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## **PROMOTING VOLUNTARY COMPLIANCE: ENVIRONMENTAL AUDITING, OUTREACH, AND INCENTIVE PROGRAMS**

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### **SUMMARY**

Environmental policies and enforcement programs developed in the United States in the latter part of this century, while successful in achieving significant reductions in environmental pollutants, have created a fragmented approach to protecting human health and the environment. Often, these policies and programs have resulted in a shifting of pollution from one regulated medium to another, instead of achieving real reductions. This approach, which is based solely on a regulatory philosophy of command and control, needs to be reexamined.

In the state of Texas, we have come to believe that the most effective approach is one that focuses on and attains substantial prevention and reduction of pollution. Because a major shift in public opinion has established broad-based levels of support for higher standards of environmental protection and environmental quality, opportunities now exist to forge meaningful partnerships involving businesses, local governments, civic organizations, and individual citizens for pollution prevention initiatives. In Texas, the emphasis on partnership has established an ambitious set of goals to exceed state and federal requirements with regard to toxic releases and generation of hazardous waste and other forms of waste and pollution. The varied programs that have emerged from this partnership—which are called Clean Texas 2000—harness the enthusiasm citizens have shown for a cleaner and healthier environment, provide assistance and incentives for regulated industrial and municipal entities to voluntarily exceed state and federal requirements, and are based on the premise that, without additional regulations, pollution reductions of enormous scale are feasible and attainable in a short period of time.

### **1 CHALLENGE AND OBSTACLE**

For all the wealth, technological resources, and commitment to environmental protection in the United States, we still have many places which have not achieved stated goals of clean water to drink, clean air to breathe, and the elimination of environmental hazards. In fact, countless environmental challenges have yet to be addressed. Industrial and municipal discharges into our water supplies and non-point source runoff from urban and rural areas continue to pollute our rivers, lakes, coastal estuaries, and groundwater. The volume of waste we generate overwhelms our ability to safely and adequately dispose of it, even though many billions of dollars are spent in this area each year. Air quality in almost 100 major urban areas fails to meet minimum health-based standards established by the federal Environmental Protection Agency. In recent years, the chemical production industry in the United States calculated that our annual generation of hazardous waste would fill enough 55-gallon drums to circle the Earth 22 times. Scattered throughout the country are 1300 federal Superfund sites; additionally, there are 22,000 Superfund sites assigned to cleanup by the states, and 48,000 more sites are waiting to be assessed. These sites may be marshlands, warehouse districts, subdivisions, small-town airports, even coastal bays, but in each of them, unsafe disposal of toxic waste has posed and in many instances continues to pose a drastic threat to human health.

The bottom line of environmental policy must be human health. But to citizens, government, and businesses, it is increasingly clear that there will never be enough revenue or enforcement personnel available to address all of these enormous challenges and clean up the ruinous ways of

the past. If we are to safeguard our natural heritage, protect public health, and foster the prosperity of future generations, we must rethink and revamp our entire approach to environmental enforcement and compliance. Clean Texas 2000 is based on three primary premises. First, every business, government, organization, and individual can and should contribute to the improvement of the environment in Texas. Second, while a strong enforcement program is an essential part of a comprehensive environmental effort, industries must go beyond what state and federal laws require for compliance in order to give our citizens the environmental quality they want. Third, all efforts to improve our environment should be recognized, and incentives should be developed to encourage new initiatives. Nowhere is the evidence and realization stronger than in the state of Texas.

### 1.1 Texas overview

Texas is the size of France or Spain, and with 17.6 million residents, it is the second most populous state in the nation. Nineteenth century settlers were drawn by its ranchland prairies, fertile soil, and long growing seasons—an agricultural bounty. In the early twentieth century, one of the world's great reservoirs of oil and natural gas was discovered in Texas. Since recovering from the Great Depression of the 1930s, the state has become a powerhouse of heavy industry and, in recent years, high-tech industry. For example, Texas facilities account for 57 percent of the United States' petrochemical capacity and 25 percent of its petroleum refining capacity. In addition, the state is blessed with a 367-mile shoreline on the Gulf of Mexico—an economic bonanza of shipping, tourism, commercial and sport fishing, offshore oil and gas production. If Texas were a nation, its Gross National Product would rank twelfth in the world.

