

## GOAL 5

# COMPLIANCE AND ENVIRONMENTAL STEWARDSHIP

*Improve environmental performance through compliance with environmental requirements, preventing pollution, and promoting environmental stewardship. Protect human health and the environment by encouraging innovation and providing incentives for governments, businesses, and the public that promote environmental stewardship.*

This goal is designed to protect human health and the environment by improving environmental behavior through regulatory and nonregulatory means. Under this goal, EPA will work to ensure that government, business, and the public meet federal environmental requirements and will empower and assist them to do more. EPA programs designed to ensure compliance with federal environmental laws and regulations, to increase voluntary and self-directed actions to minimize or eliminate pollution before it is generated (pollution prevention), and to promote environmental stewardship behavior all contribute to the achievement of this goal.

EPA uses the term “environmental stewardship” to describe behavior that includes but also exceeds required compliance. Stewards of the environment recycle wastes to the greatest extent possible, minimize or eliminate pollution at its sources, and use energy and natural resources efficiently to reduce impacts on the environment. Under this goal, EPA will strive to use science and research more strategically and effectively to inform Agency policy decisions and to guide compliance, pollution prevention, and environmental stewardship efforts. Finally, EPA will work to provide necessary environmental protection to the Nation’s tribes and will assist them in building the capacity to implement environmental programs where needed and feasible.

### OBJECTIVES

**Objective 5.1: Improve Compliance.** By 2008, maximize compliance to protect human health and the environment through compliance assistance, compliance incentives, and enforcement by achieving a 5 percent increase in the pounds of pollution reduced, treated, or eliminated<sup>1</sup>, and achieving a 5 percent increase in the number of regulated entities making improvements in environmental management practices.<sup>2</sup> (Baseline to be determined for 2005.)

**Sub-objective 5.1.1: Compliance Assistance.** By 2008, prevent noncompliance or reduce

environmental risks through EPA compliance assistance by achieving: a 5 percentage point increase in the percent of regulated entities that improve their understanding of environmental requirements; a 5 percent increase in the number of regulated entities that improve environmental management practices; and a 5 percentage point increase in the percent of regulated entities that reduce, treat, or eliminate pollution. (Baseline to be determined for 2005.)<sup>3</sup>

**Sub-objective 5.1.2: Compliance Incentives.** By 2008, identify and correct noncompliance and reduce environmental risks through a 5 percentage point increase in the percent of facilities that use EPA incentive policies to conduct environmental audits or other actions that reduce, treat, or eliminate pollution or improve environmental management practices. (Baseline to be determined for 2005.)<sup>4</sup>

**Sub-objective 5.1.3: Monitoring and Enforcement.** By 2008, identify, correct, and deter noncompliance and reduce environmental risks through monitoring and enforcement by achieving: a 5 percent increase in complying actions taken during inspections; a 5 percentage point increase in the percent of enforcement actions requiring that pollutants be reduced, treated, or eliminated; and a 5 percentage point increase in the percent of enforcement actions requiring improvement of environmental management practices. (Baseline to be determined for 2005.)<sup>5</sup>

## Means and Strategies for Achieving Objective 5.1

Environmental laws and regulations are designed to protect human health and safeguard the environment. But they can achieve their purpose only when companies and facilities comply with requirements. Companies or facilities that do not comply with statutory or regulatory requirements can gain an unfair economic advantage over those that invest the resources necessary to comply. EPA works cooperatively with state, local, and tribal agencies to secure and maintain compliance by the maximum number of the Nation's 41 million regulated entities.<sup>6</sup> To reduce noncompliance and the environmental risks that can result, EPA and its partners provide compliance assistance to promote understanding of environmental regulations; offer incentives that encourage facilities to identify violations; monitor compliance through inspections and investigations; and conduct civil and criminal enforcement actions to correct violations and deter future noncompliance. By combining these tools appropriately to address specific problems, we and our partners can prevent and reduce pollution, thereby protecting human health and the environment.

We will continue to improve our working relationships with state, local, and tribal environmental compliance programs to produce maximum compliance by regulated facilities. Specifically, EPA will

(1) work with states to ensure a consistent level of effort in state enforcement and compliance assurance programs; (2) expand the role of its partners in identifying national priorities for the federal enforcement and compliance assurance programs; (3) better integrate strategic planning efforts at the state, regional, and national levels; (4) share information about patterns of noncompliance or emerging risks which need to be addressed; and (5) explore development of common performance measures for state enforcement and compliance assurance programs.

The four elements of EPA's compliance program—assistance, incentives, monitoring and enforcement—are described in more detail below.

