

Environmental Protection Agency

FY 2002 Annual Performance Plan and Congressional Justification

Preventing Pollution and Reducing Risk in Communities, Homes, Workplaces and Ecosystems

Strategic Goal: Pollution prevention and risk management strategies aimed at eliminating, reducing, or minimizing emissions and contamination will result in cleaner and safer environments in which all Americans can reside, work, and enjoy life. EPA will safeguard ecosystems and promote the health of natural communities that are integral to the quality of life in this nation.

Resource Summary (Dollars in thousands)

	FY 1999 Enacted	FY 2000 Actual	FY 2001 Enacted	FY 2002 Request
Goal 04 Preventing Pollution and Reducing Risk in Communities, Homes, Workplaces and Ecosystems	\$241,900.5	\$273,624.3	\$301,113.7	\$297,572.3
Obj. 01 Reduce Public and Ecosystem Risk from Pesticides	\$43,240.2	\$49,322.3	\$51,453.5	\$54,472.9
Obj. 02 Reduce Risks from Lead and Other Toxic Chemicals	\$34,262.3	\$37,839.9	\$34,304.2	\$34,741.7
Obj. 03 Manage New Chemical Introduction and Screen Existing Chemicals for Risk	\$41,223.4	\$55,286.8	\$64,915.8	\$65,233.1
Obj. 04 Ensure Healthier Indoor Air.	\$29,095.7	\$34,612.0	\$38,634.2	\$37,854.0
Obj. 05 Facilitate Prevention, Reduction and Recycling of PBTs and Toxic Chemicals	\$41,923.2	\$42,130.7	\$47,448.3	\$40,661.2
Obj. 06 Assess Conditions in Indian Country	\$52,155.7	\$54,432.6	\$64,357.7	\$64,609.4
Total Workyears	1,137.8	1,249.8	1,171.3	1,161.7

*For proper comparison with the FY 2002 request, the historic data has been converted to be consistent with the new 2000 Strategic Plan structure. Goal and Objective resources for FY 1999, FY 2000, and FY 2001 may therefore differ from the resources reported in the FY 2001 Annual Plan and Budget and the FY 2000 Annual Report.

Background and Context

The underlying principle of the activities in this goal is the application of pollution prevention. Preventing pollution before it may harm the environment or public is cheaper and smarter than costly cleanup and remediation. EPA uses a number of approaches to protect public health and the nation's ecosystems from the risks of exposure to pesticides or toxic chemicals. In 1998, Toxic Release Inventory (TRI) facilities reported a total of 10.2 billion pounds of pollutants released, treated or combusted for energy. Reducing waste, and reducing the toxic chemicals that are used in industrial processing, protects the environment and also improves efficiency, thereby lowering costs for industry. Pollution prevention involves changing the behavior of those that cause the pollution and fostering the wider use of preventive practices as a means to achieve cost effective, sustainable results. For example, the Design for the Environment and Green Chemistry programs strive to change the behavior of chemists and engineers to incorporate pollution prevention and environmental risk considerations in their daily work.

In Goal 4, the Agency targets certain chemicals of high risk as well as the full range of pollutants addressed by the pollution prevention program. Many chemicals are particularly toxic to children. For instance, at high levels, lead damages the brain and nervous system and can result in behavioral and learning problems in children. Despite a dramatic reduction in lead exposure among young children over the last twenty years, there are still approximately 900,000 children in the U.S. with elevated blood lead levels. Exposure to asbestos, polychlorinated biphenyls (PCBs) and other chemicals in our buildings and in the environment poses risks to humans as well as wildlife. For other common chemicals, the risks may not be known. The screening and testing of chemicals about to enter the market, combined with the review of the most common chemicals already in use through the Chemical Right-to-Know Program, fills gaps in our knowledge about the effects of chemicals on human health and the environment.

Means and Strategy

The diversity and sensitivity of America's environments (communities, homes, workplaces and ecosystems) requires EPA to adopt a multi-faceted approach to protecting the public from the threats posed by pesticides, toxic chemicals and other pollutants. The underlying principle of the activities in this goal is the application of pollution prevention, which can be cheaper and smarter than cleanup and remediation, as evidenced by the high cost of Superfund, Resource Conservation and Recovery Act (RCRA), and Polychlorinated Biphenyls (PCB) cleanups. Pollution Prevention (P2) involves changing the behavior of those that cause the pollution and fostering the wider use of preventive practices as a means to achieve effective, sustainable results.

Under this Goal, EPA ensures that pesticides and their application methods do not present unreasonable risks to human health, the environment, and ecosystems. In addition to the array of risk-management measures entailed in the registration authorities under the Federal Insecticide, Fungicide,

and Rodenticide Act (FIFRA) for individual pesticide ingredients, EPA has specific programs to foster worker and pesticide-user safety, ground-water protection, and the safe, effective use of antimicrobial agents. These programs work to ensure the comprehensive protection of the environment and wildlife, endangered species in particular, and to reduce the contribution of pesticides to ecological threats such as pollutant loading in select geographic areas. Within this context, EPA pursues a variety of field activities at the regional, state and local levels, including the promotion of pesticide environmental stewardship. EPA is also addressing emerging threats such as endocrine disruptors by developing and implementing new screening technologies to assess a chemical's impact on hormonal activity. Finally, EPA promotes the use of sensible Integrated Pest Management (IPM) and the prevention of pesticide misuse in the panoply of uses within both the urban and rural environments.

The Agency remains committed to safeguarding our Nation's communities, homes, workplaces and ecosystems. Preventing pollution through regulatory, voluntary, and partnership actions -- educating and changing the behavior of our public -- is a sensible and effective approach to sustainable development while protecting our nation's health. Two groups with significant potential to effect environmental change are industry and academia. The Agency pursues a number of these pollution prevention programs with both of these groups. Likewise, improved understanding of the potential risks to health from airborne toxic chemicals present indoors may strengthen our ability to reduce residents' exposure through voluntary changes in behavior and through potential product reformulation.

Preventing pollution through partnerships is central to Agency chemical right-to-know activities. These activities include providing the public with information on the basic health and environmental effects of the 2,800 highest production volume (HPV) chemicals in the United States (chemicals manufactured in or imported into the U.S. in quantities of at least 1 million pounds). Most residents come into daily contact with many of these chemicals, yet relatively little is known about their potential impacts. Getting basic hazard testing information on large volume chemicals is the focus of the "HPV Challenge Program," a voluntary program recognizing industry's contribution to the public knowledge base on these prevalent chemicals. More than 469 companies have committed to voluntarily provide these test data for more than 2,155 of the HPV chemicals - a remarkable partnership between government and the private sector. The Agency intends to further evaluate whether additional testing is warranted for chemicals to which children are exposed.

Children's health is also the continuing focus of the multi-agency initiative begun in FY 2000 to combat asthma in children. Efforts in FY 2002 will target reductions in the presence of indoor triggers of asthma, such as environmental tobacco smoke and biological contaminants, by continuing to educate the public about the disease and about the steps they can take to reduce the severity and frequency of asthma attacks. Additional voluntary work will be undertaken by schools to empower their students to manage their asthma symptoms better, by school personnel to improve the indoor environments of their schools, and by health care personnel to incorporate education about managing environmental asthma triggers into asthma treatment plans for their patients. Partnerships with non-profit environmental and public health organizations with a particular focus on children are used to bring about these voluntary reductions in

exposure to asthma triggers found indoors. Achieving the goals of the multi-agency effort to maintain the government's efforts to combat asthma in children requires effective collaboration between EPA and other Federal agencies.

Also central to the Agency's work under this goal in FY 2002 will be continued attention on documenting and taking action to reduce potential risk from persistent, bioaccumulative and highly toxic chemicals (PBTs) and from chemicals that have endocrine disruption effects. PBT chemicals are of particular concern not only because they are toxic but also because they may remain in the environment for a long period of time, are not readily destroyed, and may build up or accumulate to high concentrations in plant or animal tissue. In cases involving mercury and PCBs, they may accumulate in human tissue.

The Agency mixes both regulatory and voluntary methods to accomplish its job. For example, each year the Toxic Substances Control Act (TSCA) New Chemicals program reviews and manages the potential risks from approximately 1,800 new chemicals and 40 products of biotechnology that enter the marketplace. This new chemical review process not only protects the public from the possible immediate threats of harmful chemicals, like PCBs, from entering the marketplace, but it has also contributed to changing the behavior of the chemical industry, making industry more aware and responsible for the impact these chemicals have on human health and the environment. This awareness has led industry to produce safer "greener" alternative chemicals and pesticides. Fewer harmful chemicals are entering the marketplace and our environment today because of the New Chemicals Program.

The Design for the Environment (DfE), Green Chemistry Program and Green Engineering (GE) build on and expand the new chemistry efforts. They target industry and academia to maximize pollution prevention. Our DfE Program forms partnerships with industry to find sensible solutions to prevent pollution. In one example, taking a sector approach, EPA has worked with the electronics industry to reduce the use of formaldehyde and other toxic chemicals in the manufacture of printed wiring boards. Our Green Chemistry Program also forms partnerships with industry and the scientific community to find economically viable technical solutions to prevent pollution. In addition, the Green Engineering Program works with the American Society of Engineering Education (ASEE) to incorporate GE approaches into engineering curricula.

The Pollution Prevention Framework is another example of EPA successfully influencing industry's approach to chemical selection prior to commercialization. The P2 Framework accomplishes the following: (1) integrates analytical methods and tools that help predict exposures and risks of chemicals, based on chemical structure and estimates of environmental releases and exposure; (2) allows stakeholders to evaluate and compare chemical choices and to identify environmentally preferable products and processes; and (3) helps industry identify risk issues early in product development, when pollution prevention opportunities are most cost-effective. In 2001 and 2002 EPA is using the P2 Framework as part of the Sustainable Futures effort to help companies shorten the review cycle for introduction of new safer chemicals into commerce, thereby benefitting the environment, the companies and EPA.

In several cases, achieving the strategic objectives under this goal is a shared responsibility with other federal and state agencies. For example, EPA's role in reducing the levels of childrens lead exposure involves promotion of federal-state partnerships to lower specific sources of lead to children, primarily from addressing lead-based paint hazards. These partnerships emphasize development of a professional infrastructure to identify, manage and abate lead-based paint hazards, as well as public education and empowerment strategies, which fit into companion Federal efforts with Department of Health and Human Services (HHS), Department of Defense (DOD), Department of Energy (DOE), Department of Justice (DOJ), Centers for Disease Control (CDC), and Department of Housing and Urban Development (HUD). These combined efforts help to monitor lead levels in the environment, with the intent of virtually eliminating lead poisoning in children.

Intrinsic to the effort to prevent pollution is the minimization of the quantities of waste generated by industry, government agencies, and hazardous-waste management operations. Strategies range from fostering materials reuse and recycling and other resource-recovery processes to broad-based campaigns to re-engineer the consumption and use of raw materials or personal conservation of resources. Effective and sustainable programs reduce the need for storage, treatment or disposal of hazardous or municipal wastes, while reducing costs to industry and municipalities.

Since this Goal focuses on how the public lives in communities, it features the Agency's commitment of fulfilling its responsibility for assuring human health and promoting environmental protection in Indian Country. EPA's policy is to work with tribes on a government-to-government basis that affirms the vital trust responsibility that EPA has with 572 tribal governments and remain cognizant of the Nation's interest in conserving the cultural uses of natural resources.

Research

Currently, there are significant gaps with regard to the understanding of actual human exposures to pesticides and toxic substances in consumer products in residential environments and potential human health risks from such exposures to the general population and susceptible subpopulations, such as infants and children. Methods for detecting and estimating human exposures to these chemical stressors are extremely limited. Health effects information is not available for most of these stressors. Tool that are currently available to control or prevent exposures are also limited to certain processes or materials. To reduce human health and ecological risks, research is needed to develop/improve methods to evaluate hazard on human health endpoints, models to improve the biological basis for human health risk assessment, and methods to identify ecological hazards, predict ecological risk, and characterize environmental stressor interactions. In FY 2002, the Agency will continue to support both human health and ecosystems research to reduce risks and improve the environmental safety of our communities.

Strategic Objectives and FY 2002 Annual Performance Goals

Objective 01: Reduce Public and Ecosystem Risk from Pesticides

- C Implementation of 10-15 model agricultural partnership projects that demonstrate and facilitate the adoption of farm management decisions and practices that provide growers with a "reasonable transition" away from the highest risk pesticides.

Objective 02: Reduce Risks from Lead and Other Toxic Chemicals

- C Implement certification and training of lead abatement professionals.

Objective 03: Manage New Chemical Introduction and Screen Existing Chemicals for Risk

- C Of the approximately 1,800 applications for new chemicals and microorganisms submitted by industry, ensure those marketed are safe for humans and the environment. Increase proportion of commercial chemicals that have undergone Pre-Manufacturing Notification review to signify they are properly managed and may be potential green alternatives to existing chemicals.
- C EPA will make publicly available screening level hazard data and Assessments for 8% of the 2800 High Production Volume chemicals, as part of the Agency's implementation of a comprehensive strategy for screening, testing, classifying & managing the potential risks posed by commercial chemicals.

Objective 04: Ensure Healthier Indoor Air

- C 848,000 additional people will be living in healthier residential indoor environments.
- C 1,228,500 students, faculty and staff will experience improved indoor air quality in their schools.

Objective 05: Facilitate Prevention, Reduction and Recycling of PBTs and Toxic Chemicals

- C Divert an additional 1% (for a cumulative total of 31% or 69 million tons) of municipal solid waste from land filling and combustion, and maintain per capita generation of RCRA municipal solid waste at 4.3 pounds per day.
- C The quantity of Toxic Release Inventory (TRI) pollutants released, disposed of, treated or combusted for energy recovery in 2002, (normalized for changes in industrial production) will be reduced by 200 million pounds, or 2%, from 2001. This data will be reported in 2004.

Objective 06: Assess Conditions in Indian Country

- C** Baseline environmental information will be collected for 38% of Tribes (covering 50% of Indian Country).

Highlights

EPA seeks to prevent pollution at the source as the first choice in managing environmental risks to humans and ecosystems. Where pollution prevention at the source is not a viable alternative, the Agency will employ risk management and cost effective remediation strategies. Reducing pollution at the source will be carried out using a multi-media approach in the following environmental problem areas:

Reduce Public and Ecosystem Risks from Pesticides

Reducing risk from exposure to pesticides requires a multi-faceted approach. Beyond being exposed through the food we eat, the general public, applicators, and farm workers may be exposed to pesticides through direct handling, groundwater contamination or aerial spray. One intent of the Food Quality Protection Act (FQPA) is to protect the public by shifting the nation toward safer pesticide use. Appropriate transition strategies to safer pesticides are important to the nation to avoid disruption of food supply or sudden changes in the market that could result from abruptly terminating the use of a pesticide before well-targeted safer equivalents can be identified and made available. For these reasons, the strategic agricultural partnership program continues to be an important priority in 2002. The initiative develops alternative pest management tools and approaches. The Agency will continue to work closely with industry, agricultural pesticide users and other stakeholders to effectively transition to the safer pesticides and pest management practices envisioned by the FQPA. In 2002, the initiative will continue efforts to reach more farmers, encourage them to adopt safer pesticides, use environmental stewardship and integrated pest management practices, and adopt a “whole farm” approach to environmental protection.

In 2002, through the Certification and Training (C&T) and Worker Protection (WP) programs, EPA will continue training and educating farm workers and employers on the dangers of pesticides and good worker safety practices. EPA will continue to protect the Nation’s ecosystems and reduce impacts to endangered species through the Pesticide Environmental Stewardship Program (PESP) and integrated pest management (IPM). The Agency will emphasize efforts with our tribal partners to address pesticide issues and enhance the development of tribal technical capacity, particularly in the areas of risk management, worker safety, training, and pollution prevention.

Together, the WP and the C&T programs address the problem of worker pesticide exposure. These programs safeguard workers from occupational exposure to pesticides by providing training for workers, employers, and pesticide applicators and handlers. Training and certification of applicators of restricted use pesticides further ensures that workers and other vulnerable groups are protected from undue pesticide exposure and risk. Recertification requirements keep their knowledge current with label changes and application improvements. The Groundwater Strategy, a cooperative effort with states and regions

to develop Pesticide Management Plans (PMPs), will further efforts to prevent pesticide pollution of surface and groundwaters. The Endangered Species program will enlist the support of the agricultural community and other interested groups to protect wildlife and critical habitats from pesticides. This voluntary program is carried out through communications and outreach efforts and in coordination with other federal agencies. The Pesticide Environmental Stewardship Program (PESP) and Integrated Pest Management (IPM) play pivotal roles in moving the nation to the use of safe pest control methods, including reduced risk pesticides. These closely related programs promote risk reduction through collaborative efforts with stakeholders to utilize safer alternatives to traditional chemical methods of pest control.

Antimicrobial sterilants and disinfectants are used to kill microorganisms on surfaces and objects in hospitals, schools, restaurants and homes. Antimicrobials require appropriate labeling and handling to ensure safety and efficacy. EPA remains focused on accurate product labeling and product efficacy and meeting other requirements for antimicrobial sterilants set forth by FQPA.

Reduce Risks from Lead and Other Toxic Chemicals

EPA is part of the Federal effort to address lead poisoning and elevated blood levels in children by assisting in, and in some cases guiding, federal activities aimed at reducing the exposure of children in homes with lead-based paint. During FY 2002, EPA will continue implementing its comprehensive program to reduce the incidence of lead poisoning and elevated blood levels in children nationwide.

During 2002, EPA will continue the Lead Based Paint Training & Certification Program in all fifty states through EPA authorized state, territorial or tribal programs or, in states and territories without EPA authorization, through direct implementation by the Agency. In the lead regulatory program, EPA will propose one major rule setting standard for deleading of buildings and structures, and work towards finalizing a major rule on training and certification for renovation and remodeling activities.

EPA will continue to implement the new Lead Hazards Standards Rule, the Lead Renovation Information Rule and the Real Estate Notification & Disclosure Rule. EPA is working with other Federal Agencies including Department of Health and Human Services (HHS), Department of Housing and Urban Development (HUD), Department of Defense (DOD), Department of Energy (DOE), Consumer Product Safety Commission (CPSC), and Department of Justice (DOJ) on implementing a Federal Strategy to virtually eliminate lead poisoning.

For other chemicals whose significant risks are well established (such as PCBs, asbestos, and dioxin), reductions in use and releases are important to reducing exposure of the general population as well as sensitive sub-populations. In FY 2002, EPA's PCB control efforts will encourage phase-out of PCB electrical equipment, ensuring proper waste disposal methods and capacity, and fostering PCB site cleanups. The Agency plans to develop an dioxin strategy to respond to the latest science and address

dioxin risk management in a more comprehensive cross-media approach. EPA is also continuing work on identifying and quantifying the link between dioxin sources and the general population exposure.

Manage New Chemical Introduction and Screen Existing Chemicals for Risk

Under TSCA, EPA identifies and controls unreasonable risks associated with chemicals. The chemical right-to-know program addresses a critical gap in the nation's knowledge about the health and environmental hazards of high production volume chemicals (HPVs). EPA is working with industry to put information about those chemicals into the hands of the public so they can make better and more informed consumer choices.

Another Agency priority is implementation of the Endocrine Disruptor Screening Program (EDSP). The EDSP is based on the recommendations of the Endocrine Disruptor Screening and Testing Advisory Committee (EDSTAC), which provided advice and counsel to the Agency on a strategy to screen and test chemicals and pesticides that may cause endocrine disruption in humans, fish, and wildlife. In 1999, EPA began the validation of EDSP screening test protocols which will be completed in 2001. By 2005, EPA anticipates that all high production volume chemicals will be screened for endocrine disrupting potential. The resulting priority chemicals will be tested using the approach and test methods developed from recommendations of the EDSTAC.

In 2002, EPA will also continue work in the areas of existing chemicals, new chemicals, and national program chemicals (including lead, fibers, dioxin, PCBs, and mercury). The Agency reviews chemicals already in commerce, along with chemicals or microorganisms before commercialization (i.e., "new" chemicals) to determine whether they can be handled and used safely. Another approach to safer chemicals is green chemistry, which identifies opportunities for increasing the design, development and use of less toxic chemicals and chemical processes.

Ensure Healthier Indoor Air

In FY 2002, the Indoor Environments program will continue to build on work begun in FY 2000 and FY 2001 to protect children's health by reducing the presence of indoor triggers of asthma in homes and schools where children spend the majority of their time. In particular, the Agency will continue its education and outreach activities which implement portions of "Asthma and the Environment: An Action Plan to Protect Children," the inter-agency plan developed under the Task Force On Environmental Health Risks and Safety Risks to Children (January 1999). EPA's activities are designed to increase the understanding that children with asthma, parents, caregivers, health professionals and school personnel have about the links between the condition of the indoor environment and asthma. Outreach and education efforts can empower the public to take voluntary actions to improve the quality of their indoor environment. EPA will continue to work in close collaboration with the Department of Health and Human Services' Centers for Disease Control and the National Institutes of Health. EPA will continue its agreement with the Advertising Council to use television, print, and other media channels to educate the public about the seriousness of the asthma epidemic, and about the steps they can take to identify and reduce asthma

triggers in their own environment. In addition, the Agency will continue its efforts to improve indoor air quality in Tribal lands.