### 1.2 Environmental challenges

But that great surge of population and economic growth has inflicted corresponding harm on the environment. Texas' toxic releases and hazardous waste are a monumental concern. Current or pending in Texas are 29 federal Superfund sites, along with 38 state Superfund sites whose hazards do not meet federal standards of gravity but imperil human health nonetheless. The estimated cost of cleaning up those sites will exceed \$300 million by the end of this decade. And the number of state Superfund sites is expected to increase greatly as more assessments are completed. Texas generated 139 million tons of hazardous waste in 1991 (the most recent figures available) and more than 520 million pounds of toxic releases into the environment. Texas jockeys back and forth with its neighboring state, Louisiana, for the expensive and sobering distinction of leading the nation in toxic releases into the environment; in a recent inventory by the federal Environmental Protection Agency, our two states accounted for almost one-fourth of the nation's total toxic contamination of the air, soil, and water.

Texas is confounded by other massive environmental problems, as well. The Rio Grande River, our long border with Mexico, is the most polluted waterway in the United States. In maintaining their motor vehicles, Texans generate about 18 million gallons of used motor oil each year; they dump much of it on the ground or in storm drains, and it ends up in our rivers, lakes, and bays. Unused, banned, or cancelled agricultural pesticides have been routinely buried, contaminating soil and threatening groundwater. Few Texas cities have permanent collection programs of household hazardous waste—common pesticides, detergents, paint, solvents, yard fertilizers, swimming pool chemicals—so they're routinely put out with the garbage or poured down sinks.

At an annual pickup and disposal cost of \$1 billion, individuals and businesses in Texas send nearly 20 million tons of trash to the landfills—among it, some of the 60,000 tons of household hazardous waste generated each year, an estimated 25 million used oil filters containing up to 3 million gallons of oil, and the 34,000 used tires Texans discard every day. Designed to increase the safety of landfills and prevent leaching of dangerous materials into soil and groundwater, the federal government's new Subtitle D requirements have fallen heavily on communities in every state. Certain provisions will at least double the cost of building and maintaining new landfills. Many towns in Texas

simply lack the resources to comply. By the year 2000, half the Texas landfills which existed in 1990 will be closed, and solid waste disposal costs will have increased fivefold to tenfold.

Four major metropolitan areas in Texas—Houston/Galveston, El Paso, Dallas/Fort Worth, and Beaumont/Port Arthur, with a total population of 7 million—fail to meet the requirements of the Federal Clean Air Act of 1990. Estimates of the total cost to local governments and the private sector of complying with clean air mandates range as high as \$200 billion. Four more urban areas in Texas, where almost another fifth of the state's citizens live, have borderline air quality and could lapse into non-attainment. Compliance with that federal legislation is one of the most urgent tasks facing our state over the next decade. Apart from compelling public health concerns, built into the statute is a formula that directly links together future economic growth and reductions in the levels of air pollution. If Texas fails to address its air quality problems, it risks an effective moratorium on economic growth.

Without question, individual citizens can be educated and encouraged to alter their lifestyles and help reduce the volume of pollution. But in Texas, 98 percent of the reported hazardous waste and toxins are generated by 50 corporate facilities that tend to lie within the structures of corporations known as the Fortune 500—which means they are the United States' largest, richest, and most powerful. Historically, state government in Texas has shown little inclination to challenge the status quo in ways that would achieve real environmental quality and protection. Perhaps resonant of an unbridled frontier philosophy, and no doubt mindful of the economic devastation of the 1930s, Texas environmental policy and its approach to enforcement and compliance resulted from decades of institutionalized laxness. Often as not, regulated entities were actually victims, not beneficiaries, of this approach; backlogs of work concerning permit applications piled up for years on the desks of state agencies and thereby slowed economic growth. Environmental policy in Texas was built on the false precept that economic growth and environmental protection are polar opposites, forever opposed: We could have one or the other, but never both.