### **Compliance Assistance**

To assist regulated facilities in complying with environmental regulations, EPA will continue to use a mix of tools and strategies to address particular compliance problems that exist in specific industrial, commercial, and government sectors or that are associated with certain regulatory requirements. We will continue to partner with state and local governments and to collaborate with trade associations to equip those working directly with the regulated community with compliance information. We will continue to serve as a national repository and point of contact for information and materials. Our 13 virtual Compliance Assistance Centers will provide assistance directly to the regulated community. We will also interact directly with regulated entities through training, on-site visits, and workshops, and we will assess the results of our assistance efforts.<sup>7</sup>

The Agency's partnership activities also include a compliance assistance exchange forum for sharing information on best practices, outcome measurement, and new compliance assistance materials; an interagency roundtable of representatives from federal compliance assistance programs; and a clearinghouse of compliance assistance materials available from federal, state, and local governments, academia, and trade associations.<sup>8</sup> We will continue to publicize our compliance assistance efforts to help the regulated community anticipate and prevent violations of federal environmental laws that could lead to enforcement actions.

### **Compliance Incentives**

EPA offers a suite of incentives to encourage government, industry, and business facilities to assess their overall compliance with environmental requirements and voluntarily correct and report compliance problems. The Agency will continue to make the Audit Policy (Self-Policing Policy)<sup>9</sup> and other compliance incentives available to the regulated community, including reduced penalties for violations, extended time for correction, and potentially fewer or less frequent inspections. EPA also encourages owners of multiple facilities to disclose environmental violations because such disclosures encourage these regulated entities to review their operations more comprehensively, providing a greater

overall benefit to the environment.

We will continue to work with stakeholders to improve opportunities for industries voluntarily to self-disclose and correct violations. The Small Business Compliance Policy has recently been modified to encourage greater participation by small businesses.<sup>10</sup> As part of the marketing and outreach it conducts to support this approach, EPA will work with small business compliance assistance providers to develop tools small businesses can use to understand applicable environmental requirements and take advantage of the flexibility offered by the policy. EPA also will continue to encourage states to adopt and communities to use the policy.

### **Compliance Monitoring and Enforcement**

EPA uses monitoring and enforcement activities—inspections, civil and criminal investigations, administrative actions, and civil and criminal judicial enforcement—to identify the most egregious violators and return them to compliance as quickly as possible. Federal environmental regulations establish a baseline for consistent compliance levels nationwide. States that have been delegated responsibilities for specific programs may make these baseline standards more stringent and enforce against the more stringent standards.<sup>11</sup>

We will continue to base our compliance monitoring and enforcement efforts on inspections, investigations, and enforcement actions carried out by the Agency and our state, tribal, and local government regulatory partners. To address the most significant risks to human health and the environment, including disproportionate burdens on certain populations, we will target inspections, civil investigations, and criminal investigations to achieve the greatest reduction in pollution. For example, we and our partners review compliance data, the results of inspections and investigations, and citizen “tips” and complaints to target those areas that present high rates of noncompliance and significant risks to human health and the environment.

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**Objective 5.2: Improve Environmental Performance through Pollution Prevention and Innovation.** By 2008, improve environmental protection and enhance natural resource conservation on the part of government, business, and the public through the adoption of pollution prevention and sustainable practices that include the design of products and manufacturing processes that generate less pollution, the reduction of regulatory barriers, and the adoption of results-based, innovative, and multimedia approaches.

**Sub-objective 5.2.1: Prevent Pollution and Promote Environmental Stewardship by Government and the Public.** Through 2008, reduce pollution and improve environmental stewardship practices of all levels of government. Demonstrate how government agencies can serve as stewards of the environment and assist them in meeting their responsibilities under the National Environmental Policy Act (NEPA). Raise the public’s awareness of actions it can

take to prevent pollution.

Strategic Targets:

- By 2006, reduce Toxic Release Inventory (TRI)-reported toxic chemical releases at federal facilities by 40 percent, from a baseline year of 2001.<sup>12</sup>
- By 2008, EPA will go beyond compliance with executive orders to “green” federal government operations in its purchases of “green” products and services from a baseline year of 2002.<sup>13</sup>
- By 2008, all federal agencies will have defined Environmentally Preferable Purchasing programs and policies in place and will be expanding their purchases of available “green” products and services, from a baseline of one federal agency in 2002.<sup>14</sup>
- Through 2008, 70 percent of significant impacts identified by EPA during the NEPA review of all major proposed federal actions are mitigated.
- Through 2008, 90 percent of EPA projects subject to NEPA Environmental Assessment or Environmental Impact Statement requirements result in a finding of no significant environmental impact.

**Sub-objective 5.2.2: Prevent Pollution and Promote Environmental Stewardship by Business.** Through 2008, reduce pollution and improve environmental stewardship practices in business operations by adopting more efficient, sustainable, and protective policies, practices, materials, and technologies.