Facilitate Prevention, Reduction and Recycling of PBT's and Toxic Chemicals

Pollution prevention and waste minimization require a comprehensive effort of minimizing the quantity and toxicity of waste generated by industries, the government and individual citizens. EPA's role includes several specific activities addressing industrial hazardous waste and municipal and industrial solid waste.

Preventing pollution can be cost-effective to industry in cases where it reduces excess raw materials and energy use. P2 can also reduce the need for expensive "end-of-pipe" treatment and disposal, enable firms to avoid potential liability, and support quality improvement incentives in place at facilities. Current EPA strategies include institutionalizing preventive approaches in EPA's regulatory, operating, and compliance/enforcement programs and facilitating the adoption of pollution prevention techniques by states, tribes, the academic community and industry.

One approach the Agency employs is the industrial sector-based focus that promotes cleaner technologies leading to a reduction of risks to health and the environment. EPA's Design for the Environment (DfE) Program works in partnership with industry to develop comparative risk, performance, and cost information about alternative technologies, chemicals, and processes in order to make environmentally informed business decisions.

EPA is a leader in reducing generation of municipal and industrial solid waste regulated under RCRA Subtitle D and in improving the recovery and conservation of materials and energy through source reduction and recycling. EPA encourages source reduction of municipal solid waste through its WasteWise program and encourages recycling and the recycling market through such programs as Pay As You Throw and Jobs Through Recycling. In addition, working with public and private sector stakeholders, EPA has promoted financing and technology opportunities for recycling/reuse businesses. In 2002, the Agency will serve as a catalyst for innovative source reduction and recycling in many industrial sectors, including waste reduction opportunities for construction and demolition debris, food wastes, tires, electronics equipment, carpet, transport packaging, and plastic beverage packaging.

In the hazardous waste arena, regulated under RCRA Subtitle C, the Agency is focusing on reducing the presence of the most persistent, bioaccumulative and toxic (PBT) chemicals in hazardous waste by 50 percent by 2005 (compared to a 1991 baseline). This goal is consistent with other national and international priorities for reducing the presence of PBTs in the environment. In 2002 the Agency will encourage and support implementation at the Regional, state and local levels through voluntary pollution prevention partnerships that make economic sense while they decrease human and environmental exposure to toxic wastes.

The Agency will continue reducing the barriers to safe recycling of hazardous waste through changes to recycling regulatory standards and ongoing outreach to stakeholders to explore additional

options. The Agency will be focusing particularly on ways to increase safe hazardous waste recycling while reducing burden for small businesses such as printing, electronics recyclers, and metal finishing.

Assess Conditions in Indian Country

EPA places particular priority on working with Federally Recognized Indian Tribes on a government-to-government basis to improve environmental conditions in Indian country in a manner that affirms the vital trust responsibility that EPA has with some 572 Tribal governments. The Agency will concentrate on building Tribal programs and completing a documented baseline assessment of environmental conditions for 38% of Tribes (covering 50% of Indian Country). These assessments will provide a blueprint for planning future activities identified in Tribal/EPA Environmental Agreements (TEAs) or similar tribal environmental plans to address and support priority environmental multi-media concerns in Indian country.

In 2002, EPA is requesting a total of \$52.5 million for Indian General Assistance Program grants. These resources will allow most Tribes to support at least one or two persons working in their community to build a strong, sustainable environment for the future. These people perform vital work by assessing the status of a Tribe's environmental condition and building an environmental program tailored to that Tribe's needs. Another key role of this workforce is to alert EPA of serious conditions requiring attention in the near term so that, in addition to assisting in the building of Tribal environmental capacity, EPA can work with the Tribe to respond to immediate public health and ecological threats.

EPA continues to consider additional approaches for how EPA and Indian Tribes might work together to protect public health and the environment in Indian country. As part of that effort, EPA is proposing to continue authority granted in FY 01 to enter into cooperative agreements with Tribes to assist EPA in implementing environmental programs in instances where the Tribe has not achieved primacy. Implementation of this approach would allow for a more gradual transition to full program authorization by allowing for varying degrees of Tribal involvement based on an individual Tribe's capabilities and interests. Agency-wide EPA Tribal funding has grown from about \$38 million to \$218 million in the last decade .

Research

Health effects research in FY 2002 will continue to focus on development of mechanistically-based predictive models for human health risk assessment, such as structure-activity-relationship models to help determine testing needs under Section 5 of TSCA, which addresses new chemicals. Research will also be conducted to address the needs for methods to evaluate the special sensitivities of certain subpopulations based on age, genetic factors and health status. Also, risk assessment research will continue to develop the tools, methodology, and data to conduct probabilistic assessments of ecological risk from exposure to pesticides, including the development of user friendly models that link distributions of exposure and toxicity to estimate the magnitude and probability of effects.

External Factors

The ability of the Agency to achieve its strategic goals and objectives depends on several factors over which the Agency has only partial control or influence. EPA relies heavily on partnerships with States, Tribes, local governments, the public and regulated parties to protect the environment and human health. In addition, EPA assures the safe use of pesticides in coordination with the USDA and FDA, who have responsibility to monitor and control residues and other environmental exposures, as necessary. EPA also works with these agencies to coordinate with other countries and international organizations with which the United States shares environmental goals. This plan discusses the mechanisms and programs that the Agency employs to assure that our partners in environmental protection will have the capacity to conduct the activities needed to achieve the objectives. However, as noted, EPA often has limited control over these entities. In addition, much of the success of EPA programs depends on the voluntary cooperation of the private sector and the general public.

Other factors that could delay or prevent the Agency's achievement of some objectives include: lawsuits that delay or stop EPA's and/or State partners' planned activities; new or amended legislation; and new commitments within the Administration. Economic growth and changes in producer and consumer behavior, such as shifts in energy prices or automobile use, could have an influence on the Agency's ability to achieve several of the objectives within the time frame specified.

Large-scale accidental releases or rare catastrophic natural events could, in the short term, impact EPA's ability to achieve the objectives. In the longer term, new environmental technology, unanticipated complexity or magnitude of environmental problems, or newly identified environmental problems and priorities could affect the timeframe for achieving many of the goals and objectives. In particular, pesticide use is affected by unanticipated outbreaks of pest infestations and/or disease factors, which require EPA to review emergency uses to ensure no unreasonable risks to the environment will result. EPA has no control over requests for various registration actions which include among others new products, amendments, and uses, so its projection of regulatory workload is subject to change.

To achieve our collective goal of healthy indoor environments, EPA collaborates with Federal, state and local government agencies, industry, and non-profit organizations to conduct non-regulatory public outreach and education, provide incentives, and encourage voluntary actions. These are the primary methods EPA uses to influence individuals (e.g., homeowners, school administrators, parents, building owners) to take action to reduce their health risk. A key external factor which may impact the successful attainment of the indoor environments goal is the ability of states to leverage resources to achieve adequate results in the absence of funds devoted specifically to indoor air quality. In many cases, resources are limited and compete with Federally mandated regulatory programs (Environmental Law Institute Research Report on State and Local Indoor Air Quality Programs, November, 1997.)

The Agency's ability to achieve its objective of facilitating prevention, reduction and recycling of PBTs and toxic chemicals could be impacted by the increased flexibility provided to redirect resources under the National Environmental Performance Partnership System (NEPPS). If states redirect resources away from this area, it would impact both annual performance and progress implementing the Agency's strategic plan. To mitigate this potential issue, EPA is working with the Environmental Council of States (ECOS) to develop core measures and coordinating with states to reduce Persistent, Bioaccumulative, and Toxics (PBT) in hazardous waste and develop tools that will focus state activities on shared EPA and state goals.

In addition, recycling rates in the U.S. are affected by shifts in market prices for virgin materials and potential regulatory changes to reduce or eliminate disincentives to safe recycling. While market forces have helped to achieve current rates, better markets for recycled products/recyclables/reusables are needed to encourage increased recycling rates and source reduction. EPA has worked with other agencies to develop the Federal government's "buy recycled" program and the Federal Environmental Executive to promote this program and currently has several other ongoing projects to enhance markets for recycled materials.

Achieving our objective for Indian country is based upon a partnership with Indian Tribal governments, many of which face severe poverty, employment, housing and education issues. Because Tribal Leader and environmental director support will be critical in achieving this objective, the Agency is working with Tribes to ensure that they understand the importance of having good information on environmental conditions in Indian country and sound environmental capabilities. In addition, EPA also works with other Federal Agencies, the Department of Interior (US Geological Survey, Bureau of Indian Affairs, and Bureau of Reclamation), the National Oceanic and Atmospheric Administration, the Indian Health Service and the Corps of Engineers to help build programs on Tribal lands. Changing priorities in these agencies could impact their ability to work with EPA in establishing and implementing strategies, regulations, guidance, programs and projects that affect Indian Tribes.

Environmental Protection Agency

FY 2002 Annual Performance Plan and Congressional Justification

Preventing Pollution and Reducing Risk in Communities, Homes, Workplaces and Ecosystems

Objective #1: Reduce Public and Ecosystem Risk from Pesticides

By 2005, public and ecosystem risk from pesticides will be reduced through migration to lower-risk pesticides and pesticide management practices, improving education of the public and at risk workers, and forming "pesticide environmental partnerships" with pesticide user groups.

Resource Summary

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Actual	FY 2001 Enacted	FY 2002 Request
Reduce Public and Ecosystem Risk from Pesticides	\$43,240.2	\$49,322.3	\$51,453.5	\$54,472.9
Environmental Program & Management	\$29,281.0	\$35,100.2	\$37,456.8	\$40,445.0
Science & Technology	\$844.6	\$1,062.3	\$911.2	\$942.4
State and Tribal Assistance Grants	\$13,114.6	\$13,159.8	\$13,085.5	\$13,085.5
Total Workyears	230.2	313.4	233.6	240.3

Key Programs

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Request
Pesticide Registration	\$8,201.8	\$11,346.3	\$11,986.5	\$11,383.3
Pesticide Reregistration	\$5,265.6	\$4,517.3	\$2,787.0	\$2,811.3
Endocrine Disruptor Screening Program	\$276.7	\$544.0	\$750.7	\$749.7

Pesticide Applicator Certification and Training	\$10,438.0	\$9,391.2	\$10,022.5	\$10,349.1
Pesticides Program Implementation Grant	\$13,114.6	\$13,114.6	\$13,085.5	\$13,085.5
Rent, Utilities and Security	\$0.0	\$3,376.7	\$0.0	\$2,898.4
Administrative Services	\$16.7	\$436.2	\$481.0	\$432.1
Regional Management	\$0.0	\$98.0	\$115.9	\$108.2

FY 2002 Request

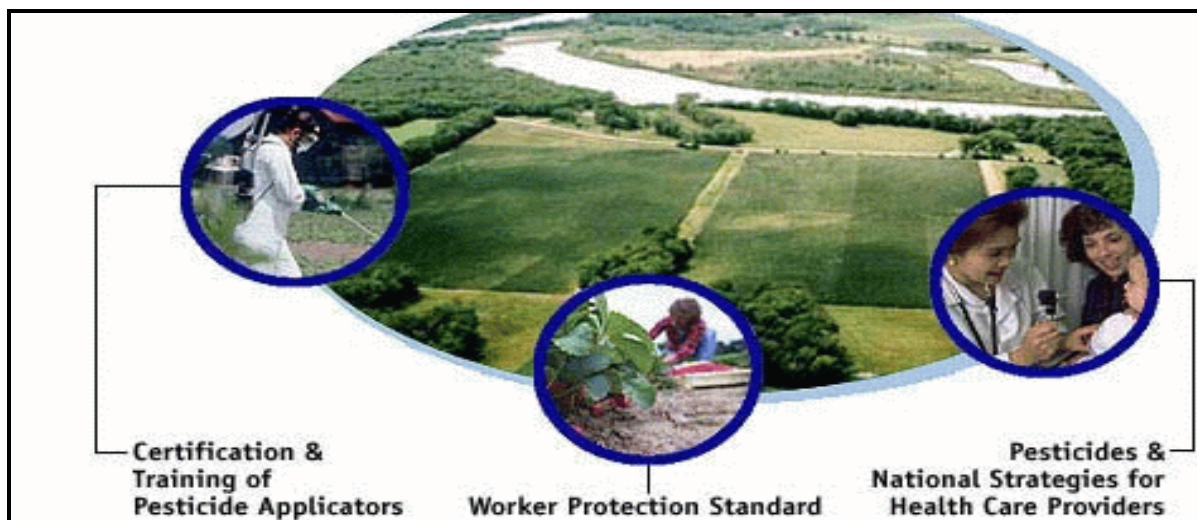
EPA will continue to assist farmers in transitioning to safer pesticides and pest management practices as the Agency continues to implement the Food Quality Protection Act (FQPA) and restricts or removes riskier pesticides from the market. In FY 2002, EPA will also continue to use a “whole farm approach” to pesticide management and pollution prevention. This approach simultaneously considers numerous risks associated with the agricultural use of pesticides, including spray drift, chemical runoff, pesticide disposal, groundwater protection, worker protection, and pesticide application techniques. This allows the Agency to develop an integrated plan for pollution prevention. EPA will continue its commitment under this objective to protect agricultural workers, to certify and train pesticide applicators, to protect endangered species and ecosystems from the harmful effects of pesticides, to develop and implement environmental stewardship and integrated pest management pollution prevention strategies and to protect our nation’s groundwater from pesticide contamination.

Reduce Human Exposure to Pesticide Use

In 2002, through the Certification and Training Program (C&T) and the Worker Protection Program (WP), EPA will continue educating workers, farmers and employers on the safe use of pesticides and worker safety. The C&T and the WP programs protect agricultural workers, employers, applicators, handlers and the public from the potential dangers posed by pesticides. The Worker Protection Standards offer protection to over three and a half million people who work with pesticides at more than 560,000 workplaces. The C&T program increases the competence of the applicators in handling and applying pesticides through training and certification (and recertification every three to five years) of private and commercial applicators of restricted use pesticides. C&T and WP also provide safety training for pesticide handlers and agricultural workers.

EPA will continue efforts to educate the public in the proper use of pesticides to prevent household and other pesticide misuse in rural and urban areas focusing on poor communities where there are proportionate public health risks to residents, especially children. EPA will employ product stewardship with manufacturers and distributors, and work with states to improve their certification and training programs. EPA continues to improve consumer product labels, communicate proper handling of pesticide

containers and their distribution, and direct enforcement activities to prevent improper sales of agricultural pesticides. The public education campaign continues, which includes working with low income and minority communities to demonstrate safe and effective pest management and control.



EPA continues to be concerned with the use of certain pesticides that are likely to show up in surface water and groundwater. The Agency is pursuing options to assess and manage pesticide use and contamination potential of those pesticides.

The Strategic Agricultural Partnership Initiative will continue to develop pest management strategies as alternatives to harmful pesticides and assist the agricultural industry in meeting state and Federal safe food standards. EPA will continue to support agricultural partnership projects that demonstrate farm management practices and provide growers with information to assist in a “reasonable transition” away from the highest risk pesticides (those likely to be lost under FQPA implementation). Regions will continue to lead the development of FQPA transition projects with commodity groups and provide strategic and technical assistance on project design, implementation, and evaluation. The “whole farm” approach, conducted in cooperation with USDA and FDA, will focus on area-specific problems. Due to variations in crops, pests and weather patterns in different locales, a regional approach will be employed to address local needs. This approach will rely on partnerships between EPA, state agencies (Departments of Agriculture, Departments of Environment and Land Grant Universities) and agricultural groups (farm bureaus and major commodity groups). The first stage of the initiative evaluates current farm operations including pesticide risk reduction technologies, Integrated Pest Management (IPM) and Best Management Practices (BMPs), soil and water conservation, handling and storage of hazardous materials and solid waste management. Model or demonstration sites are used for purposes of outreach, education and compliance assistance for other agricultural operations throughout the state.

Reduce Environmental Exposure to Pesticide Use

In FY 2002, EPA and USDA will continue to provide information about pest control options, organize and deliver pest management educational programs for agricultural producers, consumers, and other stakeholders on reduced risk pesticides and alternative pest control methods, such as IPM and Pesticide Environmental Stewardship (PESP), and develop and evaluate new pest management technologies.

The Pesticide Environmental Stewardship Program and Integrated Pest Management are closely related programs that promote risk reduction by using safer alternatives to traditional chemical methods of pest control. PESP entails voluntary partnerships with pesticide users to reduce both health and environmental risks while incorporating pollution prevention strategies. Partners and supporters of PESP play vital roles in developing common sense approaches to pesticide risk reduction. PESP supporters have an interest in risk reduction because they use agricultural products or represent groups which are affected by pesticides. This program was initiated in 1994, prior to FQPA, however, its focus is consistent with the statute's goals in reducing risk in agricultural and nonagricultural settings. PESP grants provide assistance to partners and supporters in developing and implementing risk reduction strategies. EPA and USDA will continue to encourage and support IPM practices, fostering the managed use of an array of pest control methods (biological, cultural and chemical) that achieve the best results with the least adverse impact to the environment.

Integrated Pest Management In Schools

One of EPA's highest priorities is protecting children's health from unnecessary exposure to pesticides that are used in their schools to control pests. EPA is encouraging school officials to adopt Integrated Pest Management (IPM) practices to reduce children's exposure to pesticides.

IPM is an effective and environmentally sensitive approach to pest management that relies on a combination of common-sense practices. IPM programs use current, comprehensive information on the life cycles of pests and their interaction with the environment. This information, in combination with available pest control methods, is used to manage pest damage by the most economical means, and with the least possible hazard to people, property, and the environment.

EPA is helping schools understand and implement IPM through the distribution of printed publications, awarding grants to start IPM programs, offering workshops and courses and providing guidance and assistance through partnerships with universities and national associations.

The Endangered Species Protection Program (ESPP), started in 1988, is largely voluntary and relies on cooperation between the U.S. Fish and Wildlife Service (FWS), EPA Regions, states, and pesticide users. The Endangered Species Act is intended to protect and promote the recovery of animals and plants that are in danger of becoming extinct because of human activity. Under the Act, EPA must ensure that use of pesticides it registers will not result in harm to the species listed as endangered and threatened, or harm the habitat critical to those species' survival. To implement the ESPP, labels of certain pesticides direct users to bulletins with information that will protect endangered and threatened species from harm resulting from pesticide use.

In order to protect listed species from detrimental effects from pesticide use, the Agency will continue to do the following:

- Use sound science to assess the risk of pesticide exposure to listed species.
- Attempt to find means to avoid concerns for listed species. When we cannot avoid concerns, we then consult with the scientists at the FWS.
- Implement use limitations by adding a generic label statement; developing county bulletins that contain maps of species' locations and pesticide use limitations; distributing the bulletins and other materials by a wide variety of methods; and providing a toll-free telephone number to assist users in determining whether they need a bulletin and where to obtain one.
- Encourage individual states to develop their own plans by whatever approach they determine is best for them as long as the approach meets the goals of protecting endangered species while minimizing the impact on pesticide users.

States, along with other agencies, are part of the county bulletin review process. The states are encouraged to include state agricultural, fish and wildlife agencies, as well as pesticide users, in their review process.

Antimicrobial sterilants and disinfectants are used to kill microorganisms on surfaces and objects in hospitals, schools, restaurants and homes. EPA registers and regulates antimicrobial pesticides under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). To obtain registration, manufacturers of antimicrobial products must meet the basic standards, the foremost being:

- The product will not cause unreasonable adverse effects to human health or the environment and
- Product labeling and composition comply with the requirements of FIFRA.

Manufacturers are required to submit to EPA detailed and specific information concerning the chemical composition of their product; effectiveness data to document their claims against specific microorganisms and to support the directions for use provided in labeling; labeling that reflects the required elements for safe and effective use; and toxicology data to document any hazards associated with use of the product.

Increased concern has emerged regarding whether public health products, used to kill microorganisms pathogenic to man on inanimate surfaces and objects in hospitals, schools, restaurants, and homes, work as claimed on the label. The private and public sector communities including competitor registrants, have made the Agency aware of sterilizers and hospital disinfectants which may be ineffective. Sterilizers and disinfectants are increasingly vital to containing infections that are resistant to antibiotics in clinical settings. EPA has responded to this situation by developing a comprehensive strategy to improve the regulation of antimicrobial pesticides.

One of the main components of the strategy is better coordination with stakeholders and co-regulators. EPA has greatly improved communications with the public, all levels of government, academia, user communities, industry, health professionals, trade organizations, and independent testing groups. The Agency has enhanced and expanded its use of the Internet to educate the general public about the status and direction of the regulation for antimicrobial products.

The other key link in the strategy to improve the regulation of antimicrobial products involves internal Agency processes. EPA has committed funds to ensure that the tests used to demonstrate the efficacy of antimicrobial products are reliable and reproducible. Internal controls are being perfected to ensure the integrity of data submitted by registrants. Further, the Agency is in the process of developing a complaint system to handle concerns regarding ineffective products. The Agency is actively working to ensure that all antimicrobial products sold and distributed in the marketplace are effective in protecting public health and the environment from potential health risks.