## **2 WINDOW OF OPPORTUNITY: A MAJOR SHIFT IN PUBLIC ATTITUDE**

As popular attitudes changed throughout the country, and the severity and magnitude of the environmental ills in Texas became more apparent, there has been a major shift in public attitude. The great majority of Texans support concrete actions by government to improve the environment. Public health is the overriding concern, but economic considerations have also come to the forefront. The natural resources upon which Texas' vast wealth was built are profoundly threatened, too.

The Port of Houston, for example, is the sixth largest port in the world. Ships bearing 140 million tons of cargo each year sail through Galveston Bay, a large and fragile estuary that is connected to the heavily polluted Houston Ship Channel. Recreational fishing in Galveston Bay directly contributes more than \$600 million a year to the economy and generates \$20 million in tax revenue. In addition, estuaries such as Galveston Bay are spawning grounds for Gulf of Mexico shrimp; with an annual harvest valued at \$46 million, it is the second richest commercial fishery in the waters of the United States. The direct and indirect economic contributions of Galveston Bay to the state's economy amount to well over \$3 billion a year, and provide a basis for thousands of jobs.

Three summers ago, marine scientists discovered a real threat to these valuable economic and ecological resources: a toxic compound in the Gulf that kills shrimp larvae and sterilizes female shrimp. That poison is a solvent used in the manufacture of paints, cleaning fluid, and plastics. The scientists contended that it probably washed outward from the Houston Ship Channel but certainly was discharged at some point into Galveston Bay. Waves and runoff had already flushed the toxin far out into the Gulf. More than half the shrimp harvested in Texas waters migrate from Galveston Bay. In addition, because of sewage bypasses, urban runoff, flooding, and other causes, valuable oyster beds are subject to permanent or temporary closure throughout Galveston Bay. The same disturbing balance of economic and ecological concerns exists southward along the Texas coast at

Corpus Christi, whose port is the nation's sixth largest, and whose recreational and commercial fisheries contribute \$365 million to the economy.

Along with such sobering accounts, the shift in public attitude in Texas has been driven by more positive forces. With no goading by government, but in direct response to their large clientele's desires for a cleaner and healthier environment, many private firms have discovered that environmental responsiveness is good business. In addition to the public relations value, it can increase profits. In just over two years, a large AT&T facility in Mesquite, a suburb of Dallas, saved over \$80,000 a year and reduced its waste disposal costs by 96 percent by organizing a comprehensive and competitive solid waste recycling program in its various departments. A Texas Instruments facility in Sherman converted from a solvent-based paint process to a powder paint system. They attained better product quality, eliminated toxic emissions and hazardous waste, and saved \$343,000 per year almost immediately.

In state government, the shift in attitude surfaced dramatically in the elections of 1990. A new governor, Ann Richards, a new lieutenant governor, Bob Bullock, and a new legislature enacted measures that demanded greater efficiency and responsiveness of the environmental regulatory agencies; and committed the state to aggressive goals and timetables that would vastly reduce pollution and generation of hazardous and solid waste. Among the changes made by the 1991 Legislature was the phased-in merger of the Texas Water Commission and the Texas Air Control Board into the Texas Natural Resource Conservation Commission. The purpose was to streamline environmental enforcement efforts and to eliminate duplicating and sometimes contradictory regulations. During 1991, legislation was also passed requiring companies to develop and submit pollution and prevention plans to the Texas Water Commission.

## 2.1 Task Force 21: A more aggressive environmental agenda

In response to these directives, the Texas Water Commission began by recruiting a broad-based advisory panel called Task Force 21 to help implement Texas' more aggressive environmental agenda. Its members were drawn from the legal and engineering professions, public utilities, business associations, local chambers of commerce, city and county government, consumer and environmental groups, and community organizations. The chairs were the state director of the environmentalist Sierra Club and an executive of the DuPont Corporation—probably the first time those entities ever joined in a common pursuit, at least in Texas. Task Force 21 provided invaluable assistance in developing new rules regarding hazardous waste disposal, improving the permitting procedures, and designing a long-term pollution prevention strategy.