Strategic Targets:

- By 2008, reduce by 40 percent TRI chemical releases to the environment from the business sector per unit of production (“Clean Index”), and reduce by 20 percent TRI chemicals in production-related wastes generated by the business sector per unit of production (“Green Index”), from the baseline year of 2001.<sup>15</sup>
- By 2008, reduce waste minimization priority list chemicals in hazardous waste streams reported by businesses to TRI by 50 percent from 1991 levels.
- By 2008, reduce pollution by 76 billion pounds, conserve 360 billion BTUs of

energy and 2.7 billion gallons of water, and save \$400 million, from a baseline year of 2003.<sup>16</sup>

- By 2008, reduce 165 thousand metric tons of carbon dioxide (CO<sub>2</sub>) emissions through the Green Chemistry Challenge Awards, from a baseline year of 1996.<sup>17</sup>

**Sub-objective 5.2.3: Business and Community Innovation.** Through 2008, achieve measurably improved environmental performance through sector-based approaches, performance-based programs, and assistance to small business.

Strategic Targets:

- By 2008, Performance Track members collectively will achieve an annual reduction of: 1.5 billion gallons in water use; 3,300,000 MMBTUs in energy use; 25,000 tons in materials use; 450,000 tons of solid waste; 10,000 tons of air releases; and 19,000 tons in water discharges compared to 2001.<sup>18</sup>
- Through 2008, the Sector Strategies Program will work with participating business and service sectors to achieve aggregate reductions in environmental impacts of 15 percent in water use, energy use, waste generation or disposal, air releases, or water discharges. (Improvements will be measured from baselines selected in 2004 for individual sectors.)

**Sub-objective 5.2.4: Environmental Policy Innovation.** Through 2008, achieve measurably improved environmental and economic outcomes by testing, evaluating, and applying alternative approaches to environmental protection in states, companies, and communities. This work will be targeted at improving the cost effectiveness and efficiency for regulatory agencies as well as regulated entities.

Strategic Targets:

- By 2008, facilities that partner to demonstrate alternative regulatory or technological approaches will collectively achieve an environmental improvement of 10 percent in water use, energy use, waste generation or disposal, air releases, or water discharges, or an increase of 10 percent in cost effectiveness or efficiency while achieving equal or improved environmental results. (Improved environmental performance from alternative approaches will be measured against the baseline year in which each project is initiated.<sup>19</sup>)





- By 2008, state projects conducted under the State Innovation Grant Program, Environmental Results Program, and the Joint EPA/State Agreement to Pursue Regulatory Innovation will collectively achieve an environmental improvement of 15 percent in water and energy use, waste generation or disposal, releases of contaminants into the air or water, or habitat quality, or an increase of 15 percent in cost effectiveness or efficiency while achieving equal or improved environmental results. (Improved environmental performance from alternative approaches will be measured against the baseline year in which each project is initiated.<sup>20</sup>)

## Means and Strategies for Achieving Objective 5.2

### Pollution Prevention

The Pollution Prevention Act of 1990 establishes pollution prevention as a “national objective” and the pollution prevention hierarchy as national policy.<sup>21</sup> The Act declares that pollution should be prevented or reduced at the source wherever feasible; that pollution that cannot be prevented should be recycled in an environmentally safe manner; and that, in the absence of feasible prevention or recycling opportunities, pollution should be treated. Disposal or other release into the environment should be used as a last resort.

EPA intends to achieve its pollution prevention goals through voluntary partnerships. The Agency will work with industry to build pollution prevention into the design of manufacturing processes and products and will team with states, tribes, and governments at all levels to find simple, voluntary, and cost-effective pollution prevention solutions. EPA will promote the principles of responsible stewardship, sustainability, and accountability in developing approaches to prevent pollution.

### Environmentally Preferable Purchasing

Executive Order 13101 mandates that EPA assist executive agencies in making purchasing decisions that minimize damage to the environment.<sup>22</sup> The Agency established the Environmentally Preferable Purchasing (EPP) program to provide guidance and carry out a variety of initiatives and outreach activities for a wide constituency, including federal agencies.<sup>23</sup> Under the EPP program, EPA will help purchasers conduct thorough life-cycle analyses to identify those products that generate the least pollution, consume fewest nonrenewable natural resources, and are least threatening to human health and to wildlife. Our strategy harnesses the purchasing power of government to stimulate demand for “greener” products and services, thereby fostering manufacturing changes. We will identify

environmental performance standards by which products can be evaluated (e.g., criteria and standards to evaluate chemical cleaning products and their impacts on the environment). The Agency will also invest in the development of tools, such as life-cycle analysis tools, that businesses and purchasers can use to identify key environmental attributes and evaluate the environmental performance of products. In developing and distributing these tools, we will coordinate and cooperate with businesses, states, tribes, and environmental groups and will rely on the expertise of other federal agencies, such as the National Institute of Standards and Technology.

### Biobased Products and Energy

Under Executive Order 13134 and the Farm Bill<sup>24</sup>, EPA has an important role in developing and promoting biobased products and energy. Biobased products are made from renewable agricultural, animal, or forestry materials, such as vegetable-based lubricants, biofuels, and compost. The Order sets a goal of tripling U.S. use of bioenergy and bioproducts by 2010. To meet this goal, EPA will work closely with the U.S. Department of Agriculture not only to promote the use of these renewable resources, but also to ensure that they protect the environment.