Reducing the risks of pesticide exposure is a particular challenge on tribal lands. Native Americans consume different sorts of foods from the average, and may have other farming practices. Their pattern of exposure may diverge from the general public dietary or exposure information gathered by USDA, FDA or the registrant. Outreach and education tools must be matched to tribal needs. In 2002, the Agency will continue to team with our tribal partners to address pesticide issues and enhance the development of tribal technical capacity, particularly in the areas of risk management, worker safety, training, and pollution prevention. The effectiveness of our field programs on tribal lands is directly related to tribal capacity for pollution prevention. Agency efforts include the following:

- Enhancing tribal environmental program capacity by conducting multi-media risk assessments
- Providing training and technical assistance for Tribal environmental managers to conduct their own assessments and mitigation activities, with a primary emphasis on pollution prevention, to reduce children's exposure to Persistent Bioaccumulative Toxics (PBTs), pesticides, lead and other toxic substances
- Reviewing and updating risk assessment guidelines to assess and determine the feasibility, overall effectiveness and affordability of the guidelines

FY 2002 Change from FY 2001 Enacted

EPM

- (+\$1,129,150) This increase reflects an increase in workforce costs.

- (+\$996,000, +10 FTE) Reregistration staff that were previously funded under the expired maintenance fee will be funded from the appropriated budget. There will be no program impact from changing the source of funds.
- (-\$598,700) The FY 2002 request is \$598,700 below the FY 2001 enacted budget level due to Congressional earmarks received during the FY 2001 appropriations process which are not included in the FY 2002 President's Request.
- (-\$281,476, -3.0 FTE) This is a reduction of FTE from the Special Review program and regional field programs to meet the new Agency workforce levels. Some Special Review program workload is shifting to the Tolerance Reassessment program. Field programs, including Certification and Training, Worker Protection and the Strategic Agricultural program will scale back outreach and increase reliance on state partners for program implementation.
- (-\$948,800) The Tolerance Reassessment and Tolerance Petition programs will be partially funded through fees, once fees are collected. Resources are shifted to fund the Reregistration program staff.

Annual Performance Goals and Performance Measures

Agriculture Partnership

In 2002 Implementation of 10-15 model agricultural partnership projects that demonstrate and facilitate the adoption of farm management decisions and practices that provide growers with a "reasonable transition" away from the highest risk pesticides.

In 2001 Implementation of 10-15 model agricultural partnership projects that demonstrate and facilitate the adoption of farm management decisions and practices that provide growers with a "reasonable transition" away from the highest risk pesticides.

In 2000 Agricultural partnerships were initiated in four pilot regions: 4, 6, 9, and 10. OPPTS' goal was exceeded due to R10's initiating several mini grants for start up projects.

Performance Measures:	FY 1999 Actuals	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Request
Model agricultural partnership pilot projects		15	10-15 Addit.	10-15 Addit. pilots

Baseline: Baseline is the number of projects identified in 1999.

Reduce Risk to Endangered Species

In 2002 None of the top 15 species on the Office of Pesticide Programs/Fish and Wildlife Service/ U.S. Department of Agriculture (OPP/FWS/USDA) priority list of threatened or endangered species will be jeopardized by exposure to pesticides.

Performance Measures:	FY 1999 Actuals	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Request	
Species on priority list jeopardized				0	species
Baseline:	Top 15 species on OPP/FWS/USDA list for the year.				

Reduce Wildlife Incidents and Mortalities

In 2002 Reduce by 10 percent from 1995 levels the number of incidents and amount of mortalities to terrestrial and aquatic wildlife caused by the 15 pesticides currently responsible for the greatest mortality to such wildlife.

Performance Measures:	FY 1999 Actuals	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Request	
Incidents and mortalities to wildlife				10%	reduction
Baseline:	Baseline under development in FY 2001 and should be available for reporting in FY 2002.				

Pesticides in Groundwater

In 2002 Pesticides with high leaching and persistence potential will be managed through significant actions to protect groundwater resources from contamination.

Performance Measures:	FY 1999 Actuals	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Request	
Pesticides with high leaching and persistence potential managed to protect groundwater				22	pest. (Cum)
Baseline:	Thirty-one pesticides have been identified as of March 2000. Baseline may increase if additional pesticides meeting the criteria are identified.				

Verification and Validation of Performance Measures

Performance Measure: Training of Applicators

Performance Database: Aggregation of training figures from state cooperative extension services (SCES) and voluntary worker protection training verification

Data Source: State cooperative extension services and Worker Protection program. SCES represents the education and training arm of state Agriculture Departments which extend programs to counties.

QA/QC Procedures: Training records (maintained at state or county level)

Data Quality Review: N/A

Data Limitations: Dependent on accurate record keeping at state or county level

New/Improved Data or Systems: None

Coordination with Other Agencies

EPA coordinates with various state, tribal, and federal agencies as well as with private organizations to ensure that our strategic approaches to pollution prevention and risk reduction are comprehensive and compatible with efforts already in place. Achievement of this objective depends in part on successful cooperation with our partners and the successful implementation of our regulatory programs. The number of partnerships with private and public entities serves as an effective indicator of EPA's progress in meeting its stated objectives.

Coordination with state lead agencies and with the U. S. Department of Agriculture (USDA) provides added impetus to the implementation of the Certification and Training program. States also provide essential activities in developing and implementing the Endangered Species, Groundwater, and Worker Protection programs. States are involved in numerous special projects and investigations, including emergency response efforts. The Regions provide technical guidance and assistance to the states and tribes in the implementation of all pesticide program activities.

EPA uses a range of outreach and coordination approaches for pesticide users, for agencies implementing various pesticide programs and projects, and for the general public. Outreach and coordination are essential to protect workers, endangered species, and groundwater; to provide training of pesticide applicators; to promote integrated pest management and environmental stewardship; and to support compliance through EPA's regional programs and those of the states and tribes.

In addition to the training that EPA provides to farm workers and restricted use pesticide applicators, EPA works with the state Cooperative Extension Services designing and providing specialized training for various groups (e.g., training to private applicators on the proper use of personal protective equipment and application equipment calibration, how to handle spill and injury situations, farm family safety, how to prevent drift, and pesticide and container disposal). Other specialized training is provided to public works employees on grounds maintenance, to pesticide control operators on proper insect identification, and on weed control for agribusiness.

Statutory Authorities

Federal Fungicide, Insecticide and Rodenticide Act (FIFRA)

Federal Food, Drug and Cosmetic Act (FFDCA)

Food Quality Protection Act (FQPA) of 1996

Clean Water Act

Environmental Protection Agency

FY 2002 Annual Performance Plan and Congressional Justification

Preventing Pollution and Reducing Risk in Communities, Homes, Workplaces and Ecosystems

Objective #2: Reduce Risks from Lead and Other Toxic Chemicals

By 2007, significantly reduce the incidence of childhood lead poisoning and reduce risks associated with polychlorinated biphenyls (PCBs), mercury, dioxin, and other toxic chemicals of national concern.

Resource Summary

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Actual	FY 2001 Enacted	FY 2002 Request
Reduce Risks from Lead and Other Toxic Chemicals	\$34,262.3	\$37,839.9	\$34,304.2	\$34,741.7
Environmental Program & Management	\$20,550.1	\$20,113.5	\$20,622.2	\$21,059.7
State and Tribal Assistance Grants	\$13,712.2	\$17,726.4	\$13,682.0	\$13,682.0
Total Workyears	140.7	86.6	145.6	143.1

Key Programs

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Request
Grants to States for Lead Risk Reduction	\$13,712.2	\$13,712.2	\$12,472.4	\$13,682.0
National Program chemicals: PCBs, Asbestos, Fibers, and Dioxin	\$3,268.3	\$5,753.6	\$6,115.1	\$6,388.9
Administrative Services	\$0.0	\$0.0	\$107.9	\$120.8
Regional Management	\$0.0	\$29.2	\$23.3	\$27.1

FY 2002 Request

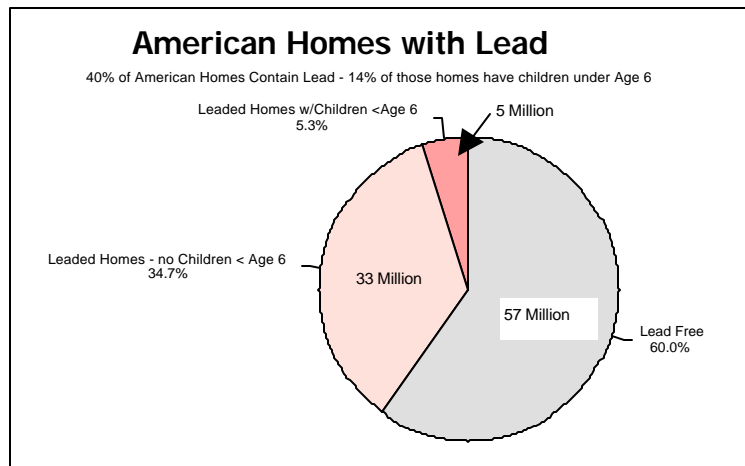
Lead Risk Reduction Program

EPA is working closely with other Federal Agencies to eliminate childhood lead poisoning. During 2002, the states, tribes and EPA will continue to implement the Lead Based Paint Training & Certification Program in all fifty-five states and territories and in tribal lands. In the lead regulatory program, EPA will propose one major rule setting standards for training and certification for renovation and remodeling activities. EPA's FY 2002 lead activities will make significant contributions to virtually eliminating lead poisoning for our Nation's children.

The concentration of lead in a child's blood is typically used as an index of lead exposure. Over the past decade, there has been concern about blood-lead levels once thought to be safe. Since 1975, the Centers for Disease Control and Prevention (CDC) has lowered the blood-lead level considered elevated for children from 40 ug/dl (micrograms per deciliter) to 10 ug/dl. (The evidence of health effects below 10 ug/dl is not sufficiently strong to warrant concern).

Ingestion of lead-contaminated dust and soil through normal hand-to-mouth activity is the primary pathway of lead exposure to U.S. children under six years of age. Dust can be contaminated by lead when: lead-based paint deteriorates; lead-based paint is disturbed in the course of renovation, repair, or abatement activity; or lead is tracked into, blown into, or otherwise enters the home from soil in the yard or other external sources (e.g., workplace). Soil contaminated with lead from deterioration of exterior lead-based paint, industrial emissions, and/or deposition of lead from past uses of leaded gasoline may be ingested directly or contribute to indoor levels of lead-contaminated dust when tracked into the home. Children may also be exposed to lead through ingesting lead-based paint chips from flaking walls, windows, and doors or from chewing on surfaces covered with lead-based paint. Other sources of lead exposure include, but are not limited to, lead-contaminated food and drinking water and parental occupational exposure to dust and airborne lead particles.

Considerable progress has been made in reducing environmental lead levels. In 1973, the Federal government began taking steps to eliminate sources of lead. Efforts include EPA phasing out leaded gasoline and the Consumer Product Safety Commission (CPSC) banning the production and sale of lead-based paint for residential use in 1978. In addition, EPA has implemented more stringent standards for lead in drinking water, and the domestic canning industry voluntarily eliminated the use of lead in solder to seal



food cans. As a result of these past and ongoing efforts, children's blood levels have declined over 80 percent since the mid-1970s.

The National Health and Nutrition Examination Survey (NHANES) conducted by the National Center for Health Statistics indicates that over the past two decades the average blood-lead level in children has decreased from 12.8 micrograms/deciliters (ug/dl) to 2.8 ug/dl. According to NHANES III Phase 2, completed in 1994, approximately 900,000 children under six years of age in the U.S. had blood-lead levels equal to or exceeding 10 ug/dl.

Although lead exposure can affect children across all socioeconomic strata and in all regions of the country, children in poor inner-city communities, however, are disproportionately affected because lead-based paint hazards are more prevalent in deteriorated older housing and the overall ambient level of environmental lead tends to be higher in inner cities. Nationally, children in Medicaid comprise 80 percent of children with blood lead levels 15 ug/dl and above. Studies by the Centers for Disease Control (1988-1991) indicate that children living in central cities are three to four times more likely to have blood-lead levels equal to or exceeding 10 ug/dl than those outside central cities, with the highest prevalence in cities where populations exceed one million.

According to HUD's National Survey of Lead and Allergens in Housing, an estimated 38 million homes (40% of all homes) contain some lead-based paint. The likelihood, extent, and concentration of lead-based paint vary with the age of the building. Eighty-seven percent of housing units constructed before 1940, 69 percent of units constructed between 1940 and 1959, and 24 percent of units constructed between 1960 and 1977 contain some lead-based paint. Over 5 million (or 14 percent) of these homes with some lead-based paint have children under age 6 in residence. Subchapter IV of TSCA focuses upon children younger than 6 years.

EPA, under the 1992 Residential Lead-Based Paint Hazard Reduction Act (Subchapter IV of TSCA), assists and guides federal activities aimed at reducing the exposure of children in homes with lead-based paint. Other Federal agencies, such as HUD and Health and Human Services (HHS), via the National Institute for Occupational Safety and Health and the CDC, also play important roles. In the past six years, EPA has made great strides in protecting children from lead poisoning through a combination of rulemaking, education, research, and partnerships. EPA has promulgated regulations to set up a federal infrastructure, including the lead accreditation, certification and workplace standards rule for targeted housing, the lead real estate notification and disclosure rule (with HUD), the lead renovation information rule, and standards identifying lead hazards in paint, dust and soil. The public education programs and tools developed include a national clearinghouse to provide the public with information on lead; and grants to states and tribes to establish accreditation; certification and workplace standards programs for targeted housing.

Grants to States for Lead Risk Reduction

By 2002, EPA will have approved those states, territories and Tribes that intend to run programs for lead accreditation certification, and workplace standards in targeted housing. All states, territories and Tribes, however, will not adopt the program, and we anticipate that EPA will be required to run a Federal lead program in 15 to 20 states and in most of the tribal lands and U.S. territories.

With implementation of the training, certification and accreditation program by states, territories or tribes, or in some cases by EPA, additional data will become available to help measure progress in reducing childhood lead poisoning and elevated blood-lead levels. In the future, EPA will be able to measure progress in reducing lead-based paint exposures through the collection of data associated with the Lead Abatement Program. In addition, the Agency will know how many professionals become certified as risk assessors, inspectors, workers or supervisors. This data will be used to measure the growth of a well-trained workforce capable of performing abatements safely and reliably.

National Program Chemicals Program

Most chemicals were introduced into commerce before the risks were known. A number of these chemicals are both prevalent and high-risk. The Agency has established a national program to manage reductions in use, safe removal, disposal or containment of these chemicals, as appropriate. Significant risks are well established for PCBs, asbestos, and dioxin, for example, and reductions in use and releases have been important to reducing exposure of the general population and sensitive subpopulations. Risk reduction efforts on these chemicals will continue to meet the mandates under TSCA and fulfill the commitments made in domestic and international agreements.

In 2002, EPA's PCB control efforts will continue encouraging phase out of PCB electrical equipment, ensuring proper storage or waste

Dioxin Exposure Initiative

The EPA Dioxin Exposure Initiative (DEI), begun in 1994, is a cross-media effort to develop the scientific tools and understanding needed to quantitatively link dioxin sources to exposure of the general population. DEI scientists are working back through exposure pathways to identify the points of origin of current dioxin exposure and the relative contribution different sources make to dioxin risks. This information will allow EPA, the states and other federal agencies to focus their risk management attention on those sources and pathways of greatest public health significance.

Results from the DEI have already resulted in significant advances in our understanding of dietary routes of exposure. In addition, DEI results to date have established baseline measurements of dioxins in food and air that will permit the tracking of environmental trends and evaluation of the effectiveness of dioxin risk management programs.

In FY 2002, activities will focus on operation of the National Dioxin Air Monitoring Network (NDAMN), continuation of field and chamber studies to characterize dioxin from uncontrolled combustion sources, air transport modeling of 2000 emission inventory, and cooperative efforts with FDA and USDA to identify and quantify dioxin pathways in animal feeds.

Program outputs will include issuing a final 2000 dioxin inventory, results of the 2001 NDAMNS cycle, and results from the urban air transect study. Continuation and strengthening of the DEI is a central theme in EPA dioxin strategy development. USDA and FDA have been active partners in the planning and implementation of many DEI projects.

disposal methods and capacity, and fostering PCB site cleanups. Recent rulemakings have provided industry with the opportunity to propose alternative risk-based PCB cleanups. Also, the Agency will continue to review existing approvals for facilities that treat, store and/or dispose of PCBs, on a five to ten year renewal cycle. The Agency will also pursue opportunities for risk reduction for mercury, and for certain industrial fibers that may pose risks in the workplace. Outreach and technical assistance will continue in the asbestos program for schools, in coordination with the Occupational Safety and Health Administration and the states. A new project to determine the risks to homeowners and remodelers from asbestos-contaminated vermiculate home insulation is underway.

EPA plans to develop an Agencywide dioxin strategy to respond to new findings in the scientific community concerning the potential risks of dioxin and address dioxin risk management in a more comprehensive cross-media approach. EPA will better examine reducing dioxin exposure, focusing on identifying and better quantifying the link between dioxin sources and the general population exposure.

FY 2002 Change from FY 2001 Enacted

EPM

- (-\$104,700,-1 FTE) The reduction of one FTE in lead regulatory development and lead outreach is to meet the Agency's new workforce level. The program will reduce outreach activities for building and superstructure rulemaking required by statute.
- (-\$130,700) The FY 2002 request is \$130,700 below the FY 2001 Enacted budget level due to Congressional earmarks received during the FY 2001 appropriations process which are not included in the FY 2002 President's Request.
- (+\$594,500) This increase reflects an increase in workforce costs.

Annual Performance Goals and Performance Measures

Lead-Based Paint Abatement Certif. and Training

In 2002	Implement certification and training of lead abatement professionals
In 2000	Additional legal requirements for lead-based paint abatement certification and training for the tribes has delayed development of two tribal programs.
In 1999	EPA continued building the lead-based paint abatement certification and accreditation program by approving 30 state and territory and two tribal programs. In 17 states that do not take on the program, EPA will run certification and accreditation.

Performance Measures:	FY 1999 Actuals	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Request
Develop state programs for the training, accreditation and certification of lead-based paint abatement professionals.	28	36		states
A Federal training, accreditation and certification program will be established and administered in states which choose not to seek approval from EPA to administer.	22	19		federal
Develop tribal programs for training, accreditation and certification of lead-based paint abatement professionals.		2		tribal programs (cum)
Number of certified individuals and firms				6000 certified

Baseline: Baseline will be established in 2001.

Training, Accreditation and Certification for Lead Paint

- In 2002 Prepare rules on training, accreditation and certification requirements for renovation and remodeling activities and training, accreditation and certification requirements for lead-based paint activities in buildings and superstructures.
- In 2001 Prepare rule on training, accreditation and certification requirements for renovation and remodeling activities
- In 2000 The lead rules for lead paint abatement/renovation and remodeling and building/superstructures were not met due to the lengthy SBREFA process and FTE cuts.
- In 1999 Development continued training, accreditation and certification rules: 1) renovation and remodeling activities and 2) deleading on bridges and structures. When these rules are promulgated, a full set of national standards for safe, effective reduction of lead-based paint hazards will be in place.

Performance Measures:	FY 1999 Actuals	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Request
Lead Renovation Information Rule	Final			rule
Develop proposed rules for lead paint abatement/ renovation and remodeling and building./superstructure rule	2 proposed	delayed		rules
Renovation and remodeling rule			1 proposed	rule
Building and Superstructure Rule				1 proposed rule

Baseline: Rule development initiated in 1998; no consistent standard for abating lead paint for renovation or buildings/superstructures existed prior to Title X.

Testing of Chemicals in Commerce for Endocrine Disruption

- In 2002 Standardization and validation of screening assays.
- In 2001 Complete standardization and validation of mammalian screens and tests.
- In 2000 In addition to the 2 planned endocrine disruptor screening assays, EPA started the 2-generation mammalian assays.
- In 1999 The Agency completed a number of key activities in FY 1999 including the High-Throughput Pre-Screening (HTPS) feasibility demonstration study, initiated the development of a Priority Setting Database, and started work on standardization of several screens and tests for use in the EDSP.

Performance Measures:	FY 1999 Actuals	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Request	
Develop program to screen 5,000 chemicals for endocrine disruption potential	Developed				program
Screening Assays Completed		4	2	11	screening assay
Baseline:	In FY 2000, the Agency began developing validation and screening protocols, with the goal of completing a total of 8 Tier 1 screens and 5 Tier 2 tests by FY 2006.				

Safe PCB Disposal

- In 2002 Reduce the industrial burden and costs of managing the safe disposal of PCBs
- In 2001 Reduce the industrial burden and costs of managing the safe disposal of PCBs
- In 2000 The data on FY 2000 PCB disposals will be available by March 30, 2001.
- In 1999 Technical Corrections to the 1998 PCB Disposal Amendments was issued on 6/24/99. The PCB Transformer Reclassification Rule will be promulgated in FY 2000. EPA published a notice in the FR in October 1999 soliciting additional information to support the Non-Liquid PCB Use Authorization Rule.

Performance Measures:	FY 1999 Actuals	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Request	
Revisions to PCB Disposal Amendments, Non-liquid PCB use authorization, Transboundary movement of PCBs	1				proposed
Safe Disposal of Transformers		Avail. 3/01	20,000	20,000	transformers
Safe Disposal of Capacitors		Avail. 3/01	35,000	35,000	capacitors
Safe Disposal of Bulk Waste		Avail. 3/01	660,000,000	660,000,000	Kg Bulk Waste
Develop Final Transformer Reclassification Rule		Delayed	Final		rule

Baseline: Capacitors: 1.85 million units; Transformers 2.20 million units

Verification and Validation of Performance Measures

Performance Measure: Number of certified individuals and firms

Performance Database: Lead-Based Paint Information Management System (LBPIMS) (interim)

Data Source: LBPIMS will include information about applicants for certification and their test scores, which will be provided by third-party test centers. The test centers will provide test scores electronically to EPA Headquarters and the Regions promptly after completion of the tests.