## 2.2 Need for strong enforcement plus prevention

The public is demanding strong, corrective action when regulated parties act with repeated, reckless disregard for human health and environmental quality. Effective environmental policy must include a firm and aggressive enforcement strategy. But in Texas, because of the enormous cost that can be incurred, most businesses want to prevent pollution and try to comply with environmental regulations. In many cases, those who fail don't know what the regulations are, or how to comply. Providing companies with technical assistance and granting them a measure of flexibility in how to comply with those standards greatly enhances the effectiveness of environmental regulations. In Texas and throughout the United States, government has been forced to recognize the limits, and oftentimes the counter-productivity, of a regulatory philosophy that emphasizes command and control. Realization is growing that we will never be able to inspect as many companies as often as we want. Realization is also growing that in subtle ways, we sometimes get the purpose of our efforts confused. Our role is to reduce pollution and safeguard human health and environmental quality—not to enforce for enforcement's sake. A major tenet of the new environmental policy in Texas has been the effort to harness this greatly changed public mood and channel this concern into initiatives based on

voluntary compliance—with particular emphasis on permanent reduction in pollution levels, across all environmental media.

That is not to say that all is now well in Texas, that every problem has gone away, that all parties are happily on board. For example, one of the first actions taken by the Texas Natural Resource Conservation Commission, shortly after the agency merger on September 1, 1993, was to review the operations of a prominent company that purchases other companies' toxic wastes and reprocesses them into industrial fuel. It's an admirable concept, but in practice the company had ignored two enforcement orders of the old Texas Water Commission, four enforcement orders of the old Texas Air Control Board, and a state court order regarding flagrant and repeated safety violations. The company was mixing toxic wastes in tanks without first conducting laboratory tests on the possible consequences. One night this practice set off a chemical chain reaction which almost resulted in an explosion that could have subjected nearby residents to a catastrophic toxic cloud. The decision-makers of the Texas Natural Resource Conservation Commission voted to temporarily shut the company down and suspend that part of the company's operations until an independent auditing firm could establish that the company had complied with all state and federal safety standards. That third-party audit has since been completed, the company has achieved compliance, and has renewed its operations. It would seem to be a reasonable and commonsense action for government to take. But in Texas, no company had ever been shut down for environmental violations, no matter how outrageous and severe. It was unprecedented.

The Texas Natural Resource Conservation Commission continues to take strong enforcement actions when they are justified and required: Penalties assessed over the past two years account for more than 50 percent of such assessments by the state during the past decade. But by enlisting the citizens and the business community in a new partnership, we see strong evidence that more can be accomplished—more reduction of pollution, less waste generated—than if we continue to emphasize only command and control. The prospect of whole-facility actions and other consolidated endeavors represents a tremendous opportunity for increased efficiency and voluntary compliance. We believe that we can not only help bring the state into compliance with existing regulations. The challenge and our goal is performance which exceeds those requirements.

### **3 CLEAN TEXAS 2000**

When the old Texas Water Commission recruited Task Force 21 in response to the legislative mandates emanating from 1991, we ensured that the advisory committee was equally balanced between environmental and public interest groups on one hand, and business and local governments on the other. No element within the group commanded a majority of the votes. We made it clear to Task Force 21 that with the election of Ann Richards as governor, her appointments to the boards of the agencies which would merge into the new Texas Natural Resource Conservation Commission would carry out her directive to make measurable, large-scale pollution reduction and prevention our top priority. We told the advisors that we were inclined to accomplish that by regulation—unless an aggressive voluntary program could be established. With that framework and background, over a period of half a year Task Force 21 helped design a statewide, comprehensive, pollution prevention initiative called Clean Texas 2000, which Governor Richards and the old Texas Water Commission launched April 7, 1992.

