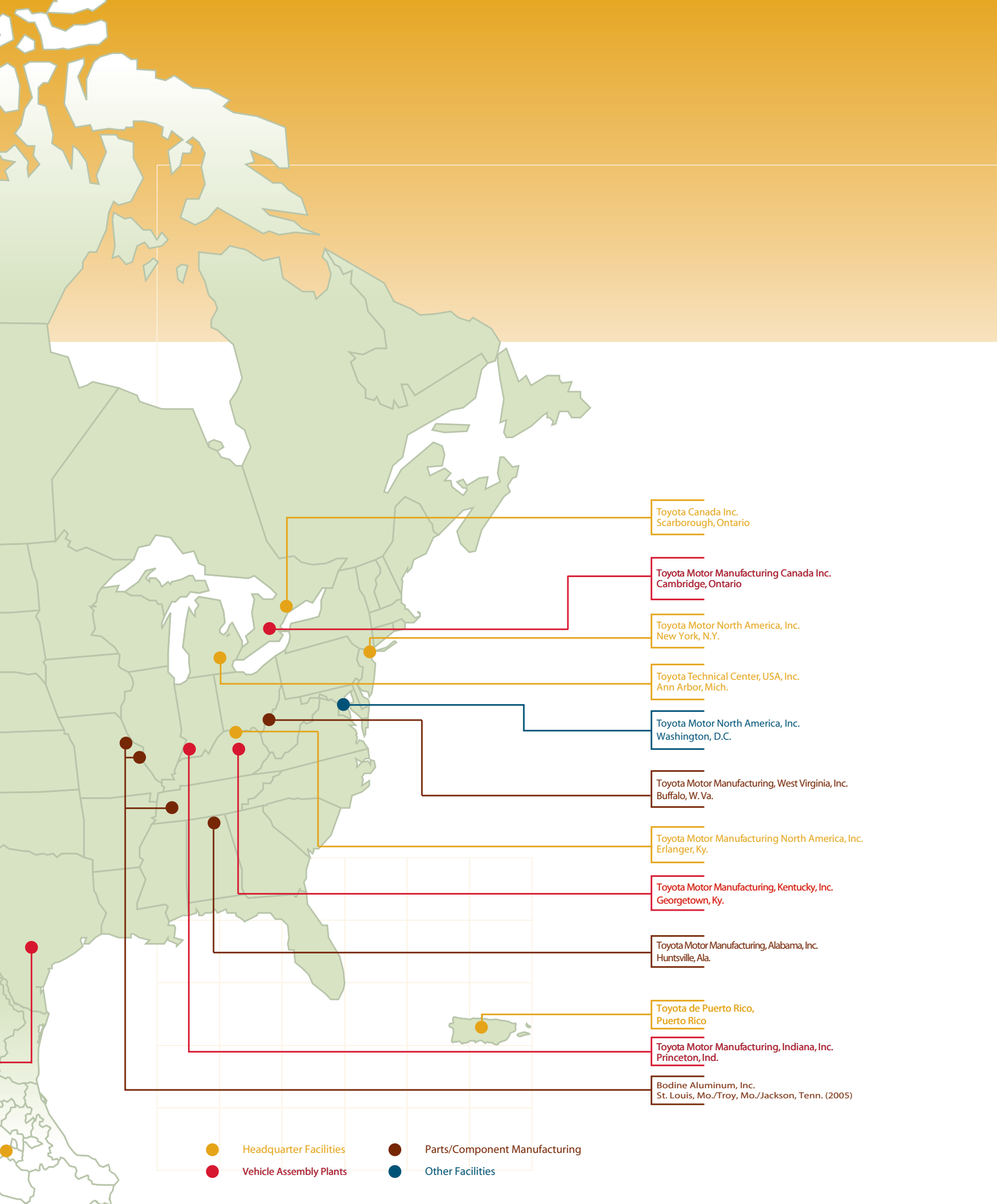
**Calty Design Research, Inc.** — Headquartered in Newport Beach, California. Branch offices in Michigan and New York. Established in 1973.

Calty provides innovative design solutions for Toyota and Lexus product development, and supports North American production with color, trim and wheel design. Most recently, Calty has contributed exterior styling for production models, such as the 2000 Celica and Avalon, 2001 RAV4 and 2002 Matrix, and created the concept vehicles FJ Cruiser, FTX truck and Lexus HPX. In 2004, Calty opened a satellite design studio in Ann Arbor.

# TOYOTA IN NORTH AMERICA

For a complete description of our affiliate companies, please see page 55.







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## ENVIRONMENTAL REPORT