QA/QC Procedures: Applicants are given photo identifications to ensure that they are the ones taking the test. EPA Headquarters will review applications for completeness, including checking for the required information and materials. Regions will review applications for quality, including a more substantive review of the application. Third-party test centers have extensive QA/QC controls under the contract.

Data Quality Review: Data quality reviews are conducted through compliance monitoring of testing facilities by regular Office of Enforcement and Compliance Assurance procedures.

Data Limitations: None known.

New/Improved Data or Systems: Final LBPIMS is under development and is currently expected to be completed in 2003.

Coordination with Other Agencies

The success of EPA's lead program depends in large part on coordination with other Federal agencies, states and Indian tribes. In 2001, EPA plans to promulgate a new rule (the lead hazard standards rule) and propose a rule (training and certification requirements for renovation and remodeling activities) which will require close coordination with HHS, HUD and the Occupational Safety and Health Administration (OSHA). EPA will also work closely with state and Federally recognized Indian tribes to ensure that 1) authorized state and tribal programs continue to comply with requirements established under TSCA; and 2) the ongoing Federal accreditation certification and training program for lead abatement contractors continues to be administered effectively.

Mitigation of existing risk is a common interest for other federal agencies addressing issues of asbestos and PCBs. EPA will continue to coordinate interagency strategies for assessing and managing potential risks from asbestos and other fibers. Coordination on the safe PCB disposal is an area of ongoing emphasis with the Department of Defense, and particularly the Navy, which has special concerns regarding ship scrapping. PCBs and mercury storage and safe disposal are also important issues requiring coordination with the Department of Energy as they develop alternatives and explore better technologies for handling high-risk chemicals.

Statutory Authorities

Toxic Substances Control Act (TSCA) section 4 , 5, 6, 8, 12(b) and 13 (15 U.S.C. 2603-5, 2607, 2611 and 2612)

Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) sections 3, 4, 5, 6, 11, 18, 24, and 25 (7 U.S.C. 136a, 136a-1, 136c, 136d, 136i, 136p, 136v, and 136w)

Asbestos Hazard Emergency Response Act (AHERA)

Asbestos School Hazard Abatement Act (ASHAA)

Environmental Protection Agency

FY 2002 Annual Performance Plan and Congressional Justification

Preventing Pollution and Reducing Risk in Communities, Homes, Workplaces and Ecosystems

Objective #3: Manage New Chemical Introduction and Screen Existing Chemicals for Risk

By 2007, prevent or restrict introduction into commerce of chemicals that pose risks to workers, consumers, or the environment and continue screening and evaluating chemicals already in commerce for potential risk.

Resource Summary
(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Actual	FY 2001 Enacted	FY 2002 Request
Manage New Chemical Introduction and Screen Existing Chemicals for Risk	\$41,223.4	\$55,286.8	\$64,915.8	\$65,233.1
Environmental Program & Management	\$29,864.3	\$38,244.8	\$44,192.6	\$44,681.1
Science & Technology	\$11,359.1	\$17,042.0	\$20,723.2	\$20,552.0
Total Workyears	328.2	382.9	375.0	372.5

Key Programs
(Dollars in thousands)

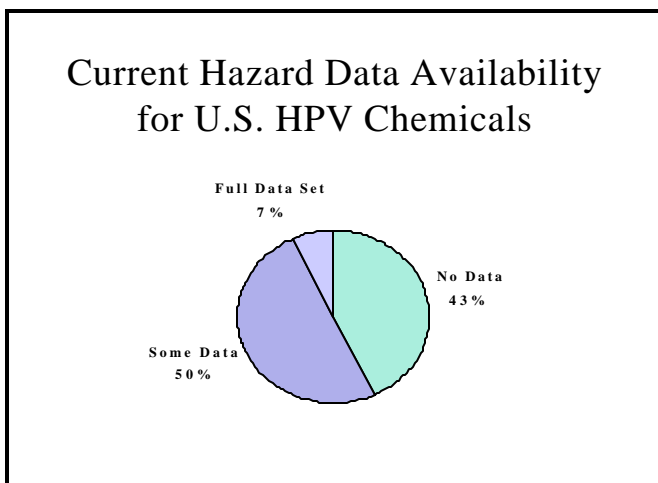
	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Request
Endocrine Disruptor Screening Program	\$1,308.5	\$5,444.5	\$3,611.9	\$2,912.6
New Chemical Review	\$14,659.5	\$11,818.4	\$12,543.1	\$13,014.7
Existing Chemical Data, Screening, Testing and Management	\$14,225.3	\$20,394.5	\$24,429.6	\$25,423.4
Environmental Monitoring and Assessment Program, EMAP	\$0.0	\$0.0	\$143.0	\$148.0

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Request
Rent, Utilities and Security	\$0.0	\$3,858.3	\$1,270.3	\$1,447.2
Administrative Services	\$0.0	\$903.2	\$1,262.2	\$908.2

FY 2002 Request

This objective includes work in four broad program areas: governing the introduction of new chemicals into commerce (chemicals in the process of commercialization), assessing the risks of existing chemicals (chemicals in commerce), screening and testing chemicals for endocrine disruptor effects, and assessing the safety of biotechnology products and genetically modified organisms. These programs are pivotal to reducing current and future risk by preventing or controlling the production of new chemicals that pose unreasonable risks and assessing and addressing the risks of chemicals already in commerce.

One of the major program priorities in FY 2002 is the Chemical Right-to-Know (CRTK) Program, which focuses on the lack of critical toxicological and environmental effects information on industrial chemicals. Currently there is little information available on the potential hazards of most chemicals used in every day products and industrial processes. CRTK's High Production Volume (HPV) Program targets the 2,800 chemicals produced in the highest volumes (1 million pounds or greater) in the U.S. Working in partnership with industry, the Agency will ensure that basic screening-level testing on these chemicals is made publicly available by 2005. CRTK will help prioritize EPA's chemical risk assessment and management activities and increase the amount of information on chemical exposures, hazards and risks that EPA can provide to the public. Using this information, states, communities, industry, and the public will be empowered to act on their own and in concert with EPA to address risks posed by these chemicals.



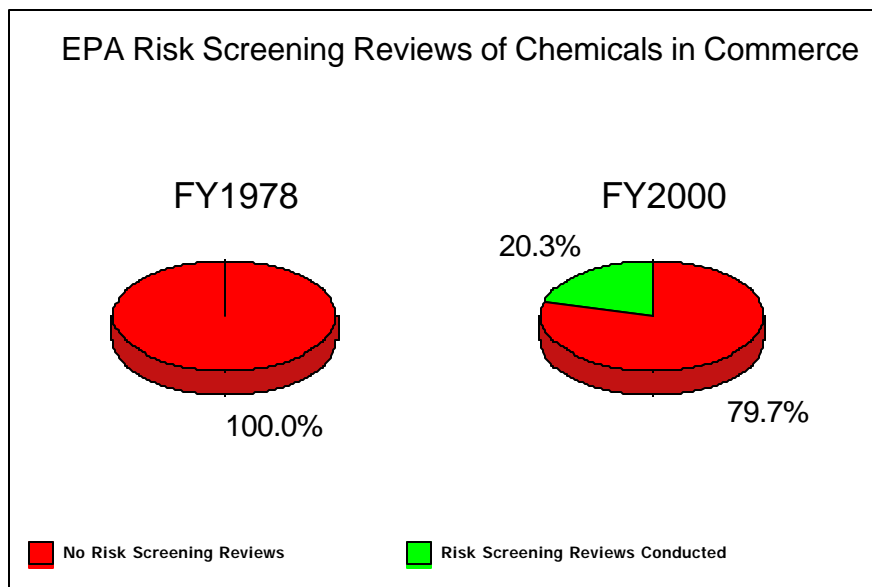
New Chemicals Program

The Toxic Substances Control Act (TSCA) requires EPA to review a chemical or microorganism before it is manufactured commercially (i.e., a "new" chemical) to determine whether it can be handled and used safely. If the Agency determines that an unreasonable risk may be posed to people or the environment, EPA can block the chemical's entry into commerce or establish control measures to ensure the chemical's

safety in the marketplace. Since 1979, EPA has reviewed more than 33,000 pre-manufacturing notifications (PMNs) and taken actions to control risks for about 10% of these chemicals and microorganisms.

In 2002, EPA expects to receive and assess within the TSCA mandated 90-day review period approximately 1,800 additional PMNs. As part of its review of new chemical substances, the Agency has developed an array of innovative, efficient screening mechanisms. As part of a new chemical review for commercial chemicals in the process of commercialization, the Agency routinely works with industry to share any options and suggestions it may have on process improvements, or to produce new chemicals more safely.

The adjacent chart indicates substantial progress made in the New Chemicals Program since its inception in 1978. In FY 2000, there were potentially 78,598 chemicals in commerce; 15,992 of these chemicals, or 20.3%, had gone through the TSCA Premanufacture Notice process and entered into commerce following submittal of a Notice of Commencement of Manufacturing. These chemicals have been assessed for risks, and controls are in place as necessary. A large proportion of these chemicals also may be "green" alternatives to existing chemicals in commerce.



The New Chemicals Program also examines new microorganisms derived from biotechnology to ensure that potential risks have been evaluated and that adequate controls are in place before they are released into the environment. Recent regulatory changes have increased the rate of new biotechnology chemicals submitted for review. Other outreach and technical assistance to encourage safer chemicals and chemical production and use include green chemistry and green engineering textbooks and other publications, a reference compendium, laboratory manuals, symposia and actual course work materials, all developed in partnership with industry, professional organizations and universities.

In 2002, the Agency plans to launch "Sustainable Futures," a program which offers an expedited Pre-Manufacturing Notification process to companies who take training in the use of the methods and apply the results toward development of safer chemicals. The Agency, working with others in the scientific community, has developed computerized methodologies that look at the structure of chemicals and estimate potential hazard and risk. The methods, called the Pollution Prevention Framework and the PBT Profiler, can be used to identify hazardous chemicals even before product manufacture begins. EPA is encouraging industry to use these screening-level tools, used internally by EPA, to evaluate chemical alternatives early in the research and development stage.

In 2001, EPA's technology transfer efforts introduced these risk-screening methods to the industry, and the response was both positive and dramatic. The participating companies have indicated that the methods identified safer alternatives early in the product development cycle, when pollution prevention, product substitution, and risk reduction are most cost effective. The companies also found that the models reduced production costs, shortened time to market, and reduced generation of waste. In 2001, under a pilot program (Project XL) EPA provided regulatory relief to two companies who used the tools as an integral part of product development. In a win-win result, industry saved time and money and the environment saw inherently safer chemicals. In FY 2002, EPA intends to expand the use of the risk screening tools developed from Project XL to other companies to assist them in selecting safer chemicals for use in their products and processes.

Assessing Existing Chemicals: The Chemical Right-to-Know Program

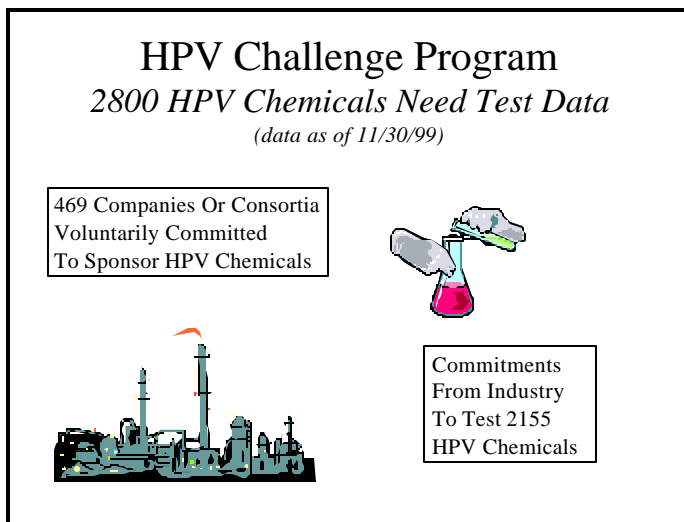
One of EPA's critical responsibilities under TSCA is to identify and control any unreasonable risks that might be associated with the thousands of chemicals which are already in commerce. In 2002, the Agency will complete assessments of Methyl Tertiary Butyl Ether (MTBE), a gasoline additive, and several other chemicals used in a wide variety of commercial products and industrial processes. EPA's strategy for addressing the remaining chemicals in commerce is to foster the public availability of risk screening information to allow states, communities, industry, and the public to act on their own and in concert with EPA to reduce risks posed by these chemicals.

EPA's CRTK Program focuses on the lack of critical toxicological and environmental effects information on industrial chemicals. In FY 2002, EPA will continue to develop risk screening data on High Production Volume (HPV) chemicals under this program. HPV chemicals are those that are manufactured or imported in quantities of at least one million pounds.

EPA will also focus on chemicals of special concern to children. Little hazard information exists in the public domain for many of these chemicals that we use daily.

Only seven percent of the 2,800 HPV chemicals have a full set of basic information on health and environmental effects. Only 25 percent of consumer chemicals (those used by children and families in consumer products) have a full set of basic information. In addition, the Agency will continue working with other countries in the Organization for Economic Cooperation and Development's (OECD's) Existing Chemicals Program to further expand the availability of risk screening information.

Without this information, we may not be able to effectively identify and evaluate the human health and environmental risks posed by these chemicals (although the HPV screening program does not include actual risk assessments on these chemicals). In addition, relatively little is known about the unique effect on



children's health of chemicals that are widely used in children's products or otherwise have high potential for exposure to children.

Basic screening-quality information for all 2,800 HPV chemicals will be made available to the public by 2005 through a voluntary industry challenge and a series of test rules for those data not obtained through the voluntary program. The resulting hazard data will be broadly disseminated to the public in a format that will be easily understood. The response from industry to this initiative has been enthusiastic: 469 companies have sponsored 2,155 chemicals and 187 chemical categories. The Agency intends to further evaluate whether additional testing is warranted for chemicals to which children are exposed, under a parallel Voluntary Children's Chemical Evaluation Program that will be launched in 2002.

Much of the focus of the Agency in FY 2002 will be on small groups (or categories) of HPV chemicals proposed by industry. Such categories of chemicals can be considered together because of their similar structure or toxicological properties. The Agency will be actively engaged in assessing the validity of such categories of chemicals, and allowing the public to access the hazard data on these chemicals as the data are obtained from industry.

In 2002, the Agency will continue to work with stakeholders to explore possibilities for identifying use information. Use information would allow the Agency to identify chemical exposure pathways, better assess risks associated with such exposures, and identify potential unsafe uses of household chemicals and other consumer products.

Endocrine Disruptor Program

The Food Quality Protection Act (FQPA) requires EPA to screen pesticides for estrogenic effects on human health, and the Safe Drinking Water Act authorizes EPA to screen chemicals found in drinking water sources. FQPA requires that "appropriate validated test systems" be used in the screening program. An Advisory Committee established in 1996 recommended that EPA expand the scope of the screening program to include specific other types of endocrine effects in addition to estrogenic effects, and to include industrial chemicals, drinking water contaminants, and important mixtures in addition to pesticides. Endocrine disruption is of concern for many reasons, including potential for interference with growth and development, induction of certain types of cancer, and adverse effects on reproduction.

EPA proposed its Endocrine Disruptor Screening Program in the Federal Register on December 28, 1998. Since then, EPA has focused on two major activities in implementing the screening program: the development and validation of test systems for use in the screening program, and the development of a priority-setting system to assist in choosing which chemicals should be tested first. Work on the priority-setting system will be completed in early 2002. Work on the development and validation of assays will accelerate in 2002 due to the recent award of a master support contract for laboratory support. EPA recently signed a consent agreement for target dates for completion of individual test systems. Certain test systems must be validated by the end of 2003; others must be validated by the end of 2005. Since some of these tests are barely out of the research stage, significant work is required in order to standardize them for use as routine assays, and to show the reliability of the tests across a wide range of chemicals and across different laboratories.

International Activities in Biotechnology

The Agency plays a key role in international biotechnology programs concerned with food safety sponsored by the Organization for Economic Cooperation and Development (OECD), the United Nations (UN), and the European Union (EU). Biotechnology products include new chemicals and chemical preparations which may be used in food and feed, as well as genetically modified foods. The Agency is an active participant in two biotechnology workgroups under the Environment Policy Committee within the OECD: 1) The Working Group on the Harmonization of Regulatory Oversight in Biotechnology and 2) the Task Force for the Safety of Novel Foods and Feeds. The Working Group focuses on environmental safety assessment of biotechnology products while the Task Force assesses the safety of foods and feeds derived through biotechnology. The major areas of work by the two workgroups are development of consensus documents and outreach activities. The consensus documents contain technical information which is intended to aid the safety assessment of biotechnology products for regulatory approval. In FY 2002, the U.S. will host an International Conference on the Environmental Impacts of Genetically Modified Organisms (GMOs). The conference is intended to address the environmental impacts of GMOs, looking at the facts, uncertainties and safety assessments. The Working Group will coordinate substantive preparations for the conference with relevant groups within the OECD, other international organizations, and developing countries.

Research

There are over 80,000 existing chemicals on the Toxic Substances Control Act (TSCA) inventory and each year an additional 2,000 chemicals are added. Each year, 1 billion pounds of active ingredients found in over 2000 conventional pesticides are applied in the United States. Release of these chemicals into the environment through agricultural and nonagricultural application and other means poses serious risks to both human health and ecosystems (e.g., plant and wildlife). In FY 2002, the Agency will continue to support both human health and ecosystems research to reduce risks and improve the environment safety of our communities, homes, work places and ecosystems associated with releases of pesticides and other toxic chemicals. This research will include the development and improvement of methods to evaluate hazards on human health endpoints, models to improve the biological basis for human health risk assessment, and methods to identify ecological hazards, predict ecological risk, and characterize environmental stressor interactions.

Human Health Research

Humans are exposed every day to thousands of chemicals in single or multiple combinations, through the air, drinking water, food, and dust. The objectives of the human health research program under the Safe Communities goal are to: develop and verify methods to detect, characterize and quantify adverse human health effects that result from exposure to pesticides and other toxic substances; develop and validate models to predict the human health effects of exposure to pesticides and other toxic substances; and provide data on the health effects of selected pesticides and other toxic chemicals, alone or in combination.

Health effects research in FY 2002 will continue to focus on development of mechanistically-based predictive models for human health risk assessment, such as structure-activity-relationship models to help determine testing needs under Section 5 of TSCA, which addresses the introduction of new chemicals into

commerce. Research will also be conducted to address the needs for methods to evaluate the special sensitivities of certain subpopulations based on age, genetic factors and health status. These methods will be used to evaluate endpoints of toxicity that are qualitatively different from those of concern for the general population.

In FY 2002, EPA will continue to participate in the Agriculture Health Study (AHS) with the National Cancer Institute (NCI), the National Institute for Environmental Health Sciences (NIEHS), and the National Institute of Occupational Safety and Health (NIOSH) studying the health of men and women in agriculture. EPA's role is to collect high quality data and evaluate how accurately the study questionnaire classifies pesticide application activities and enables the prediction of applicator exposure and dose. Data collection for the study is scheduled to be completed in FY 2002; sample analysis will be completed and data analysis initiated in FY 2003; and reporting will be completed by FY 2004.

The results of the application of methods developed under this research program will significantly increase understanding of the impacts of specific classes of pesticides and toxic substances on human health.

Ecological Research

Over the long term, ecosystems degradation poses one of the most serious risks to human health and economic sustainability. Our Nation's ecosystems provide valuable renewable resources such as food, fiber, water storage, and wood. Stresses to the environment can impact these resources as well as critical self-purifying environmental processes. Ecosystems protection research remains a high priority area due to the need for better understanding of environmental stressors and their impacts on the health and sustainability of ecosystems. The mechanisms and consequences of changes in the biological, chemical and physical attributes of ecosystems due to stressors are poorly understood and represent significant challenges to the research community.

In FY 2002, ecosystems effects research will focus on improving our understanding of ecosystem stressors and will focus on: 1) develop methods to evaluate the ecological effects of cumulative exposure to pesticides and other anthropogenic stressors; 2) develop and validate predictive models (e.g., biologically-based dose-response, structure-activity-relationship) to identify and characterize ecological hazard and risk; 3) develop hazard identification techniques for numerous ecological health end points for various wildlife species; and 4) evaluate data on the direct stressor effects of toxic chemicals, including pesticides, on ecosystems, and on interactions of such exposures with other anthropogenic and/or natural stressors.

Risk assessment research will continue to develop the tools, methodology, and data to conduct probabilistic assessments of ecological risk from exposure to pesticides, including the development of user friendly models that link distributions of exposure and toxicity to estimate the magnitude and probability of effects. Also included is model validation and sensitivity analyses to identify areas of research most likely to reduce uncertainty in model predictions. Finally, the Agency will apply larger-scale risk assessment tools to pesticides and toxic substances issues, and refine existing aquatic exposure assessment models used to assess the impacts of pesticides and toxics on broader scales of ecological organization.