The specific goals of Clean Texas 2000 are: to reduce hazardous waste and toxic releases into the Texas environment by 50 percent by the year 2000; to reduce the solid waste going into landfills by 50 percent by the year 2000; and to educate every Texan to take personal responsibility for the environment. The program is a partnership among businesses, industries, local governments, schools, civic groups, and individual citizens committed to the achievement of those ambitious goals. The Texas Natural Resource Conservation Commission serves as a clearing house for project ideas and for bringing partners together with complementary resources. Tactically, Clean Texas 2000 emphasizes environmental auditing to assure consistent compliance by regulated entities, public

outreach and involvement, public outreach and involvement, incentives to exceed state and federal regulatory standards, and measurement towards established reduction goals. It has six key components.

### 3.1 Clean Industries 2000

The first component is Clean Industries 2000. Major improvements in the industrial sector are essential if our cities are to comply with the Federal Clean Air Act and Texas is to reduce its staggering output of hazardous and toxic waste.

Membership in the Clean Industries 2000 program is reserved for those regulated industrial facilities or plants that commit to reduce the amount of hazardous wastes and/or emissions tracked by the federal Toxic Release Inventory Program by at least 50 percent by the year 2000. In addition, participating facilities agree to implement an internal environmental management program to assure high levels of environmental compliance with state and federal standards; participate in a citizen communications program involving the local community; and support a community environmental project by providing financial or in-kind services for one or more projects such as household hazardous chemical collection, groundwater protection, or a citizens' water quality monitoring program.

With regard to voluntary compliance, and the sheer volume of pollution reduced, perhaps the most gratifying result of the initiatives undertaken in Texas has been the response to Clean Industries 2000. In the first year of the program, 75 charter members voluntarily pledged to reduce hazardous waste generation by almost 30 million tons and toxic emissions by 237 million pounds—reductions of 57 percent and 62 percent, respectively.

Projects and pollution reduction schedules are reviewed annually in order for participants to renew their memberships. Clean Industries 2000 companies are rewarded by the Governor's recognition, eligibility in an annual awards competition, favorable mention in the press and a Clean Texas 2000 newsletter, and use of the Clean Texas 2000 logo. The executives, managers, and boards of directors of these companies have been motivated by a sense of corporate citizenship, responsibility, and community. But they also have taken these steps because they know that pollution reduction of such scale is technologically feasible and represent significant savings for them in the realm of disposal costs.

For example, in the past BP Chemical generated 16 million pounds of hazardous waste a year that could only be burned or disposed of by deep-well injection. Now through a new purification process, that hazardous substance can be sold to the pharmaceutical industry and made into insulin and used in research efforts to develop other life-saving drugs. The project cost several million dollars but will pay for itself in 2-3 years.

Additionally, countless marketing surveys in the United States have shown a strong preference among consumers that is not lost on manufacturers. Recently, a polling firm engaged by the Texas Natural Resource Conservation Commission found that 92 percent of Texans said they would be more likely to buy a product from a company known to be environmentally responsive. That was no surprise. But on the other hand, 61 percent of the Texans polled believed that large corporations were "dragging their feet" on environmental issues. Powerful incentive lies within that statistical margin.

Over 100 companies have now joined Clean Industries 2000. And of the 50 facilities that generate 98 percent of the hazardous pollution in our state, 31 have now agreed to reduce toxic releases and/or generation of hazardous waste 50 percent by the end of this century.

### 3.2 Clean Cities 2000

Clean Cities 2000 is the second component of Clean Texas 2000. The purpose of Clean Cities 2000 is to encourage cities to develop a comprehensive environmental program—including initiatives that will help the state meet a 40 percent waste reduction goal established by the Texas Legislature.

The designers of this component were cognizant, on one hand, of the costly and pressing Subtitle D federal requirements that would force the closing of many Texas landfills and greatly multiply the cost of building new ones. Waste disposal costs were going to increase from \$1 billion to \$5-10 billion a year. On the other hand, so much of the 20 million tons of municipal waste now taken to landfills for disposal was unnecessary and dangerous. Leaves, brush, and glass clippings account for nearly 20 percent of this waste stream, when yard waste could easily be composted and kept out of the landfills; every Texas household produces 15 to 22 pounds of hazardous waste each year, and citizens who recognize that danger have had few options of safe disposal; plus all the used motor oil and filters, used tires and lead auto batteries, and agricultural pesticides that are either dumped on the ground illegally or sent to landfills.