### Pollution Prevention State Grant Program

EPA remains committed to helping industry further prevent pollution by adopting more efficient, sustainable, and protective business practices, materials, and technologies. A vital component of our strategy is the continuation of the Pollution Prevention State Grant program.<sup>25</sup> Annually, EPA provides \$6 million to states and tribes to support their efforts to provide industry with technical assistance, information sharing, and outreach. The grants also support promising, innovative ideas for preventing pollution. Finally, states will require adequate resources dedicated to pollution prevention to implement strategies successfully. EPA will monitor state resource levels and work with states to expand resource commitments for pollution prevention.

### Pollution Prevention at Federal Facilities

Apart from its work with business, the Agency will continue to target prevention of hazardous chemical releases and wastes generated by federal facilities. Working with the states, in coordination with other federal agencies, and armed with pollution prevention tools, technologies, and data generated through TRI, we will work to reduce toxic chemical releases at federal facilities by 40 percent (from a 2001 baseline) by 2006.<sup>26</sup> To help achieve this goal, and to continue reducing other environmental impacts at federal facilities, we will promote the use of environmental management systems (EMSs) under Executive Order 13148.<sup>27</sup> These systems help to address environmental impacts through measured problem identification and response, rather than crisis management. Leading by example, EPA will be implementing EMSs at 34 of its own facilities.

### Green Chemistry

EPA's Green Chemistry Program<sup>28</sup> supports research and fosters development and implementation of innovative chemical technologies to prevent pollution in a scientifically sound, cost-effective manner. Through voluntary partnerships with academia, industry, and other government agencies, Green Chemistry supports fundamental research in environmentally benign chemistry and provides a variety of educational and international activities, including sponsoring conferences and meetings and developing tools. The Presidential Green Chemistry Challenge Award program recognizes superior achievement in the design of chemical products.

### Green Engineering and Design for the Environment

Traditionally, engineering approaches to pollution prevention have been focused on waste minimization and have not addressed such risk factors as exposure, fate, and toxicity. EPA's Green Engineering (GE) program<sup>29</sup> promotes consideration of these factors in the design, commercialization, and use of chemical products and the development of feasible, economical processes that minimize generation of pollution at the source. A goal of the GE program is to incorporate "green" or environmentally conscious thinking and approaches in the daily work of engineers, especially of chemical and environmental engineers. Similarly, EPA's Design for the Environment (DfE) Industry Partnership Program<sup>30</sup> promotes integration of cleaner, cheaper, and smarter pollution prevention solutions into everyday business practices. DfE will continue to work with industry sectors to reduce risks to human health and the environment, improve performance, and save costs associated with existing and alternative pollution prevention technologies or processes.

### Waste Minimization and Recovery

To reduce priority chemicals in hazardous wastes going to landfills, EPA will focus on key waste streams and waste generators through a variety of mechanisms, including the Waste Minimization Partnership Program (part of the Agency's Resource Conservation Challenge, or RCC). This program encourages EPA, state and local governments, manufacturers, and other nongovernmental organizations to form voluntary partnerships to reduce the generation of hazardous wastes containing any of 30 priority chemicals. Companies that become Waste Minimization Partners are publicly recognized for their contribution to the national reduction goal. In 2003, EPA worked with a limited number of Charter Members in a pilot effort to ensure that all aspects of the program were operating smoothly. EPA will now be accepting applications from additional companies that meet membership criteria, with the goal of recruiting 100 new partners, including Fortune 500 companies and small businesses, over the next 5 years. Our primary goal, however, will remain not the number of program participants, but the reductions in chemical wastes that can be achieved.

The RCC also focuses on recovering materials and energy, either by converting wastes into products and energy directly or as a result of process and product redesigns that produce these benefits. We will closely coordinate our RCC efforts with the Agency's other pollution prevention activities, potentially revising our strategies or targets to focus on materials and energy recovery through recycling when source reduction is not a feasible solution. The Agency is also working with its partners to identify additional goals that will reflect our expanded effort, beginning in 2003, to increase recovery of materials and energy and reduce releases of priority chemicals in waste. We expect these new goals to be in place by 2004, as the program becomes fully operational.

## **Innovation**

EPA is committed to developing and promoting innovative strategies that achieve better environmental results, reduce costs, and reward stewardship. In collaboration with its state and tribal partners, the Agency will continue to focus its efforts on innovations that will assist small businesses and communities in improving both their environmental performance and their bottom lines. EPA has prepared an Innovations Strategy to guide our efforts in this and other areas. The strategy relies on continued outreach to states, tribes, and business to help identify innovative approaches that merit testing, evaluation, and implementation.