The Agency will incorporate the human health and ecological test methods and models developed under this goal into test guidelines under which manufacturers will be required to submit data to the Agency on pesticides in accordance with the Fungicide, Insecticide, and Rodenticide Act (FIFRA) and on toxic substances in accordance with TSCA.

FY 2002 Change from FY 2001 Enacted

EPM

- (+\$1,328,158) This increase reflects an increase in workforce costs.
- (-\$115,400, - 1.1 FTE) FTE in the New Chemicals Program risk assessment were reduced to meet the new Agency workforce levels. The program will rely more heavily on partnering as well as modeling improvements to meet statutory requirements.
- (-\$510,000) This is a reduction from the Endocrine Disruptor and other programs to help meet the increase in workforce costs and to fund other priorities, including scientific peer review. An alternative contract structure will allow the program to conduct priority research with no significant delays due to this change.

Research

S&T

- (+\$715,300) This increase reflects an increase in workforce costs.
- (-\$486,500) The FY 2002 Request is \$486,500 below the FY 2001 Enacted budget level due to Congressional earmarks received during the FY 2001 appropriations process which are not included in the FY 2002 President's Request.
- (-\$400,000). This reduction represents a planned decrease in the AgHealth Study effort, which is an examination of the health of men and women in agriculture. Data collection for the study is scheduled to be completed in FY 2002; sample analysis will be completed and data analysis initiated in FY 2003; and reporting will be completed by FY 2004. EPA's role is to evaluate how accurately the study questionnaire classifies pesticide application activities and enables the prediction of applicator exposure and dose.

Annual Performance Goals and Performance Measures

New Chemicals and Microorganisms Review

In 2002 Of the approximately 1,800 applications for new chemicals and microorganisms submitted by industry, ensure those marketed are safe for humans and the environment. Increase proportion

of commercial chemicals that have undergone PMN review to signify they are properly managed and may be potential green alternative to existing chemicals.

In 2001 Of the approximately 1,800 applications for new chemicals and microorganisms submitted by industry, ensure those marketed are safe to humans and the environment. Increase proportion of commercial chemicals that have undergone PMN review to signify they are properly managed and may be potential green alternatives to existing chemicals.

In 2000 All new chemical pre-manufacturing notification (PMN) submissions were reviewed within the required timeframe.

In 1999 EPA used TSCA authorities to review 1,717 PMNs and exemptions. EPA took control actions on 20 of the 31 notices involving PBTs. EPA received 172 toxicity tests on over 103 chemicals.

Performance Measures:	FY 1999 Actuals	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Request	
TSCA Pre-Manufacture Notice Reviews	1717	1838	1800	1800	notices
Notice of Commencements			21%	21.6%	NOCs (Cum)

Baseline: In FY2000, there were potentially 78,598 chemicals in commerce; 15,992 of these chemicals had gone through the TSCA PMN process and entered into commerce following submittal of a Notice of Commencement of Manufacturing. These chemicals have been assessed for risks and controls are in place as necessary. A large fraction of these chemicals also may be "green" alternatives to existing chemicals in commerce.

PBT Profiler

In 2002 Provide industry with user-friendly, computerized tool (PBT Profiler) that allows new chemical product alternatives to be evaluated quickly and inexpensively for persistence, bioaccumulation and toxicity.

Performance Measures:	FY 1999 Actuals	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Request	
Number of users of the PBT Profiler				50	users
Number of Chemicals Profiled				500	chemicals

Baseline: In FY2001 the Agency completed development, beta testing, and independent scientific peer review of the PBT Profiler and began public dissemination of the PBT Profiler. Use of the PBT Profiler by companies at the Research and Development stage is the most effective way to do PBT risk screening because it is when PBT risk reduction and pollution prevention are most cost-effective.

Chemical Right-to-Know Initiative

In 2002 EPA will make publicly available screening level hazard data and Assessments for 8% of the 2800 High Production Volume chemicals, as part of the Agency's implementation of a comprehensive strategy for screening, testing, classifying & managing the potential risks posed by commercial chemicals.

In 2001 EPA will make publicly available data from test plans submitted by industry on chemicals already in commerce.

In 2000 Industry's response to the HPV Challenge was greater than expected. Industry provided EPA with significantly more test data and voluntary agreements on high production volume chemicals than was expected.

In 1999 EPA challenged industry to take responsibility for collecting data on the effects of the chemicals they manufacture and over 200 companies and consortia had voluntarily committed to make public, before the end of 2005, basic hazard data on over 1,150 of the approximately 2,800 HPV chemicals.

Performance Measures:	FY 1999 Actuals	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Request
TSCA Chemical Inventory Update Rule	Proposed			rule
Under chemical right-to-know activities, secure voluntary agreements from chemical manufacturers to test high production volume chemicals		2155		chemicals
Through chemical testing program, obtain test data for high production volume chemicals on master testing list		181	800	chemicals
After reviewing submissions from companies, make screening quality health and environmental effects data publicly available for 2,800 HPV chemicals				8% data (Cum)

Baseline: The cumulative percentage of the High Production Volume (HPV) chemicals with screening quality health and environmental effects data publicly available. HPV chemicals are industrial chemicals which are manufactured or imported into the US at 1 million pounds or greater per year. EPA studies indicate that, at the beginning of the HPV chemical program, few had completed data sets that were available to the public.

Expand Local Information on Toxic Substances

In 2002 Provide information and analytical tools to the public for assessing the risks posed by the release of toxic substances in communities.

In 2001 Provide information and analytical tools to the public for assessing the risks posed by the release of toxic substances in communities.

In 2000 The goal of providing information and analytical tools to the public was not met due to a shift to other priorities. The community partnership initiating the second community analysis has made slow progress.

In 1999 The TRI Persistent Bioaccumulative Toxics rule was proposed. The final rule was published in the Federal Register in October 1999 (FY 2000).

Performance Measures:	FY 1999 Actuals	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Request
Addition of PBTs to TRI rulemaking	Final			Rule
Provide current national risk screening information to the public		0	1	1 tools

Completion of community risk identification analyses	1	2	2	analyses
Complete EPA-HQ risk-based priority setting exercise			3	analyses
Complete EPA risk-based regional office priority-setting system			5	analyses
Complete state risk-based priority setting exercises			6	exercises
Expand use of risk screening environmental indicators tools to other countries that administer pollutant release and transfer registries			1	country

Baseline: Release of national risk screening information first occurred in FY 1999. First community risk identification analyses were completed in FY 2000. First National, Regional, and State level risk-based priority setting exercises will be completed in FY2002. First expanded use of risk screening tool by other countries will occur in FY 2002.

Risk Screening Environmental Indicators

In 2002 Reduce by 3.0% annually the risk-related score associated with air and water release pathways for chronic human health calculated for releases and transfers of toxic chemicals reported to TRI from the level calculated for the preceding year, after adjusting for changes in production indices for the manufacturing, mining and utilities sectors.

In 2002 Reduce by 1.5% annually, the hazard-based score for chronic human health calculated for releases and transfers of toxic chemicals reported to TRI from the level calculated for the preceding year, after adjusting for changes in production indices for the manufacturing, mining and utilities sectors.

Performance Measures:	FY 1999	FY 2000	FY 2001	FY 2002
	Actuals	Actuals	Estimate	Request

Reduction in the year 2002 production-adjusted RSEI hazard-based score of releases and transfers of toxic chemicals reported to TRI from the level calculated for 2001 (reported in 2004).				1.5%	index
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Reduction in the year 2002 production-adjusted RSEI risk-related score of releases and transfers of toxic chemicals reported to TRI from the level calculated for 2001 (reported in 2004).				3%	index
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Baseline: This production-adjusted APG measure is based upon the Risk Screening Environmental Indicators (RSEI) chronic human health risk-related score which is calculated by weighting estimated surrogate doses associated with TRI releases by facilities. The data for 1995 are used as the baseline for this measure.

Research

Research on Commercial Chemicals and Microorganism

- In 2002 Develop improved methods and models to evaluate the impact of environmental stressors on human health and ecological endpoints for use in guidelines, risk assessments, and risk management strategies.
- In 2001 Develop exposure data, and health risk assessment methodologies, and control technologies to improve the characterization of health risks and reduce community exposures to environmental chemical stressors
- In 2000 EPA developed a model to assess the susceptibility of the developing immune system to environmental contaminants, yielding a product important for evaluating the impact of environmental stressors on human health and ecological endpoints.
- In 1999 Completed summary of in vitro methods used to sort chemicals acting through one-electron reactive mode of toxic action, which will provide the Agency with an additional approach to the classification of potential ecological hazard posed by new and existing chemicals.

Performance Measures:	FY 1999 Actuals	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Request
Peer reviewed publication on the in vitro screening methods for one-electron reactions.	1			publication
Develop an animal model to assess susceptibility of the developing immune system to environmental contaminants.		1		model
Guidance in the use of Structure Activity Relationships (SAR) computer technologies.			1	guidance
Create searchable database from existing toxicity databases to enable researchers and risk assessors to explore structure-activity associations across toxicity endpoints of regulatory interest.				1 database
Baseline:	At present, standard guidelines for test methods and risk assessment methodologies to evaluate the potential risks of environmental stressors to human health and ecological systems are limited to certain endpoints and are generally non-probabilistic in nature. Improved test methods and risk assessment tools will be developed to more accurately predict and fully characterize human health and ecological risks. Improved risk management tools will also be developed that will better identify and reduce environmental exposures to human health and ecosystems.			

Verification and Validation of Performance Measures

Performance Measure: TSCA Premanufacture Notice Reviews

Performance Database: New Chemicals Management Information Tracking System (MITS), which tracks information from beginning of PMN program (1979) to present. Information includes premanufacture notices (PMNs), low volume and test market exemptions; number of PMNs submitted and final disposition (whether regulated or not).

Data Source: As needed, industry submits requests for review to the Agency, including information on chemicals to be manufactured and imported, chemical identity, manufacturing process, use, worker exposure, environmental releases and disposal.

QA/QC Procedures: LAN server contains confidential business information (CBI) support documents on each of the chemicals; data undergo QA/QC by EPA before being uploaded to LAN. EPA always checks for consistency among similar chemicals in databases.

Data Quality Review: Review of industry data; EPA staff scientists and contractors perform risk screening and assessment which could lead to regulation.

Data Limitations: None known

New/Improved Data or Systems: None planned

Coordination with Other Agencies

EPA's chemical testing data provides information for the Occupational Safety and Health Administration's (OSHA) worker protection programs, the National Institute for Occupational Safety and Health (NIOSH) for research, and the Consumer Product Safety Commission (CPSC) for informing consumers about products through labels. EPA frequently consults with these agencies on project design, progress and the results of chemical testing projects

Research

EPA is among six agencies within the federal government that conducts intramural human and environmental health research (EPA, NIEHS, NCI/NIH, CDC, FDA, and ATSDR). The Agency conducts research in all elements of the human health risk assessment paradigm (e.g., exposure, effects, risk assessment, and risk management), making our contribution unique within the Federal government. EPA is widely recognized both nationally and internationally for its work in identifying the relationship between human health effects and exposure to environmental pollutants. Basic research on the mechanisms underlying these effects in combination with problem-driven research programs contribute significantly to the Agency's ability to fulfill its goals and objectives under several environmental mandates.

Collaborations with other Federal and international research organizations create an atmosphere in which the impact of the individual programs is strengthened and the overall positive impact on public and environmental health is significantly increased. For example, in 2002, the Agency will continue its cooperation with NCI, NIEHS, and NIOSH on the Agricultural Health Study, which is a study of the health of men and women in agriculture.

Statutory Authorities

Toxic Substances Control Act (TSCA) section 4 , 5, 6, 8, 12(b) and 13 (15 U.S.C. 2603-5, 2607, 2611 and 2612)

Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) sections 3, 4, 5, 6, 11, 18, 24, and 25 (7 U.S.C. 136a, 136a-1, 136c, 136d, 136i, 136p, 136v, and 136w)

Federal Food, Drug, and Cosmetic Act (FFDCA)

Research

Federal Insecticide, Fungicide and Rodenticide Act (FIFRA)

Toxic Substances Control Act (TSCA)

Federal Food, Drug, and Cosmetic Act (FFDCA)

Environmental Protection Agency

FY 2002 Annual Performance Plan and Congressional Justification

**Preventing Pollution and Reducing Risk in
Communities, Homes, Workplaces and Ecosystems**

Objective #4: Ensure Healthier Indoor Air

By 2005, 16 million more Americans than in 1994 will live or work in homes, schools, or office buildings with healthier indoor air.

Resource Summary
(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Actual	FY 2001 Enacted	FY 2002 Request
Ensure Healthier Indoor Air.	\$29,095.7	\$34,612.0	\$38,634.2	\$37,854.0
Environmental Program & Management	\$16,144.2	\$24,278.2	\$28,554.7	\$27,747.3
Science & Technology	\$4,793.5	\$1,981.5	\$1,939.6	\$1,966.8
State and Tribal Assistance Grants	\$8,158.0	\$8,352.3	\$8,139.9	\$8,139.9
Total Workyears	146.2	112.6	130.3	128.4

Key Programs
(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Request
Air, State, Local and Tribal Assistance Grants: Other Air Grants	\$8,158.0	\$8,158.0	\$8,139.9	\$8,139.9
Indoor Air Research	\$2,818.7	\$0.0	\$0.0	\$0.0
Children's Indoor Environments	\$3,746.8	\$15,161.7	\$14,714.1	\$13,624.1

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Request
Radon	\$5,235.4	\$4,232.1	\$6,562.7	\$6,733.0
Indoor Environments	\$6,496.0	\$8,437.6	\$7,469.4	\$7,576.3
Administrative Services	\$0.0	\$196.8	\$206.7	\$170.8
Regional Management	\$0.0	\$21.5	\$23.1	\$26.9

FY 2002 Request

Health Effects of Indoor Air Pollution

Americans spend about 90 percent of their time indoors where they are exposed to levels of pollutants that are often higher than outdoors. As a result, indoor air pollution poses high risks to human health, especially to sensitive populations, and has been ranked among the top four environmental risks in relative risk reports. Estimates of the economic costs to the nation of poor indoor air quality, including lost worker productivity, direct medical costs for those whose health is adversely affected, and damage to equipment and materials, are on the order of tens of billions of dollars per year. (Report to Congress on Indoor Air Quality, EPA/400/1-89-001). In January 2000, the National Academy of Sciences (NAS) affirmed the significance of indoor triggers of asthma and the alarming increase in asthma rates nationwide (Clearing the Air: Asthma and Indoor Air Exposures, (ISBN 0-309-06496-1, January 2000).

Indoor air pollutants continue to have significant impacts in our homes, schools, and workplaces.

- Nearly 1 in 13 school aged children has asthma and there is substantial evidence that indoor environmental exposures to dust mites and ETS play a significant role in triggering asthma symptoms, and, in some instances, are causally linked to the development of the disease. (Institute of Medicine, National Academy of Sciences (U.S.). Committee on the Assessment of Asthma and Indoor Air. *Clearing the Air: Asthma and Indoor Air Exposures*. 2000. Washington. National Academy Press.)
- Asthma's estimated annual cost to the nation is \$11.3 billion (National Heart, Lung, and Blood Institute, (NHLBI) 1998).
- Radon is the second leading cause of lung cancer and is estimated to be responsible for 15,000 to 22,000 deaths per year (February 1998, BEIR VI, NAS). Nearly 1 out of every 15 homes is estimated to have radon concentrations above the EPA recommended action level.

- In schools, the General Accounting Office (GAO) estimates that 9.9 million students and 570,000 teachers and school staff suffer illnesses annually due to poor indoor air quality.
- Young children are exposed to Environmental Tobacco Smoke (ETS) in approximately 27 percent of U.S. homes, increasing their risk for asthma and causing thousands of lung infections and other diseases. (Results of a national telephone survey entitled "Radon Risk Communication and Results Study" commissioned by the EPA in 1994 and 1996.)
- Many of the pollutants of concern in combating exposure to Urban Air Toxics are also found indoors, and are emitted by indoor sources such as consumer products and building materials.

Indoor Environments Program Strategy

EPA has two major strategies to meet its human health objective for indoor air quality:

- EPA raises public awareness of actual and potential indoor air risks so that individuals can take steps to reduce exposure. These outreach activities provide essential information to the public and to the professional and research communities about indoor air risks. Outreach takes the form of educational literature, media campaigns, hotlines, and clearinghouse operations. Underpinning EPA's outreach efforts is a strong commitment to environmental justice, community based risk reduction, and customer service. For example, the media campaign undertaken in partnership with the Advertising Council seeks to educate people about asthma and the role that environmental triggers found indoors can play in the worsening of the disease.
- EPA uses partnerships and technology transfer to improve the way in which all types of buildings, including schools, homes, workplaces, and other large buildings are designed, operated, and maintained to bring about healthier environments indoors. To support these voluntary approaches, EPA incorporates the most current science available as the basis for recommending ways that people can reduce their exposure to indoor contaminants.

In order to encourage individuals, schools, and industry to take action to reduce risks in their indoor environments, EPA must reach people at the local level. To do this, EPA uses assistance agreements and cooperative partnerships to collaborate with organizations such as the American Academy of Pediatrics, the Asthma and Allergy Foundation of America, the National Association of Counties, the National Association of County and City Health Officials, the National Education Association, the American Lung Association, the Consumer Federation of America Foundation, the National Environmental Health Association, and the National Council of La Raza. These partnerships position EPA to successfully reach and educate its target audience which includes physicians who treat children with asthma, school personnel who control the environments where children spend many hours each day, county and local environmental health officials, and disproportionately affected, disadvantaged populations. Through this national partner network of over 30 organizations and about 900 local field affiliates, EPA leverages the personnel, expertise, and credibility of these groups to provide the tools to their target audiences and to the general public to make informed decisions about reducing risk in their indoor environment.

Indoor Environments: Children's Health Emphasis - Asthma and Environmental Tobacco Smoke

EPA is very concerned about the rise in childhood asthma incidence, a disease which the Centers for Disease Control (CDC) has characterized as an epidemic. The number of children with asthma has more than doubled in the past 15 years; during the period 1996 - 1998, an estimated 4 to 6 million children had asthma (National Center for Health Statistics, CDC). In 1996, 210,000 hospitalizations for asthma were in children under the age of eighteen (National Center for Environmental Health, CDC). From 1977 to 1995, there was a three-fold increase in the number of deaths from asthma and each year over 10 million school days are missed due to this disease (President's Task Force on Environmental Health Risks and Safety Risks to Children, 1999). The cost of asthma to the U.S. economy was estimated to be over \$11 billion in 1998 (NHLBI, 1998).

In FY 2002, EPA will continue to implement the cross-Agency initiative to reduce childhood asthma incidence and severity, focusing on reducing children's exposure to indoor triggers of the disease. EPA is working, with other Federal agencies, to ensure that indoor environmental management is an integral part of asthma care in the United States. While there is no known cure for asthma at this time, the medical community is in agreement, and it is established in national guidelines, that both medical treatment and environmental management are needed to effectively control asthma. However, indoor environmental management is often not practiced and often not part of the prescription for managing asthma. EPA is targeting two primary audiences to help address indoor asthma triggers nationwide -- the medical community and the general public.

First, the Agency is working to improve the medical community's awareness of and attention to indoor asthma triggers and their role in triggering asthma attacks in asthmatics. EPA, in conjunction with the Department of Health and Human Services (HHS) agencies, is coordinating a series of conferences with managed care organizations to discuss current asthma care practices and to encourage greater emphasis on avoidance of asthma triggers as part of a comprehensive asthma treatment regimen. In FY 2002, EPA will continue to follow-up on these conferences to share lessons learned about how to better integrate medical treatment and environmental management.

Second, EPA will continue, with the help of the Advertising Council, to raise the awareness of the general public about indoor asthma triggers. Particular attention will be paid to children with asthma and their care givers and to low income adults with asthma. Support and direction will be provided to asthma groups that educate low-income residents about the environmental components of asthma in the home setting and funding will continue to increase the introduction of school-based asthma education programs, such as the American Lung Association's "Open Airways," into hundreds of additional schools nationwide, with an emphasis on reaching inner city schools with disproportionately affected populations. The program teaches students with asthma to identify and control their exposure to the asthma trigger in their environment, and helps staff, and teachers understand the steps they can take to improve their school's asthma management.

In FY 2002, EPA will expand implementation of "Indoor Air Quality (IAQ) Tools for Schools," a program to improve the environment inside schools. Adoption of these low-cost/no-cost guidelines for proper operation and maintenance of school facilities will result in a healthier indoor environment for all

students and staff, but will be of particular help to children with asthma, lessening the degree to which they are exposed to indoor asthma triggers. EPA will regularly evaluate the training materials for these school-based projects to ensure that they effectively and efficiently address the environmental issues and maintain a uniform tracking system to document program progress.

EPA will continue to collaborate with Federal, state, and community organizations to focus on in-home asthma education as a proven and practical method of helping children and their parents/guardians identify and reduce indoor environmental asthma triggers. The Agency will work with housing groups, home health educators, community groups, and building operators to design, conduct, improve, and track efforts which substantially reduce indoor environmental triggers for asthma in low-income housing.