### Improving Business and Community Environmental Performance

EPA will continue to advance environmental protection through innovative and collaborative approaches with business and other governmental entities. EPA's National Environment Performance Track program, for example, recognizes and rewards superior environmental performance and motivates improvement. Through Performance Track, the Agency will continue to recruit high-performing facilities that have the environmental policies and management systems needed to deliver better results and will create mechanisms and resources for sharing information that can help other Performance Track members and prospective members improve their performance.

Under its Sector Performance Improvement Program, EPA tailors environmental performance improvement efforts to particular industry sectors. The Agency will continue to select sectors based on criteria, such as their impact on national and regional priorities, trade association interest, and facility-level EMS development. The Agency will designate a staff liaison with expertise on the sector to develop and maintain partnerships and facilitate quick responses to sector-specific questions and issues. Through its website, the Agency will also continue to provide an array of sector-specific information on pollution prevention, voluntary partnerships, best practices, sector performance, and other topics.

### Improving Environmental Protection Policy

To foster innovation in environmental protection, the Agency reaches out to states, tribes, businesses, and others to identify new approaches that merit further testing, development, and potential dissemination. Over the next 5 years, EPA plans to test and demonstrate various innovations. In partnership with states and industry, and through programs and agreements that have been created since the mid-1990s, we will focus on priority environmental problems to improve environmental protection while increasing efficiency and cost savings. For example, the State Innovation Grant Program will fund projects that use innovative approaches to permitting. The program will broaden its solicitation of state and tribal projects and will continue to provide direct assistance on a number of the most promising projects. The Agency also will continue to collect, review, approve, and help implement state proposals through the Joint EPA/State Agreement to Pursue Regulatory Innovation.

EPA will continue to promote promising innovations that provide for the use of more flexible and performance-based regulation, multimedia approaches, incentives for superior performance, market-based approaches, public involvement processes, and programs tailored for small sources. In some cases these improvements will be brought about through changes in national rules or policies; in others, they may occur through a more gradual process of adopting new techniques across states or Agency programs. EPA will facilitate these processes by encouraging Agency, state, and tribal staff to submit innovative ideas and suggestions to a central point; using the Agency's Innovation Action Council as a forum to obtain senior-level endorsement of promising innovations; identifying pilot projects that can be mined for "lessons learned;" holding national symposia during which federal, state, and tribal officials can share information and experiences; and using Web-based tools to disseminate information about ongoing projects to Agency staff and management.

### **Implementation of the National Environmental Policy Act**

EPA actions that are subject to NEPA requirements include wastewater and drinking water treatment plant construction and other grants, EPA-issued new-source water discharge permits, and EPA facility construction. For actions that may impact the environment, EPA prepares either an environmental assessment that supports a finding of no significant impact or an environmental impact statement. The Agency will continue to comply fully with NEPA requirements and to implement mitigation measures to ensure that EPA-sponsored activities result in no significant environmental impact.

Section 309 of the Clean Air Act requires EPA to review and make public its comments on other federal agencies' environmental impact statements. EPA performs this role in consultation with the White House Council on Environmental Quality. EPA also promotes environmental stewardship by establishing strong working relationships with other agencies. For example, EPA helps other agencies

scope out their environmental impact statements; assists them in developing projects to avoid environmental impacts; supports streamlined environmental review processes; participates in rotational assignment programs; participates in interagency work groups; and provides training and guidance.

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**Objective 5.3: Build Tribal Capacity.** Through 2008, assist all federally recognized tribes in assessing the condition of their environment, help in building their capacity to implement environmental programs where needed to improve tribal health and environments, and implement programs in Indian country where needed to address environmental issues.

Strategic Targets:

- By 2008, increase tribes' ability to develop environmental program capacity by ensuring that 100 percent of federally recognized tribes have access to an environmental presence. (FY 2002 baseline: 82 percent of tribes)<sup>31</sup>
- By 2008, develop or integrate 15 (cumulative) EPA and interagency data systems to facilitate the use of EPA Tribal Enterprise Architecture information in setting environmental priorities and informing policy decisions. (FY 2003 baseline: 2)<sup>32</sup>
- By 2008, eliminate 20 percent of the data gaps for environmental conditions for major water, land, and air programs as determined through the availability of information in the EPA Tribal Enterprise Architecture. (FY 2003 baseline: 26 data gaps)<sup>33</sup>
- By 2008, increase implementation of environmental programs in Indian country to 189 (cumulative total) as determined by program delegations, approvals, or primacies issued to tribes and EPA direct implementation. (FY 2002 Baseline: 149)<sup>34</sup>
- By 2008, increase by 52 the number of EPA-approved quality assurance plans for tribal environmental monitoring and assessment activities. (FY 2003 baseline: approximately 243 plans)<sup>35</sup>
- By 2008, increase by 50 percent the number of EPA agreements with tribes that reflect holistic program integration and traditional use of natural resources. (FY 2003 baseline: 45 Performance Partnership Grants and EPA/Tribal Environmental Agreements)<sup>36</sup>

**Means and Strategies for Achieving Objective 5.3**

EPA's strategy for achieving its objectives in Indian country has three major components. First, the Agency will work to develop the information technology infrastructure needed to measure environmental conditions in Indian country and related lands and measure the environmental results that accrue from the implementation of environmental programs on those lands. Second, EPA will continue to distribute Indian General Assistance Program capacity-building grants with the goal of establishing an environmental presence in all 572 federally recognized tribes in the United States.<sup>37</sup> Third, EPA's American Indian Environmental Office will continue to coordinate closely with Agency programs to guide and track the timely and appropriate implementation of those programs directly on Indian lands.<sup>38</sup> This work is closely related to efforts described under the tribal component of EPA's cross-goal partnership strategy in the following chapter.

EPA will continue to construct an information technology infrastructure that organizes environmental data on a tribal basis, enabling a clear, up-to-date picture of environmental activities in Indian country. We will take advantage of new technology to establish direct links with other federal agencies (including the U.S. Geological Survey, Bureau of Reclamation, and Indian Health Service) to create an integrated, comprehensive, multi-agency Tribal Enterprise Architecture. This interactive system will allow tribes and EPA regional offices to supply management information that supplements data collected by the national tribal systems.

In addition, EPA will develop Strategic Plan Tracking Systems (Government Performance and Results Act [GPRA] tracking systems) to follow progress in achieving tribal objectives, sub-objectives, and strategic targets on a real-time basis. The Agency will use data available through the Tribal Enterprise Architecture and allied GPRA tracking systems to adjust approaches and activities as necessary to achieve improved results on tribal lands and to report to the tribes on the Agency's progress. These tools will also help EPA determine the resources and skills needed over the 5-year cycle of the *Strategic Plan*.

Consultation and direct partnerships with tribes are integral to EPA's strategy. The Tribal Caucus, which has advised the Agency on tribal issues for several years, will serve as the focal point for work under this objective and will help facilitate continued development of EPA-tribal partnerships. To improve the environment in Indian country, the Agency will also engage other EPA-sponsored tribal groups, such as the Tribal Committee of the Forum on State and Tribal Toxics Action,<sup>39</sup> the Tribal Pesticides Program Council,<sup>40</sup> and the Tribal Science Council.<sup>41</sup>

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**Objective 5.4: Enhance Science and Research.** Through 2008, strengthen the scientific evidence and research supporting environmental policies and decisions on compliance, pollution prevention, and environmental stewardship.

**Sub-objective 5.4.1: Strengthening Science.** By 2008, all (100 percent of) routine National Enforcement Investigations Center environmental measurements (field or laboratory) will be accredited by an internationally recognized, third-party organization. (FY 2001 baseline: 30 areas of environmental data collection.)<sup>42</sup>

**Sub-objective 5.4.2: Conducting Research.** Conduct leading-edge, sound scientific research on pollution prevention, new technology development, socioeconomics, and decision making. By 2008, the products of this research will be independently recognized as providing critical and key evidence in informing Agency policies and decisions and solving problems for the Agency and its partners. (Also see *Research*, under Cross-Agency and Support-Program Evaluations in Appendix 2 of this *Strategic Plan*.)

## Means and Strategies for Achieving Objective 5.4

EPA is working to strengthen the science that it needs to make sound decisions and establish effective compliance and enforcement policies. The Agency is continuing to conduct research on pollution prevention, new and developing technologies, social and economic issues, and decisionmaking. We will use the results of these studies to develop products and tools that EPA, its partners, and stakeholders can use to promote energy and natural resource conservation, pollution prevention, recycling, and other aspects of environmental stewardship. Besides benefitting the Agency and its partners, advancing science and research will also help clarify requirements and expectations for members of the regulated community and will provide tools and strategies to help them meet those requirements.

### Strengthening Science

EPA's science work under Goal 5 has a two-fold purpose: (1) to improve the science that supports compliance monitoring, inspections, investigations, case support, and selected regulations; and (2) to continue to provide premier investigatory work to support the Agency's enforcement and compliance assistance activities. To accomplish these ends, EPA's National Enforcement Investigations Center (NEIC)<sup>43</sup> and EPA regional laboratories will implement a nationally and/or internationally recognized quality system that provides for third-party oversight and features both technical/scientific and the forensic elements of environmental data collection and measurement. Through NEIC and our regional laboratories, we will also work to improve field and laboratory measurement techniques and to advance innovative analytical approaches to support compliance and enforcement efforts.



## Conducting Research

EPA will work with its partners and stakeholders to identify research needs, set priorities, and develop project plans. We will concentrate on (1) research that will help identify best practices and approaches that promote, at a minimum, compliance with all regulatory requirements and (2) research that may yield innovative approaches to improve performance and results in such areas as pollution prevention and sustainable development.