EPA will support on-going work to reduce asthma and other childhood disease by implementing programs designed to reduce the number of homes where young children are exposed to ETS. ETS exposure increases the risk of lower respiratory tract infections such as bronchitis and pneumonia. EPA estimates that between 150,000 and 300,000 of these cases annually in infants and children up to 18 months of age are attributable to exposure to ETS (EPA 1992). ETS exposure is causally associated with increased risk of acute and chronic middle ear disease (WHO 1999). Asthmatic children are especially at risk since ETS exposure increases the number of episodes and severity of symptoms for up to 1,000,000 asthmatic children. Recent studies have suggested links between ETS exposure, sudden infant death syndrome, and low birth weight. The Agency will continue its multi-media campaign on environmental tobacco smoke, including the Smoke Free Homes Pledge program, which targets the parents of young children, advising them not to expose children to smoke inside the home. EPA will continue to work in collaboration with the CDC, states, and local organizations to develop and make available tools and resources which motivate parents and guardians to make their homes smoke-free. EPA will continue grant support to state and local governmental tobacco control programs to help reduce the proportion of homes in which children are exposed to secondhand smoke.

Indoor Environments: Homes, Schools, and Buildings Programs

EPA continues to work toward bottom line results for the Indoor Environment base programs including implementation of the Indoor Air Quality (IAQ) “Tools for Schools” kit and the “Open Airways” program in elementary schools, office buildings managed with good Building Air Quality practices, home radon tests completed, home radon mitigation accomplished, and new homes built with radon-resistant features. EPA provides assistance to the public, other governmental agencies, and non-governmental organizations to help meet the program’s objective to reduce indoor environmental pollutants.

Through the State Indoor Radon Grant Program, EPA provides assistance to the states for the development and implementation of programs to assess and mitigate radon, thereby enhancing the effectiveness of state and local activities for radon risk management. The grant program helps: 1) establish the basic elements of an effective Radon Program in states that have not yet done so and support innovation

and expansion in states that currently have programs in place, and 2) strengthen the Federal/state partnership by helping states develop radon program elements and activities.

FY 2002 Change from FY 2001 Enacted Budget

EPM

- ! (-\$1,205,700) This reduction will decrease the number of asthma interventions by EPA, reduce outreach efforts for environmental tobacco smoke (ETS), and reduce the number of “Tools for Schools” kits distributed. The inception of education and outreach programs generates a range of start-up costs. As these activities mature, the Indoor Environments program is identifying opportunities to streamline operations.
- ! (+\$429,300) Resources are requested for increased payroll needs.

Annual Performance Goals and Performance Measures

Healthier Residential Indoor Air

In 2002 848,000 additional people will be living in healthier residential indoor environments.

In 2001 890,000 additional people will be living in healthier residential indoor environments.

In 2000 1,032,000 additional people are living in healthier residential indoor environments.

In 1999 1,322,000 additional people are living in healthier residential indoor environments.

Performance Measures:	FY 1999 Actuals	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Request
People Living in Healthier Indoor Air	1,322,000	1,032,000	890,000	848,000 People

- Baselines:
1. By 2002, increase the number of people living in homes built with radon resistant features to 3,320,000 from 600,000 in 1994. (cumulative)
 2. By 2002, decrease the number of children exposed to ETS from 19,500,000 in 1994 to 17,222,000. (cumulative)
 3. By 2002, increase the number of people living in radon mitigated homes to 1,561,700 from 780,000 from 1994. (cumulative)
 4. By 2002, increase by 136,000 the number of people with asthma and their caregivers who are educated about indoor air asthma triggers.

Healthier Indoor Air in Schools

In 2002 1,228,500 students, faculty and staff will experience improved indoor air quality in their schools.

In 2001 1,930,000 students, faculty and staff will experience improved indoor air quality in their schools.

In 2000 2,580,000 students, faculty and staff are experiencing improved indoor air quality in their schools.

In 1999 1,050,000 students, faculty, and staff experienced improved indoor air quality in their schools.

Performance Measures:	FY 1999 Actuals	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Request	
Students/Staff Experiencing Improved Indoor Air Quality in Schools	1,050,000	2,580,000	1,930,000	1,228,500	Students/Staff

Baseline: The nation has approximately 110,000 schools with an average of 525 students, faculty and staff occupying them for a total baseline population of 58,000,000. The IAQ "Tools for Schools" Guidance implementation began in 1997, and the program's projection for 2002 is that an additional 2,340 schools will implement the guidance (additional, not cumulative since there is not an established baseline for good IAQ practices in schools.)

Verification and Validation of Performance Measures

Performance Measure: People Living in Radon Resistant Homes

Performance Database: Survey

Data Source: National Association of Home Builders (NAHB) annual membership survey

QA/QC Procedures: Not known - Data is obtained from an external organization

Data Quality Review: N/A

Data Limitations: This is a voluntary survey and may under report the number of radon resistant new homes built.

New/Improved Data or Systems: None

Performance Measure: People Living in Radon Mitigated Homes

Performance Database: External

Data Source: Radon fan manufacturers report fan sales to the Agency.

QA/QC Procedures: Not known - Data is obtained from external organizations

Data Quality Review: N/A

Data Limitations: Reporting is voluntary and may underestimate the number of radon fans sold.

New/Improved Data or Systems: None

Performance Measure: Children Under 6 not Exposed to Environmental Tobacco Smoke (ETS) in the Home

Performance Database: National telephone survey of a representative sample of almost 31,000 homes.

Data Source: EPA

QA/QC Procedures: Designed, conducted, and analyzed in accordance with approved Agency procedures.

Data Quality Review: N/A

Data Limitations: Random digit dialing methodology is used to ensure that a representative sample of households has been contacted; however, survey is subject to inherent time limitations of voluntary telephone surveys of representative samples.

New/Improved Data or Systems: None

Performance Measure: Students/Staff Experiencing Improved Indoor Air Quality (IAQ) in Schools

Performance Database: Survey of representative sample of schools.

Data Source: EPA

QA/QC Procedures: Designed, conducted, and analyzed in accordance with approved EPA QA/QC procedures.

Data Quality Review: N/A

Data Limitations: Subject to inherent limitations of voluntary telephone surveys of representative samples.

New/Improved Data or Systems: Survey will be conducted in 2001 to determine implementation and adoption of good IAQ practices.

Coordination with Other Agencies

EPA serves a unique role in programs related to safety, consumer products and schools because of its experience and track record in raising public awareness of actual and potential indoor air risks, in addition to past work on indoor air quality issues associated with consumer products, and its expertise in the areas of indoor air quality in schools. EPA also plays a lead role in the Task Force for Environmental Asthma Issues.

EPA works with Federal, state, and local government agencies, industry, non-profit organizations, individuals as well as other nations to promote more effective approaches to identifying and solving indoor air quality problems. EPA works with the:

- C Department of Health and Human Services (HHS) to develop and conduct programs aimed at reducing children's exposure to known indoor triggers of asthma, including environmental tobacco smoke;
- C Department of Housing and Urban Development (HUD) on home safety issues especially those affecting children;
- C Consumer Product Safety Commission (CPSC) to identify and mitigate the health hazards of consumer products designed for indoor use;
- C Department of Education (DoEd) to encourage construction of schools with good indoor air quality; and
- C Department of Agriculture (USDA) to encourage USDA Extension Agents to conduct local projects designed to reduce risks from indoor air quality.

As Co-chair of the interagency Committee on Indoor Air Quality (CIAQ), EPA works with the CPSC, the Department of Energy, the National Institute for Occupational Safety and Health and the Occupational Safety and Health Administration to review EPA draft publications, arrange the distribution of EPA publications and coordinate the efforts of Federal agencies with those of state and local agencies concerned with indoor air issues.

Statutory Authorities

Radon Gas and Indoor Air Quality Research Act of Title IV of the Superfund Amendments and Reauthorization Act (SARA) of 1986

Toxic Substances Control Act (TSCA), section 6, Titles II, and Title III (15 U.S.C. 2605 and 2641-2671)

Federal Insecticide, Fungicide and Rodenticide Act (FIFRA)

Clean Air Act (CAA)

Safe Drinking Water Act (SDWA)

Environmental Protection Agency

FY 2002 Annual Performance Plan and Congressional Justification

Preventing Pollution and Reducing Risk in Communities, Homes, Workplaces and Ecosystems

Objective # 5: Facilitate Prevention, Reduction and Recycling of PBTs and Toxic Chemicals

By 2005, facilitate the prevention, reduction, and recycling of toxic chemicals and municipal solid wastes, including PBTs. In particular, reduce by 20 percent the actual (from 1992 levels) and by 30 percent the production-adjusted (from 1998 levels) quantity of Toxic Release Inventory (TRI)-reported toxic pollutants which are released, disposed of, treated, or combusted for energy recovery, half through source reduction

Resource Summary

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Actual	FY 2001 Enacted	FY 2002 Request
Facilitate Prevention, Reduction and Recycling of PBTs and Toxic Chemicals	\$41,923.2	42,130.70	47,448.30	40,661.20
Environmental Program & Management	\$32,850.7	31,207.60	38,395.80	31,608.70
State and Tribal Assistance Grants	\$9,072.5	\$10,923.1	\$9,052.5	\$9,052.5
Total Workyears	211.8	264.9	193.3	185.2

Key Programs

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Request
Design for the Environment	\$4,724.9	\$4,741.9	\$4,976.8	\$4,979.0
New Chemical Review	\$0.0	\$1,443.0	\$1,604.3	\$1,608.0
Pollution Prevention Program	\$9,449.5	\$8,333.2	\$8,608.9	\$8,871.5
Pollution Prevention Incentive Grants to States	\$5,999.5	\$5,999.5	\$5,986.3	\$5,986.3

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Request
RCRA State Grants	\$3,073.0	\$3,073.0	\$3,066.2	\$3,066.2
Waste Minimization	\$2,413.2	\$1,913.3	\$1,979.9	\$2,120.0
Source Reduction	\$2,299.0	\$1,950.9	\$1,883.3	\$2,052.7
Recycling	\$4,232.9	\$3,639.3	\$3,351.1	\$3,712.7
Common Sense Initiative	\$1,119.1	\$379.5	\$385.2	\$0.0
Administrative Services	\$0.0	\$58.5	\$96.7	\$95.7
Regional Management	\$0.0	\$89.0	\$85.3	\$90.0

FY 2002 Request

Pollution prevention (P2) is designed to prevent contaminants from entering the environment, in contrast to risk management and remediation, which are designed to control pollutants that have already been introduced. Under the Pollution Prevention Act of 1990, “pollution should be prevented or reduced at the source whenever feasible” as the preferred approach to environmental protection. Compared to approaches that control, treat, or clean up pollution, P2 can sometimes be more effective in reducing potential health and environmental risks to the extent that it may:

- reduce releases to the environment;
- reduce the need to manage pollutants;
- avoid shifting pollutants from one media (air, water, land) to another; and
- protect natural resources for future generations by cutting waste and conserving materials.

Preventing pollution can be cost-effective to industry in cases where it reduces excess raw materials and energy use. P2 can also reduce the need for expensive “end-of-pipe” treatment and disposal, and support quality improvement incentives in place at facilities. Current EPA strategies include institutionalizing preventive approaches in EPA’s regulatory, operating, and compliance/enforcement programs and facilitating the adoption of pollution prevention techniques by states, tribes, the academic community and industry. EPA uses market incentives, environmental management tools and new technologies to promote wider adoption of P2 measures.

Much progress has been made in carrying out these strategies, though more work remains. Perhaps the fastest growing opportunities lie in private sector partnerships, which enable EPA’s knowledge of P2 principles and techniques to be combined with industry-specific expertise in production and process design. Another opportunity for building P2 practices into industrial operations lies in partnerships with the

academic community. By developing and providing educational tools for universities to train the next generation of engineers, we plant the seeds needed to replicate P2 practices throughout industry.

FY 2002 Key Program Activities

In FY 2002, EPA will work to achieve the pollution prevention objective by pursuing a coordinated set of activities, tailoring programs and projects to the concerns and interests for each arena. Every type of organization and each individual consumer has a part to play in preventing pollution. P2 approaches can be flexibly applied to most endeavors. The Agency will promote effective pollution prevention through the following programs and activities:

Pollution Prevention Incentive Grants to States

The States are the primary sources for businesses and communities that are seeking assistance in identifying and applying prevention approaches. EPA has provided seed money to help states in promoting innovation and developing state capacity. The Pollution Prevention Incentives for States (PPIS) grants foster the development of new P2 approaches by providing funds to states in the areas of technical assistance and training, education and outreach, regulatory integration, demonstration projects, legislative activities and awards programs. Another key program for states, the Pollution Prevention Resource Exchange, helps to support technical assistance organizations by coordinating the development and dissemination of up-to-date information on P2 approaches.

Pollution Prevention Program

(a) *Sustainable Business Practices.* Businesses can sometimes reduce costs significantly by implementing effective P2 programs. Sometimes the savings are not readily apparent because of the structure of the company's internal accounting system. The Agency will play a role in encouraging businesses to modify their management accounting systems to fully and explicitly account for environmental costs. These strategies are designed to improve the current business management framework in ways that will enable companies to more easily choose prevention practices.

EPA will build on the success of the Michigan Source Reduction Initiative (MSRI) by initiating additional projects in FY2002 using the approach pioneered under the MSRI. EPA is working to identify new industry partners. In addition, the Agency will develop Sustainable Business Franchises to provide corporations a fully developed, self-sustaining module for the delivery of environmental technical assistance. Finally, EPA plans a project called "Driven to Success: Benchmarking Eco-Leadership" to provide a

The Michigan Source Reduction Initiative (MSRI)

MSRI was undertaken by NRDC, Dow Chemical, and a group of community activists to reduce waste and emissions at Dow's Midland, Michigan, chemical manufacturing plant. The project, begun in late 1996 and completed in April 1999, aimed to achieve its 35% reduction goal through pollution prevention and manufacturing process improvements that decreased waste before being generated. The project exceeded that goal, achieving emission reductions of 43 percent. The facility's initial investment of \$3.1 million in these improvements has returned \$5.4 million annually.

clearer picture of those environmental performance initiatives that result in sustainable industrial and business practices, and to better identify and delineate the factors that motivate companies to undertake these initiatives.

(b) Government Actions. The Agency is invested in sharing information and supporting State programs on Pollution Prevention. During FY2002, State Program Support will include management of the PPIS grants (discussed above); P2 Results; and support of the National Pollution Prevention Roundtable. In the area of Information Sharing, EPA will continue funding the Pollution Prevention Information Clearinghouse and management of the highly successful Pollution Prevention Resource Exchange.

(c) Safer Products. EPA has the lead in implementing the Pollution Prevention Act (PPA) and in carrying out Executive Order 13101 and its predecessor, Executive Order 12873, section 503. The PPA requires EPA to “identify opportunities to use Federal procurement to encourage source reduction.” These orders require the Federal government to use its purchasing power - about \$200 billion in goods and services each year - to create a demand for products and services that have a reduced impact on the environment (i.e., environmentally preferable products, or EPPs). The Agency finalized guidance in 1999 to help executive agencies identify and purchase environmentally preferable products and services. In FY 2002, EPA will expand demonstration projects to include electronic products and Department of the Interior cafeteriaware. Other program activities for FY2002 include the development of tools to assist government purchasers in making environmentally preferable purchases. Additionally, the Agency will conduct a benchmark measurement of the performance and extent to which government purchasers are actually making environmentally preferable purchases.

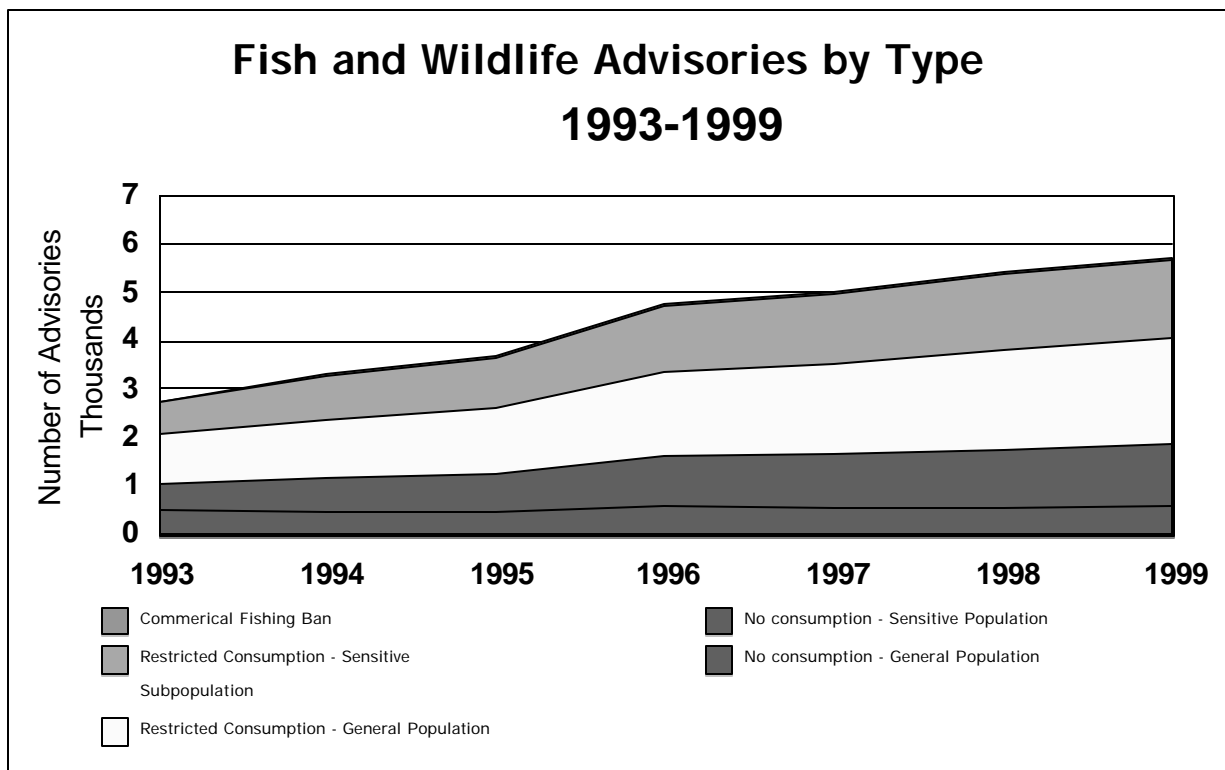
EPA is moving forward with efforts to provide information consumers can use to make environmentally friendly choices, through the use of Environmentally Preferable Products (EPP). The Consumer Labeling Initiative (CLI) is designed to improve household product labels to better present environmental, safe use, health, and other information. Proper labeling is especially important for products that are used by or around children, so that parents can evaluate potential risks to children from possible exposure to toxic chemicals. During FY2002, the CLI program will conduct significant public outreach on *Reading the Label – First*, encouraging consumers to read the product label prior to purchase and use.

(d) PBT Program. The Agency is concerned about persistent, bioaccumulative and toxic (PBT) substances, such as mercury, dioxin, and DDT, because these pollutants persist in the environment and can build up to high concentrations in human and animal tissue. Some PBTs can cause developmental and neurological defects in fetuses and young children and some are also suspected endocrine disruptors.

(e) Environmental Justice through Pollution Prevention. The Environmental Justice P2 Program administers grants to low-income, minority and federally recognized tribal communities to develop innovative P2 projects and capacity building approaches to address environmental concerns. In 2002, this

program will be phased out as a separate component of the P2 program, reflecting increasing integration of P2 and environmental justice into other base programs.

To address continuing issues associated with PBTs, EPA launched a cross-office, cross-media PBT program in FY 1999. Through this effort, the Agency seeks to prevent, minimize and, when possible, eliminate PBTs which are harmful to both human health and the environment. The initiative's cross-media approach is designed to stop the transfer of PBT pollutants across media using all of EPA's tools: regulatory, compliance assistance, enforcement, research, voluntary actions, prevention, and international negotiations. The PBT program fosters cross-agency collaboration on activities related to priority PBTs by building on actions by individual national program offices and regions, and by providing resources for



priority PBT activities that further this agency-wide effort. **This chart shows fish and wildlife advisories issued from 1993 to 1999. Persistent bioaccumulative toxic (PBT) chemicals (e.g., mercury, PCBs, chlordane, dioxins, and DDT) were involved in 99% of all advisories. EPA and its partners are addressing the presence of PBTs in the environment. The advisory data indicate that much work needs to be done to ensure that individuals who consume fish and wildlife in quantity are protected from toxics in their food. The Agency is currently reviewing the extent to which changes in monitoring, rather than changes in water quality, may have impacted the numbers over time.**

By the beginning of FY 2002, the Agency plans to establish an agencywide, complete PBT Strategy and specific National Action Plans for priority PBTs, and to initiate full-scale implementation of those plans, particularly for mercury. Critical measurement and monitoring efforts will be in their third year, facilities will be collecting PBT chemical release data under the new TRI rule, and submissions under TSCA

for approval of new PBT chemicals for entry into commerce will be under close scrutiny. New activities for FY 2002 are to include:

- Development of cross-cutting action plans for PBT monitoring and risk communication
- Increased focus on regional/state implementation projects
- Major emphasis on dioxin, continuing emphasis on mercury and PCBs
- First results from major measuring, monitoring and data collection efforts

To ensure full scientific and public review as potential PBT chemicals are identified, EPA is increasing its peer review and outreach. In a key example, the Agency is formulating a request to the Science Advisory Board (SAB) to review the issue of whether lead should be classified as a highly bioaccumulative substance. The SAB review process is an open, public process. The Agency also has an ongoing working relationship with representatives of the metals industry. EPA will continue to meet with them and other interested members of the public on issues of appropriate methodologies for determining the levels of persistence and bioaccumulation of metals and metal compounds.