For example, over the next 5 years the Agency's Office of Research and Development will conduct research and prepare reports and assessments on renewable resources, metal processing fluids, fuel cells, and buildings. We will share these products with industry, academia, and other agencies to further their work in preventing pollution.

Other research efforts will result in four generic, sustainable environmental system methodologies for watershed management (using market incentives, ecological food-web models, hydrological models, and pest resistance management frameworks); an evaluation of the effectiveness and efficiency of market-based incentive approaches, as compared to traditional environmental regulation; and efforts to make innovative environmental technologies commercially available, such as technologies EPA would use for building decontamination and water security.

EPA has developed Multi-Year Research Plans that describe the research we will conduct on pollution prevention and new technologies and on economics and decision sciences during the next 5 to 10 years. The plans lay out long-term research goals as well as the annual milestones needed to achieve these goals.<sup>44</sup>

### Pollution Prevention and New Technologies

Over the last decade, the Agency has increasingly focused on pollution prevention in addressing high-risk human health and environmental problems. A preventive approach requires (1) innovative design and production techniques that minimize or eliminate adverse environmental impacts; (2) holistic approaches that make the most of our air, water, and land resources; and (3) fundamental changes in how goods and services are created and delivered to consumers.

As part of its multi-year plan, EPA has established long-term goals for pollution prevention and new technologies research. These goals focus on developing tools, technologies, and sustainable environmental systems approaches and on continuing to prevent and control pollution by targeting sources and sectors that pose the greatest risks to human health and the environment. For example, this research will provide credible performance data for commercial environmental technologies to aid vendors in marketing innovative technologies, buyers in making purchasing decisions, and permittees in

making decisions about environmental technologies. Research results can assist EPA and states in improving compliance performance by providing information and tools for cleaner, cost-effective industrial processes and new technologies and verifying the performance of commercial technologies. Research results will also provide technical options and alternatives for improving environmental management. Approaches to sustainable environmental systems developed through this research will provide cost-effective methods of protecting sensitive ecosystems. For instance, this research can help build tribal capacity by providing holistic, multimedia solutions at the watershed scale that take local cultural values into account and promote sustainable practices.

### Economics and Decision Sciences

EPA conducts economics and decision-sciences research to increase our understanding of human behavior toward the environment, enabling us to develop policies that can alter behaviors that contribute to environmental problems. This research also informs state and other federal agencies on how to best and most cost-effectively accomplish three overarching responsibilities: (1) anticipating, identifying, and setting priorities for managing environmental problems to protect ecological and human health; (2) developing policies to address the selected environmental priorities; and (3) implementing the policies to achieve better environmental outcomes.

Our multi-year plan for economics and decision sciences establishes long-term research goals for understanding and changing environmentally damaging behaviors, developing tools to assess the highest-priority issues based on public preferences, and developing implementation strategies that provide incentives for desirable behavioral responses to government interventions. For example, this research will help us understand the motivations driving human behavior toward protecting the environment, the techniques for implementing environmental policy most effectively and efficiently (e.g., traditional regulation, market and economic incentives, information disclosure), and the monetary value society attaches to healthy people and healthy ecosystems.

The results of our research on compliance behavior of regulated entities will help EPA and states improve compliance performance and promote environmental stewardship. We and our partners will rely on research into market-based approaches and economic incentives to develop innovative alternatives to traditional regulatory approaches. As we establish regulations to protect human health and the environment, research on valuation will enable us to make informed decisions on which environmental problems to address and the public benefits to be derived from various types of standards and levels of stringency.

## EXTERNAL FACTORS

EPA's ability to meet its objectives for compliance and environmental stewardship could be affected by a number of factors. For example, natural catastrophes—such as floods, significant chemical spills, and the new challenges associated with homeland security and responding to real or potential terrorist threats—may require the Agency to revise its priorities and redirect its resources.

The Agency relies heavily on its partnerships to advance protection of human health and the environment. For example, many of the strategic targets the Agency has set under this goal are predicated on the assumption that states and tribes will be able to maintain or increase their levels of compliance and enforcement work, or that the U.S. Department of Justice will accept or prosecute cases.

In the area of pollution prevention, for example, the Agency's work is almost entirely dependent on voluntary partnerships, collaboration, and persuasion, since there are few environmental regulations that set specific source-reduction requirements. The DfE Program seeks partnerships with industry trade associations to engage jointly in the development and marketing of products that generate less pollution. The Green Chemistry Program challenges industry and the academic community to step forward with new chemical formulations that pose fewer risks to human health and the environment. And EPA's strategy of "greening the supply chain" depends on the willingness of large manufacturers to voluntarily require their suppliers to provide environmentally preferable products. These efforts all depend on our partners' continued willingness to cooperate in joint endeavors that might not realize an immediate payoff. EPA's ability to carry out its voluntary pollution prevention initiatives could be reduced if partners begin to believe that the initiatives are not worthwhile, are too risky, or are otherwise contrary to their best interests.

The community that contributes to and uses EPA's data and information is also evolving. As states and tribes develop the ability to integrate their environmental information, EPA will need to adjust its systems to ensure that it can receive and process reports from states and industry under Agency statutory requirements. Citizen and community organizations and the public at large are also increasingly involved in environmental decisionmaking, and their need for quality information and more sophisticated analytical tools is growing.

Finally, the regulated community's willingness to comply with the law and to exceed minimum requirements is an obvious factor in the Agency's achievement of its compliance and environmental stewardship goals. A key component of our waste minimization strategy for reducing priority chemicals from waste streams, for example, is the commitment that small and large businesses make to work with EPA and other governmental organizations to address the targeted chemicals.

### **Human Capital Focus For Achieving Goal 5**

EPA will provide focused training and development opportunities in:

- The compliance and enforcement requirements under all major environmental statutes, including facility inspections and investigations
- The regulatory development process
- Collaboration and communication
- Grant management
- Federal Indian legal and other issues

We will also use a range of flexible hiring authorities to quickly recruit skilled scientists, researchers, and others, and we will further develop our existing workforce by rotating senior-level managers and staff across air, water, and land programs.

### **Efficiency Measures For Goal 5**

Efficiency measures relate results to the resources or time invested to achieve those results and augment effectiveness measures in evaluating performance. They help us integrate EPA's budget and performance—part of the President's Management Agenda—and demonstrate the cost-effectiveness and timeliness of program activities.

Under our enforcement program in Goal 5, efficiency measures will track the pounds of pollutants reduced against the time EPA staff spends in enforcement activities:

*For FY 2005, the two efficiency measures will be pounds of pollutants reduced per FTE, and dollars of injunctive relief collected per FTE. Since achievement of the Civil Enforcement Program's annual and long-term goals is highly dependent on the enforcement cases concluded in a given year, there can be significant variability in a measure from one year to the next. To partially address this variability these efficiency measures are based on 3-year rolling averages.*

## Notes

1. “Pounds of pollutants reduced, treated, or eliminated” is an EPA measure of the quantity of pollutants that will no longer be released to the environment as a result of a noncomplying facility returning to its allowable limits through the successful completion of an enforcement settlement. (Facilities may further reduce pollutants by carrying out voluntary Supplemental Environmental Projects.) Online compliance information is available to the public via EPA’s Enforcement and Compliance History Online (ECHO) Web Site: <http://www.epa.gov/echo/>; EPA’s Office of Enforcement and Compliance Assurance. Washington, DC. Accessed August 28, 2003.

2. “Environmental management practices” refers to a specific set of activities EPA tracks to evaluate changes brought about through assistance, incentives, and concluded enforcement actions. Implementing or improving environmental management practices—for example, by changing industrial processes; discharges; or testing, auditing, and reporting—may assist a regulated facility in remaining in compliance with environmental requirements. Further information on environmental management practices is available in EPA’s *Case Conclusion Data Sheet Training Booklet*, available online at: [www.epa.gov/compliance/resources/publications/planning/caseconc.pdf](http://www.epa.gov/compliance/resources/publications/planning/caseconc.pdf); EPA’s Office of Enforcement and Compliance Assurance. Washington, DC.

3. The performance results achieved in FY 2005 will serve as the baseline from which future performance results will be compared. EPA will establish this objective’s baseline in FY 2005 by analyzing data collected through EPA’s Reporting Compliance Assistance Tracking System (RCATS), Office of Enforcement and Compliance Assurance, Washington, DC.. RCATS is an internal tracking system and not available to the public.

4. The performance results achieved in FY 2005 will serve as the baseline from which future performance results are compared. EPA will establish this objective’s baseline in FY 2005 by analyzing data collected through EPA’s Integrated Compliance Information System (ICIS), Office of Enforcement and Compliance Assurance, Washington, DC. ICIS is an internal EPA database and not available to the public

5. The performance results achieved in FY 2005 will serve as the baseline from which future performance results will be compared. EPA will establish this objective’s baseline in FY 2005 by analyzing data collected through EPA’s Integrated Data for Enforcement Analysis, (IDEA) database and data collected manually on Inspection Conclusion Data Sheets (ICDS), Office of Enforcement and Compliance Assurance, Washington, DC. Accessed September 10, 2003. Information on IDEA is available at:  
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18. These improvements are beyond existing regulatory requirements.
19. For every EPA-supported project, assistance agreements or other mechanisms will include a provision requesting recipients to quantify changes (i.e., improvements) to their environmental media, cost effectiveness, or workload efficiency. These changes will be measured against a baseline year in which the project is initiated.
20. For every EPA-supported project, assistance agreements or other mechanisms will include a provision requesting recipients to quantify changes (i.e., improvements) to their environmental media, cost effectiveness, or

workload efficiency. These changes will be measured against a baseline year in which the projected is initiated.

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