Design for the Environment and Other Programs

One of the Agency's key P2 industry sector-based programs focuses on fostering cleaner technologies and the reduction of potential risks to health and the environment through the adoption of safer chemicals and workplace practices. EPA's Design for the Environment (DfE) Program works in partnership with industry to develop comparative risk, performance, and cost information about alternative technologies, chemicals, and processes to better aid industry in making environmentally-informed decisions. Through this program, EPA has entered into partnerships with more than 15 industries, including printing and graphics; textile and garment care; electronics and computers; automotive manufacturing, repair, and refinishing; industrial and institutional laundries; foam furniture manufacturing; paints and coatings; and others. In 2002, EPA intends to initiate DfE Partnerships in the boat building and furniture repair industries.

DfE partnership projects support the reduction of risks to health and the environment through the development of a better understanding of workplace and environmental hazards, through identifying incentives to encourage the adoption of safer workplace practices, and through providing technical support towards the redesign of safer chemicals, mixtures, formulas, products, and technologies. In particular, DfE partnerships have already begun to see changes in either the use of chemicals or workplace practices in industrial and institutional laundry product formulations, dry-cleaning and garment care, and in the electronics industry. DfE's partners in the flexographic ink, electronics, and foam furniture product industries expect to complete the technical aspects of these alliances during FY 2001 and will continue outreach activities through 2002.

DfE has completed comparative assessments on over 700 chemicals and continues to evaluate several hundred additional chemicals each year. The switch to alternative cleaner, safer chemistries and/or

the adoption of P2 practices in the workplace can result in the reduction of the use of hazardous chemicals. These use reductions will translate into lower quantities of hazardous chemicals released, disposed of, treated, or combusted for energy recovery; contributing to the overall objective of achieving a 20 % reduction in such quantities.

The current focus of the Green Engineering Program (GE) is on education. Green Engineering aims to educate senior-level undergraduates as well as graduate students in engineering to build P2 principles into the design and operation of industrial processes. EPA has developed a Green Engineering textbook and other educational materials. Several schools have already used the draft manuscript in their classes as a primary textbook. EPA is working with the American Society of Engineering Education (ASEE) to further disseminate GE information to engineering schools. In 2002, there will be Green Engineering Tract at the Summer American Society of Engineering Education (ASEE) Conference.

The Buy Clean program applies Environmentally Preferable Purchasing principles to indoor environmental quality, with an emphasis on its potential for reducing risk to schoolchildren from exposure to indoor air pollutants. Concentrations of environmental chemicals can be considerably higher indoors than outside, and many indoor air pollutants are suspected of triggering asthma episodes in children. The program is focusing on products used in schools, placing priority on developing guidance, resources, and incentives for schools and their partners to evaluate products and services on the basis of health, environmental, and product effectiveness characteristics; incentives for schools to purchase preferable products and services; and incentives for manufacturers to commercialize and market environmentally preferable products and services.

In 2002, EPA will complete development of the technical tools and supporting infrastructure necessary to begin to extend the Buy Clean program nationwide. This work will build upon the pilot grant program, case studies, tools and guidance materials developed for Buy Clean. EPA will finalize and distribute the case studies from the pilot Buy Clean programs and recognize the accomplishments of the pilot Buy Clean schools, which were implemented across the country. These case studies and accomplishments are intended to serve as examples for other schools to implement Buy Clean. As the program pilots are evaluated, outreach to other state and federal partners, such as the Department of Education, will take on increasing importance to the success of the program. One outreach option under consideration is to establish a network of centers with public health expertise that would assist schools, develop additional tools for vendors, and work with City, County and State public health professionals and other partners.

The pollution prevention approaches discussed above are aimed at providing assistance and incentives to various sectors of society to promote new habits and new ways of doing business that are sustainable, cost-effective and beneficial to the environment. These activities can promote greater ecological efficiency and therefore help to reduce the generation and release of production-related waste.

Green Chemistry

The Green Chemistry Program fosters the research, development, and implementation of innovative chemical technologies that can accomplish pollution prevention in both a scientifically-sound and cost-effective manner. The Green Chemistry Program recognizes and promotes chemical technologies that reduce or eliminate the use or generation of hazardous substances during the design, manufacture, and use of chemical products and processes and that have broad application in industry. More specifically, the Green Chemistry Program supports fundamental research in the area of environmentally benign chemistry as well as a variety of educational activities, international activities, conferences and meetings, and tool development. Green Chemistry Program partners include industry, academia, trade organizations, scientific societies, and other state and federal government organizations.

The Green Chemistry Challenge Program continues to be effective at catalyzing the behavioral change necessary to drive the research, development, and implementation of green chemistry technologies. In addition, this program also continues to provide an opportunity to quantitatively demonstrate the technical, environmental, and economic benefits that green chemistry technologies offer. In 2002, the Green Chemistry Program will also be focusing its outreach, awards, and grants efforts to target 1) certain audiences not currently involved in green chemistry product and process design and 2) specific high priority chemicals, products, and/or processes for which safer or greener alternatives are not available.

Resource Conservation and Recovery Program

Pollution prevention and safe recycling are two of the nation's best tools for environmental protection. Well implemented, systematic source reduction and recycling programs solve waste management problems at their source, lowering pressure on the environment and reducing energy use at a number of critical points- production of raw materials, subsequent processing into finished products, and eventual transport and disposal at a waste management facility. At the same time, the best programs save industry and government money.

The Resource Conservation and Recovery Act (RCRA) directs EPA to promote a reduction in the amount of waste generated and improved recovery and conservation of materials through recycling. The RCRA program emphasizes a national policy focusing on a hierarchy of waste management options that advocates source reduction, reuse and recycling over treatment and disposal. In the 1990 Pollution Prevention Act, Congress codified this hierarchy of waste management options, reaffirming the need for source reduction and recycling programs for both hazardous and municipal solid wastes.

The activities in this objective encompass the Agency's partnership with states, Tribes and local communities to reduce toxic chemicals in industrial hazardous waste streams, to reduce the generation of municipal, hazardous and other solid waste through pollution prevention, and to increase recycling of hazardous and municipal solid waste.

In the hazardous waste arena, the Agency is complementing its regulatory control program with a strong emphasis on developing waste minimization partnerships with industry to reduce the generation of

wastes that are most harmful to human health and environment. In concert with international goals of reducing the presence of persistent, bioaccumulative and toxic chemicals (PBTs) in the environment, the RCRA program will rely on a list of chemicals of concern developed across EPA and will emphasize voluntary partnerships with states, industry and communities to find ways to reduce them.

The Agency is currently drafting an initial description of trends in amounts of PBT constituents in hazardous waste since 1991. This trends report is planned as the first annual analysis that will aid EPA in tracking progress toward its GPRA goal of reducing the presence of PBT chemicals in RCRA hazardous waste by 50 percent by 2005, compared to a 1991 baseline. The annual trends analysis will give an overview of the state generation and management of hazardous waste containing PBTs and will provide detail by industry sector and by state.

In 2002, EPA will focus its efforts on the implementation stage of its program to reduce hazardous wastes containing PBTs. EPA will sponsor industry workshops, encourage increased technical assistance and information sharing, and publicly recognize industry leaders. One example is a multi-year partnership with the New England states to reduce the generation of industrial hazardous and municipal waste containing mercury. This partnership is already influencing companies that produce appliances and instruments containing mercury to examine low or non-mercury technologies.

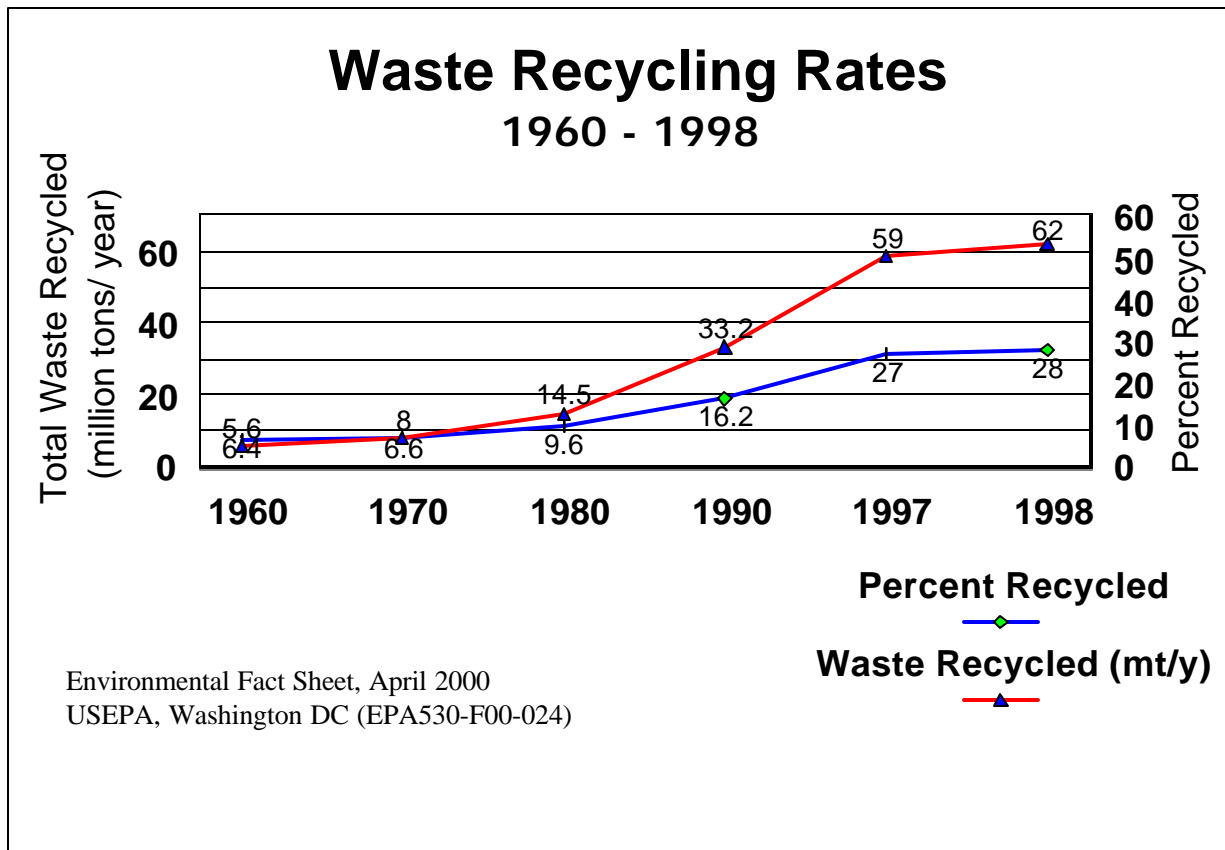
The Agency will be reviewing where regulatory innovations can increase the rate of recycling in 2002. This will include regional and State collaboration to clarify or revise existing policy related to hazardous waste recycling. EPA will also increase recycling by working with industry. The Agency will continue its efforts to issue a rule encouraging the recycling of lead-containing cathode-ray tubes, investigate whether other electronic devices are being recycled safely and how electronics recycling can be increased, and continue to work with specific industry sectors (e.g., printing and metal finishing) on innovative approaches to promoting safe recycling.

Pollution prevention and waste reduction have clear benefits combating the ever-growing stream of municipal solid waste. Annual generation of municipal solid waste (MSW) grew steadily from 88 million to 217 million tons between 1960 and 1997. MSW includes waste generated from residences, commercial establishments, institutions, and industrial non-process operations. The RCRA municipal solid waste program provides national leadership, technical assistance and outreach for businesses, industry, and municipalities implementing source reduction and recycling systems in their plants, facilities and communities, as well as for states and tribes whose laws provide the structure for these activities. The program implements a coordinated set of strategies to manage wastes, including source reduction (also called waste prevention), recycling (including composting), combustion, and landfilling. Preference is given to strategies that maximize the diversion of waste from disposal facilities, with source reduction (including reuse) as the highest priority, followed by recycling.

In 2002, the Agency will promote the economic, environmental, and social benefits of municipal solid waste source reduction and recycling, including composting. The Agency will continue building

partnerships with government agencies, tribes, non-profit organizations, business, and industry to make advancements toward achieving the national goal of a 35% diversion of municipal solid waste from landfills and combustion by 2005. The Agency will share technical information through satellite broadcast forums, workshops, training, and outreach materials. These efforts will help local governments assess progress by applying EPA's Source Reduction Measurement Methodology and establish equitable and fair "Pay as You Throw" fee systems for solid waste services. The Agency will promote participation in voluntary programs like WasteWise and engage in discussions with business and industry to show them how they can help achieve the national recycling goal. EPA will focus on materials that are difficult to recycle and materials that are generated in large quantities including construction and demolition debris, electronics, food waste, tires, plastics and carpet.

In 2000, WasteWise signed its 1000th partner. The program's partners have reduced in total over 7.7 million tons of waste. WasteWise will recruit new partners by demonstrating the best practices in waste diversion and buying recycled products, and help partners realize how they can save money by doing it. In 2002, the WasteWise program will seek federal sector partners to promote source reduction, recycling and buy-recycled programs. EPA expects dozens of additional partners as a result of increased compliance with RCRA 6002, which requires federal agencies to buy products made with recycled content. Regional staff will recruit new partners and will provide valuable technical assistance to them.



The WasteWise federal sector focus complements EPA's issuance of additional Comprehensive Procurement Guidelines (CPG) that establish guidelines for Federal and state purchasing to help improve the market for products made from materials recovered from the solid waste stream. These efforts will foster implementation of Executive Order 13101, which requires Federal agencies to reduce waste, reuse materials and recycle. In 2000, 18 items, such as industrial drums, carpet cushion and park benches, were added to the CPG bringing it to a total of 54 products. Continuing advancements in technology development will increase the number and quality of recycled content products in the marketplace that could be featured in EPA's biannual guidelines, required by Executive Order 13101.

One effort that has built momentum both internationally and domestically and is expected to continue into 2002 is *Extended Product Responsibility* (EPR). By engaging in discussion with product manufacturers, EPA will encourage them to evaluate the life cycle of their product so that product design and manufacturing can be modified to reduce impacts on the environment. The Agency will encourage product manufacturers to determine what their appropriate role is in the recycling of their products at end-of-life. EPA has witnessed substantial engagement by electronics and carpet manufacturers in EPR discussions this past year. EPR is a broad-reaching environmental principle that will complement environmental programs across the Agency.

Through creation of new recycling and reuse businesses, EPA's Jobs Through Recycling (JTR) program has succeeded in stimulating both markets for recycled materials and job opportunities. In 2002 the JTR program will provide a national forum for information exchange on recycling technology, economics of recycling, and business financing opportunities.

FY 2002 Change from FY 2001 Enacted

EPM

- (-\$1,424,800, -4 FTE) The Environmental Justice Grants Program was eliminated due to the need to focus resources on higher priority mandated programs and to meet the new Agency workforce levels.
- (-\$104,700, -1 FTE) One FTE was reduced in the Design for the Environment program to meet the new Agency levels. DfE partnerships in 2002 will be reduced in scope from previous years.
- (-2.7 FTE) The reduction is from the facilitation of prevention, reduction and recycling of Persistent Bioaccumulative Toxins (PBTs), and Municipal Solid Waste (MSW).
- (-\$12,571,900) The FY 2002 request is \$1,995,500 below the FY 2001 Enacted budget level due to Congressional earmarks received during the FY 2001 appropriations process which are not included in the FY 2002 President's Request.

- (+\$980,800) This increase reflects an increase in workforce costs.
- (+\$310,000) The Agency redirected resources from Goal 5 to support waste identification activities. EPA will issue a rule encouraging the recycling of lead-containing cathode-ray tubes and collect data on innovative approaches to promoting safe recycling in the printing and metal finishing sectors.
- (+\$385,000) The Agency redirected resources from Goal 5 to support waste minimization activities that focus on reducing hazardous wastes containing PBTs. This will be accomplished through voluntary partnerships with states, industry and communities and by sponsoring industry workshops, increasing technical assistance and providing public recognition.
- (+\$207,300) The Agency redirected resources from Goal 5 to adjust the working capital fund.

Annual Performance Goals and Performance Measures

Toxic Release Inventory (TRI) Pollutants Released

- In 2002 The quantity of Toxic Release Inventory (TRI) pollutants released, disposed of, treated or combusted for energy recovery in 2002, (normalized for changes in industrial production) will be reduced by 200 million pounds, or 2%, from 2001. This data will be reported in 2004.
- In 2001 The quantity of Toxic Release Inventory (TRI) pollutants released, disposed of, treated or combusted for energy recovery in 2001 (normalized for changes in industrial production) will be reduced by 200 millions pounds, or 2%, from 2000. This data will be reported in 2003.
- In 2000 Projections for Form Rs submitted are based on past year submissions.
- In 2000 EPA exceeded its target of a reduction of 200 million pounds of TRI pollutants released.
- In 1999 Total releases of toxic chemicals decreased by 38.8million pounds from 1995 thru 1997. The 1997 TRI data, however, reflect a continued increase in production related wastes. This increase is accompanied by a continued increase in the use of pollution prevention practices by industry.

Performance Measures:	FY 1999 Actuals	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Request
Form Rs with Source Reduction activities (cumulative)		134,000		Facilities
Reduction of TRI non-recycled waste (normalized)	1.1B lbs	incr.405 Million	200 Million	200 Million lbs

Baseline: Baseline for 2002 is level of pollutants released in 2001.

Improvement of Indoor Environ. Quality in Schools

In 2002 Work with one school district to develop criteria/tools for procurement of products that will improve indoor environmental quality; identify two high priority product categories for use in pilot.

In 2001 Work with school districts to develop criteria/tools for procurement of products that will improve indoor environmental quality; identify two high priority product categories and set health-based product criteria for use in pilot school districts.

In 2000 In FY2000, EPA entered into an agreement with one school district in Mass. to improve indoor environmental quality and set health-based product criteria. This district is piloting a project to develop procurement specifications and implement a pilot "Buy Clean" program for two product categories.

Performance Measures:	FY 1999 Actuals	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Request	
Agreement reached with school district on purchasing criteria for two product categories.		1	2	2	Agreements
Pilot programs with actual schools				8	Pilot Programs

Baseline: Baseline is under development as part of the project.

Safer Alternative Cleaning Technologies

In 2002 Expand P2 practices in the garment care industries by achieving a reduction in the use of perchloroethylene by the dry-cleaning industry from the 1997 levels.

In 2001 Expand P2 practices in the garment care industry by achieving reduction in the use of perchloroethylene by the dry cleaning industry from 1997 levels.

In 2000 Supporting expanded P2 practices in a the garment and textile care industry , data for Jan.-Oct. 2000 indicates 348 wetcleaning machine sales. This is 36% over the 1998 base year. Projections based on the prior eight months were used for Nov. and Dec.

In 1999 Overall, the DfE program has formed partnerships with industry to reduce million of pounds of hazardous chemicals, reduce worker exposure, increase awareness of safer practices, and develop environmentally preferred products. Dry cleaners reduced perc use by 11 million pounds in 1998.

Performance Measures:	FY 1999 Actuals	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Request	
Percentage increase in the use of alternative cleaning technologies by garment care industry	10%	36%			Use-cumulative
Perchloroethylenereduction			30%	38%	Use Reduction (cum)

Baseline: In 1997, 83 million pounds perchloroethylene (perc) used; in 1998, 72 million pounds of perc used; in 1999, 63 million pounds of perc used.

Cleaner Products/Technologies

- In 2002 Expand the use of cleaner technologies in priority industries.
- In 2001 Achieve a 5% increase in use of cleaner flexographic ink technologies and cleaner (water or non-solvent-based) adhesives or bonding techniques in foam furniture products. Expand the use of cleaner technologies in priority industries.
- In 2000 The technical assessment of traditional and alternative ink formulations was delayed though completed in FY2000. Outreach activities began only after the assessment was complete. We expect to see the results of this work in FY 2001.

Performance Measures:	FY 1999 Actuals	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Request	
For inks, track size of flexographic ink industry and market share (\$ and lbs) of cleaner inks.		0%	10%	15% (cum)	Market share
For adhesives, track size of cleaner adhesive industry market share.			5%	10% (cum)	Market Share
For eco-friendly detergents, track the number of laundry detergent formulator industry partners.			8	15	Partners (cum)
Regional project to expand the use of cleaner technologies				15	Projects

Baseline: Eco-friendly detergents baseline is 1997: 0 partners, 0 detergents Adhesives baseline is 1997 -- measure is increase in market share from baseline. Baseline for flexographic inks measure is 1998.

Pollution Prevention Outreach Efforts

- In 2002 Broaden outreach efforts on P2 methods to colleges, universities and tribal schools, sponsoring college training network and modifying curricula to better reflect tribal values
- In 2001 Broaden outreach efforts on P2 methods to colleges, universities and tribal schools, sponsoring college training network and modifying curricula to better reflect tribal values
- In 2000 As a result of the change in priorities and tighter resources, the P2/DfE program has shifted to creating on-line/web-based materials. This strategy is farther reaching and more cost effective in responding to the continued need to make this information available.

Performance Measures:	FY 1999 Actuals	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Request	
Number of P2/DfE curricula (comm. coll. and tribal) instructor workshops and training modules developed		4			Ed. Tools

Adoption of Green curriculum by chemical engineering departments. 25 50 Department Cum.

Baseline: Baseline is number of workshops and curricula developed from start of project in 2000 and 16 chemical engineering departments attended workshops in 1999.

Municipal Solid Waste Source Reduction

In 2002 Divert an additional 1% (for a cumulative total of 31% or 69 million tons) of municipal solid waste from land filling and combustion, and maintain per capita generation of RCRA municipal solid waste at 4.3 pounds per day.

In 2001 Divert an additional 1% (for a cumulative total of 30% or 67 million tons) of municipal solid waste fromland filling and combustion, and maintain per capita generation of RCRA municipal solid waste at 4.3 pounds per day.

In 2000 FY 2000 data is not available for the diversion of municipal solid waste from land filling and combustion (goal was an additional 1%) or maintaining per capita generation of RCRA municipal solid waste to 4.3 pounds per day. Analysis of FY 1999 data is anticipated by September 2001.

In 1999 Data Unavailable

Performance Measures:	FY 1999 Actuals	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Request	
Millions of tons of municipal solid waste diverted. (NA=Not available)	NA	NA	67	69	million tons
Daily per capita generation of municipal solid waste.	NA	NA	4.3	4.3	lbs. MSW

Baseline: 1990 levels established at 17% of MSW diverted and 4.3 pounds MSW per capita daily generation.

Green Chemistry Challenge Awards

In 2002 Continue to stimulate development of new safe ("green") chemicals and safe chemical processes through public recognition for outstanding achievements in this field.

In 2001 Continue to stimulate development of new safe ("green") chemicals and safe chemical processes through public recognition for outstanding achievements in this field.

In 2000 EPA exceeded its target of 50 Green Chemistry Challenge Award nominations.

In 1999 EPA received 136 nominations in five categories, more than two and a half times its target. The efforts upon which these nominations were based produced reductions in use and emissions of hazardous substances, savings in capital investments, reduced worker exposure, and improved product yields.

Performance Measures:	FY 1999 Actuals	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Request	
Green Chemistry Challenge Award	134	74			Applications

Alternative feed stocks, processes, or safer products identified through Green Chemistry Challenge Award	50	110	Prod/proc (cum)
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Baseline: Baseline is zero in FY 2000.

Managing PBT Chemicals

In 2002 Initiate further actions pursuant to PBT Strategy and Level I PBT National Action Plans including a plan to address unique environmental health threats to Tribes and special populations.

In 2001 Initiate further actions pursuant to PBT Strategy and Level I PBT National Action Plans including a plan to address unique environmental health threats to Tribes and special populations.

In 2000 Review of available information during examination of potential Level II PBT chemicals led to a broader list than originally expected.

In 1999 EPA published a draft agency-wide PBT Strategy and draft Mercury Action Plan. EPA initiated ten new projects with primary focus on reducing mercury use and emissions. EPA also completed seven draft national action plans, which address 11 of the remaining priority PBTs.

Performance Measures:	FY 1999 Actuals	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Request	
Initiate risk reduction actions in accordance with National Action Plan	11				Chemicals
Integrate level II chemicals into National Action Plans.		19			Chemicals
Number of prevention and reduction projects initiated at HQ and in the Regions		12	25	35	Projects (Cum)
Publish final list of additional priority PBTs.			1		List
Hospital Mercury Project				200	Participants
Number of New Multiple-PBT Strategies Completed				2	Strategies

Baseline: For PBT risk reduction projects, the baseline is zero projects in FY 1999. The baseline for hospital mercury project is under development in FY 2001. The baseline for number of new multiple-PBT strategies completed is zero in 2001.

Reducing PBTs in Hazardous Waste Streams

In 2002 Reduce persistent, bioaccumulative and toxic chemicals in hazardous waste streams by expanding the use of state and industry partnerships and Regional pilots.

In 2001 Reduce persistent, bioaccumulative and toxic chemicals in hazardous waste streams by expanding the use of State and industry partnerships and Regional pilots.

In 2000 Goal not met. Due to an increase in scope of voluntary chemicals the final list on RCRA persistent, bio-accumulative and toxic (PBT) chemicals was not issued. EPA anticipates that the expanded list will be issued by September 2001.

In 1999 The schedule for finalizing the PBT List was delayed due to changes in the scope of effort. Based on public comments, EPA decided to expand the list to include other multi-media data. The schedule has been extended to include peer review of underlying data. EPA anticipates final publication in 2/00.

Performance Measures:	FY 1999 Actuals	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Request	
Issue final guidance on PBT Identification	0				document
Issue final PBT list.		0			list
Prepare a trends report that shows Toxic Release Inventory changes from 1991 to 2000.			1		report
Prepare a Trends Report that shows Toxic Release Inventory changes from 1991 to 1999 and report the percent of reductions of PBTs in hazardous waste streams.				1	report
Baseline: 1991 Toxic Release Inventory data will be used to determine reductions.					

Verification and Validation of Performance Measures

Performance Measure: reduction of TRI non-recycled wastes

Performance Database: TRIM: Toxic Release Inventory Modernization, formerly **TRIS** (Toxic Release Inventory System) - contains aggregate data on source reduction by individual reporting facilities. The aggregate data are used to provide a measure of national performance.

Data Source: Facilities reporting under TRI. For example, in FY 1998, 21,571 facilities filed 72,073 TRI reports.

QA/QC Procedures: Automated edits and error checks during data preparation by industry respondents; automated edits, error checks, data scrubs, corrections and normalization by EPA during data entry

Data Quality Review: GAO Report: Toxic Substances: EPA Needs More Reliable Source Reduction Data and Progress Measures (09/23/94, GAO/RCED-94-93). Report reviewed EPA's progress to implement source reduction reporting requirements, results of voluntary program to reduce emissions of 17 highly toxic chemicals, and activities to disseminate source reduction information to meet state and industry needs. Agency is working

on rulemaking to clarify the various types of source reduction activities under the Pollution Prevention Act.

Data Limitations: TRI release data cover chemicals which are on the TRI list and may be a fraction of the total releases. Therefore, TRI data may provide a partial measure of the impact of the Agency's pollution prevention activity under the Pollution Prevention Act. (PPA section 6604(b) is a partial enumeration of EPA activities under the PPA. TRI releasers are identified by regulation and are a narrower category of facilities.)

New/Improved Data or Systems: EPA plans to develop regulations for improving reporting of source reduction activities by TRI reporting facilities.

Performance Measure: Millions of tons of municipal solid waste diverted; Daily per capita generation of municipal solid waste

Performance Database: In the non-hazardous waste program, no national databases are in place or planned.

Data Source: The baseline numbers for municipal solid waste source reduction and recycling are developed using a materials flow methodology employing data largely from the Department of Commerce which can be found in an EPA report titled "Characterization of Municipal Solid Waste in the United States."

QA/QC Procedures: Quality assurance and quality control are provided by the Department of Commerce's internal procedures and systems. The report prepared by the Agency is then reviewed by a number of experts for accuracy and soundness.

Data Quality Review: The report, including the baseline numbers and annual rates of recycling and per capita municipal solid waste generation, is widely accepted among experts. There are various assumptions factored into the analysis to develop progress on each measure.

Data Limitations: Non-hazardous waste data limitations stem from the fact that the baseline statistics and annual rates of recycling and per capita municipal solid waste generation are based on a series of models, assumptions, and extrapolations and, as such, are not an empirical accounting of municipal solid waste generated or recycled. The data supporting the municipal solid waste generation and recycling measures are derived from generation data collected by the Department of Commerce from various industries as well as data from industries who use recyclable materials to help determine rates of recycling. There are various assumptions factored into the analysis to develop progress on each measure.

New/Improved Data or Systems: Since these numbers are widely reported and accepted by experts, no new efforts to improve the data or the methodology have been identified or are necessary.

Coordination with Other Agencies

This objective spans a broad range of pollution prevention activities, which can yield reductions in waste generation in both the public and private sectors. For example, the Environmentally Preferable Product initiative, which implements Executive Orders 12873 and 13101, is promoting the use of cleaner products by federal agencies, which may stimulate demand for the development of such products by industry.

This effort includes a number of demonstration projects with other federal departments/agencies, such as the General Services Administration (use of safer products for indoor painting and cleaning), Department of Defense (use of safer paving materials for parking lots), and Defense Logistics Agency (safer solvents). The program also works with the National Institute of Standards and Technology, the International Standards Organization, and other groups to develop standards for Environmental Management Systems.

In addition to business, industry and other non-governmental organizations, EPA will work with Federal, State, Tribal, and local governments to encourage reduced generation of waste as well as the safe recycling of wastes. Frequently, successful projects require multiple partners to address the multi-media nature of effective source reduction and recycling programs. The Agency has brought together a range of stakeholders to examine alternatives in specific industrial sectors, and several regulatory changes have followed which encourage hazardous waste recycling. Partners in this effort include the Environmental Council of States, the Tribal Association on Solid Waste and Emergency Response, and the Association of State and Territorial Solid Waste Management Officials.

As Federal partners, EPA and the U.S. Postal Service (USPS) work together on several municipal solid waste projects. For instance, rather than dispose of returned or unwanted mail, EPA and the USPS developed and implemented successful recycling procedures and markets, including the return of unwanted mail (advertisements, catalogues, etc.) to the Post Office for recycling rather than disposal by the recipient. In addition, EPA Regional offices have provided significant assistance to the National Park Service to implement Integrated Solid Waste Management Plans at parks in western states. EPA also works with the Small Business Administration to provide support to recycling businesses.

EPA has worked with the Council on Environmental Quality (CEQ) and the Federal Environmental Executive (FEE) to reinvigorate Federal leadership for sustainable recycling. In particular, the Agency is currently engaged with the Department of Defense, Department of Education, USPS, Department of Energy, the FEE, and other agencies to foster proper management of surplus electronics equipment, with a preference for reuse and recycling. With these agencies, and in cooperation with the electronics industry, EPA participated in developing a draft interagency memorandum of understanding (MOU) which will lead to increased reuse and recycling of an array of computers and other electronics hardware used by civilian and military agencies. Implementation of this MOU will divert substantial quantities of plastic, glass, lead, mercury, silver, and other materials from disposal.

Statutory Authorities

Toxic Substances Control Act (TSCA) sections 4 and 6 and TSCA Titles II, III, and IV (15 U.S.C. 2605 and 2641-2692)

Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) sections 3, 4, 5, 6, 11, 18, 24, and 25 (7 U.S.C. 136a, 136a-1, 136c, 136d, 136i, 136p, 136v, and 136w)

Pollution Prevention Act (PPA) (42 U.S.C. 13101-13109)

Clean Air Act (CAA) section 309 (42 U.S.C. 7609)

Clean Water Act (33 U.S.C. 1251-1387)

Emergency Planning and Community Right-to-Know Act (EPCRA) (42 U.S.C. 11001-11050)

Resource Conservation and Recovery Act (RCRA) (42 U.S.C. 6901-6992k)

Solid Waste Disposal Act as amended by the Hazardous Waste Amendments of 1984.

Environmental Protection Agency

FY 2002 Annual Performance Plan and Congressional Justification

Preventing Pollution and Reducing Risk in Communities, Homes, Workplaces and Ecosystems

Objective #6: Assess Conditions in Indian Country

By 2005, EPA will assist all federally recognized tribes in assessing the condition of their environment, help in building the tribes' capacity to implement environmental management programs, and ensure that EPA is implementing programs in Indian country where needed to address environmental issues.

Resource Summary

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Actual	FY 2001 Enacted	FY 2002 Request
Assess Conditions in Indian Country	\$52,155.7	\$54,432.6	\$64,357.7	\$64,609.4
Environmental Program & Management	\$9,570.4	\$10,239.0	\$11,888.0	\$12,139.7
State and Tribal Assistance Grants	\$42,585.3	\$44,193.6	\$52,469.7	\$52,469.7
Total Workyears	80.7	89.4	93.5	92.2

Key Programs

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Request
Tribal General Assistance Grants	\$42,585.4	\$42,628.4	\$52,469.7	\$52,469.7
Administrative Services	\$27.1	\$97.0	\$167.7	\$132.9
Regional Management	\$0.0	\$254.1	\$281.5	\$327.7

FY 2002 Request

Under Federal environmental statutes, the Agency has responsibility for assuring human health and environmental protection in Indian country. Since 1984, EPA policy has been to work with Tribes on a government-to-government basis that affirms the vital trust responsibility that EPA has with every federally-recognized Tribal government. EPA endeavors to address Tribal environmental priorities, ensure compliance with environmental laws, provide field assistance, assure effective communication with Tribes, allow flexibility in grant programs, and provide resources for Tribal operations. Agency-wide EPA Tribal funding has grown from about \$38 million to \$218 million in the last decade .

A lack of comprehensive environmental data severely impacts our ability to properly identify risk to human health and the environment in Indian country. Progress toward building Tribal and EPA infrastructure and completing a documented baseline assessment of environmental conditions by 38% of Tribes (covering 50% of Indian Country) will enable EPA/Tribes to identify high priority human health and environmental risks. These assessments will provide a blueprint for planning future activities through the development of Tribal/EPA Environmental Agreements (TEAs) or similar Tribal environmental plans to address and support priority environmental multi-media concerns in Indian country.

Under the authority of the Indian Environmental General Assistance Program (GAP) Act of 1992, EPA provides grants to Tribal governments and intertribal consortia for developing the capacity to administer multi-media environmental protection programs. In 2002, EPA is requesting \$52.5 million so that most Tribes will have at least one or two persons working in their community to build a strong, sustainable environment for the future. The vital work performed by these key people is to: assess the status of a Tribe's environmental condition; build an environmental program tailored to Tribe's needs, develop environmental education programs and solid waste management plans, assist in the building of Tribal environmental capacity, and alert EPA to serious conditions requiring attention in the near term in which EPA can work with the Tribe to respond to immediate public health and ecological threats.

The EPA has strived to work effectively with Indian Tribes since before the promulgation of its formal Indian Policy in 1984. Vital to that policy are the principles that the Agency has a government-to-government relationship with Tribes, and that "EPA recognizes Tribes as the primary parties for setting standards, making environmental policy decisions and managing programs for reservations, consistent with agency standards and regulations." To that end, EPA "encourage[s] and assist[s] Tribes in assuming regulatory and program management responsibilities," primarily through its Treatment in the Same Manner as a State (TAS) process under several environmental statutes. See, e.g., 33 U.S.C. § 1377 & 42 U.S.C. § 7601(d).

EPA's policy has been and will continue to be that Tribes develop the capability to implement federal programs themselves. However, in working with Tribes, EPA has realized that TAS does not suit the needs of all Tribes. Some Tribes with pollution sources and other environmental problems may be too small to support a fully delegated or approved environmental programs. Other Tribes are wary of seeking TAS status because it may lead to costly litigation that may in turn lead to a diminishment of Tribal sovereignty. As a result few Tribes

have sought TAS under EPA's various regulatory programs. In the absence of EPA-approved Tribal programs, EPA generally faces practical challenges in implementing the federal programs in Indian country. EPA will continue to encourage and work with Tribes to develop their capability to implement Federal environmental programs.

In accordance with EPA's longstanding policy, EPA is considering additional approaches for how EPA and Indian Tribes might work together to protect public health and the environment in Indian country. As part of that effort, EPA is again proposing appropriations language that would provide another tool to implement its federal programs while removing existing legal and procedural impediments to working directly and effectively with Tribal governments. The proposed language would allow EPA to award cooperative agreements to federally recognized Indian Tribes or Intertribal consortia if authorized by their tribal members to assist the Administrator in implementing federal environmental programs for Indian Tribes. These cooperative agreements would be made notwithstanding the Federal Grant and Cooperative Agreement Act requirements that federal agencies use a contract when the principal purpose of a transaction is to acquire services for the direct benefit or use of the United States. Cooperative agreements, rather than a contract under the federal acquisition regulation, are the preferred funding mechanism, since they better reflect the government-to-government relationship. They would be made using funds available to EPA for direct implementation of federal environmental programs on Indian lands. These cooperative agreements would not be awarded using funds designated for State financial assistance agreements.

The proposed language would promote Tribal participation when EPA is directly implementing federal environmental programs in Indian country or for Tribes. It would also help Tribes build the capacity to achieve TAS status if they wish to do so. While EPA would retain final decision-making authority and ultimate responsibility for all regulatory activities where EPA directly implements federal programs, the proposed language would allow for varying degrees of Tribal involvement in assisting EPA in carrying out the federal program depending upon a Tribe's interest and ability in carrying out specific work. Some Tribes might perform much of the work for EPA necessary to develop and carry out federal environmental programs. Other Tribes might gradually increase their involvement as their capacity to assist EPA increases over time. In this way, the proposed language would improve environmental protection while also building the capacity and expertise of the Tribes to run their own environmental programs.

Annual Performance Goals and Performance Measures

Tribal Environmental Baseline/Environmental Priori

In 2002	Baseline environmental information will be collected for 50% of Tribes.
In 2001	Baseline environmental information will be collected by 34% of Tribes (covering 50% of Indian Country).
In 2000	16% of tribal baseline information was collected by enabling a pilot demonstration model to access and display tribal information from EPA databases and data collection surveys containing environmental information. However, only four EPA/Tribal Environmental Agreements (TEAs) were signed.

In 1999 10% of Tribal environmental baseline information was collected and 46 additional tribes have tribal/EPA environmental agreements or identified environmental priorities.

Performance Measures:	FY 1999 Actuals	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Request	
Tribal environmental baseline information collected	10	16			% Baseline
Tribes with Tribal/EPA environmental agreements or identified environmental priorities	46	4			Tribes
Environmental assessments for Tribes (cumulative).			193	286	Tribes, etc.

Baseline: There are 572 tribal entities that are eligible for GAP program funding. These entities are the ones for which environmental assessments of their lands will be conducted.

Verification and Validation of Performance Measures

Performance Measure: Baseline environmental information will be collected for 38% of Tribes (covering 50% of Indian Country).

Performance Database: The American Indian Environmental Office (AIEO) is developing a new information system that will be used to access baseline environmental information. This information system will draw together environmental information on Tribes from the existing EPA databases, such as those from the Office of Water, EPA Regions, as well as databases from other federal agencies. All the data will be accessed on a per Tribe basis, so environmental information can be queried by Tribe, by state, by EPA Region, or nationally. Information that is GEO-referenced will be displayed graphically on an electronic map of tribal reservation boundaries. The information system will also have a narrative profile description by Tribe of environmental information and management activities.

Data Source: The data sources will be existing federal databases that are available nationally, both from EPA and from other agencies, supplemented by electronic data sources collected from the EPA regions. These data sources are all external and will be identified and referenced in our information system application.

QA/QC Procedures: Quality of the external databases will be described but not ranked. A Quality Management Plan is projected for development as agency-wide guidance is developed.

Data Quality Reviews: Tribes will have the opportunity to review and comment upon their Tribal Profile. Mechanisms for adjusting data will be supplied.

Data Limitations: Data limitations appearing in the Tribal profiles are subject to the data quality of the underlying database systems referenced.

Coordination with Other Agencies

EPA/BIA Interagency Cooperation on Environmental Compliance

EPA and the Bureau of Indian Affairs (BIA) are developing a working relationship on matters of pollution prevention and compliance assistance. For example, EPA is training BIA field staff on how to conduct their own pollution prevention and environmental compliance audits. EPA is also assisting BIA in audits of a number of selected BIA facilities that are likely to demonstrate environmental compliance issues common to many similar BIA facilities.

Solid Waste Interagency Workgroup

EPA and a large number of Agencies including the Bureau of Indian Affairs, the Indian Health Service, the Federal Aviation Administration, the National Oceanic and Atmospheric Administration, and the Departments of Housing and Urban Development, Agriculture (Forest Service and Rural Utilities Service), and Defense are working collaboratively to identify, prioritize and close solid waste dumps in Indian country. The Group is focusing on 146 of the highest priority sites from the Indian Health Service's 1997 Report to Congress, entitled "Open Dumps on Indian Lands," which contains an inventory of 1,162 open dumps in Indian Country. Additional agencies are likely to participate as the workgroup further defines its goals and strategy.

Other Examples of Interagency Coordination

Under a two-party Interagency agreement, EPA works extensively with the Indian Health Service to cooperatively address the drinking water and wastewater infrastructure needs of Indian Tribes. EPA and the Department of Interior are meeting to develop training for Tribes on the roles and responsibilities of Natural Resource Damage Trustees under Superfund authorities, with a pilot effort planned for Tribes in the Oklahoma/Kansas/Missouri mining belt. EPA is actively participating in the Department of Defense's Defense Environmental Restoration Task Force. EPA worked closely with the Department of Energy, Sandia Pueblo and Isleta Pueblo to approve the first temporary unit, on-site cleanup of Resource Conservation and Recovery Act (RCRA) wastes in Region 6 prior to disposal in an onsite corrective action management unit. Sandia Lab estimates the on-site treatment and disposal will save \$5 million in clean up costs. EPA Region 1 and the Agency for Toxic Substances Disease Registry (ATSDR) are evaluating the exposure of mercury to Tribal members in Indian country. ATSDR is assisting the Tribes and EPA in developing a Tribal fish consumption survey and looking at existing data (fish tissue analysis and air data) to determine if testing of human hair, blood, or urine is warranted due to the level of mercury exposure.

Statutory Authorities

Indian Environmental General Assistance Program (GAP) Act of 1992 as amended (42 U.S.C. 4368b)