Communities may voluntarily participate in the Clean Cities 2000 program by satisfying several key requirements. Phase I requires all cities to implement solid waste recycling and reduction programs to attain a goal of 3.15 pounds per capita, per day disposal rate by the year 2000. This figure represents a 50 percent reduction of the statewide average disposal rate in 1991. Flexibility is given to cities to prescribe which recycling and source reduction programs to implement to achieve the reductions. Most comprehensive programs include community-wide recycling, composting programs, and participation in used oil and used tire collections. Every successful program includes a strong local public education program.

In Phase II, cities with a population of 50,000 or greater select from a menu of water and air quality or conservation programs to implement annually. Program examples include city-wide volunteer water quality monitoring, programs to reduce non-point source pollution, and public education programs to educate citizens about the contribution of motor vehicles to air pollution.

Twenty-three cities, large and small, joined the Clean Cities 2000 program in the first year. Smaller cities formed regional partnerships to work collectively to achieve the program's goals. The Texas Natural Resource Conservation Commission provides member cities with statewide publicity and recognition, technical assistance and training, public education materials and bonus points in scoring of competitive statewide recycling grants. This year, more than \$10.2 million will be made available to local governments, public institutions, and non-profit organizations to help implement recycling and source reduction programs. Funding for the grant program comes from a portion of the solid waste tipping fees paid to the state by landfill operators.

Additionally, about 19 million tires have been collected and shredded (a modest amount for recycled use in asphalt manufacture and highway construction) and 6 million used auto batteries have been recycled. Over 1000 private businesses have established public collection centers for used oil and oil filters.

The Texas Natural Resource Conservation Commission has also found that enforcement measures can themselves be an important form of public outreach and revenue enhancement. In prior decades, revenues accrued by enforcement actions were deposited in the state's general fund, where it was unlikely they would be used for environmental purposes. Now, enforcement revenue may be used for supplemental environmental projects at the local level. Under this program, 50 percent of penalties collected through enforcement can be used for local environmental cleanup or education programs. For example, one Texas company cited for arsenic contamination agreed to a \$6 million buyout of affected private properties around the facility. Of the additional penalties assessed, \$1.5 million was channeled to agricultural pesticide collection, household hazardous waste collection, and other local programs. These supplemental environmental projects have become a valuable tool in advancing the broad aims of Clean Cities 2000.

### 3.3 Clean Texas 2000: Texas Watch

The third component of Clean Texas 2000 component is Texas Watch. This program's purpose is to provide an organized means of channeling the enthusiasm of individual citizens into substantial environmental protection projects. Citizen volunteers are recruited and trained in three areas of pollution control and prevention: water quality and environmental monitoring; local groundwater

protection activities; and community collection of household hazardous waste, agricultural chemical waste, and empty pesticide containers.

Collection of household and agricultural hazardous waste is advanced through periodic regional one-day events, as well as more costly permanent collection centers. In 1992, 200 tons of banned or unused agricultural pesticides were collected from farmers for proper disposal, and 97,000 pounds of agricultural pesticide containers were recycled. This rural program will be expanded in 1994 to include collections of used tires and oil.

Three thousand Texas Watch volunteers have been trained by the Texas Natural Resource Conservation Commission to document and safeguard the water quality of lakes, streams, and rivers in their communities. In cooperation with river authorities and local governments, they collect samples of surface water supplies on a weekly basis. Often, the samples collected by Texas Watch volunteers identify problems and trigger mechanisms to conduct more in-depth reviews.

Facets of the Texas Watch program have been adapted from the highly successful public beach cleanups conducted by volunteers enlisted by the Texas General Land Office. That program has resulted not only in extensive news media coverage and cleanup of tide-washed beach debris that local governments could not manage; it has heightened public consciousness and support for oil spill prevention and response plans and enforcement of a treaty banning ocean dumping of solid waste by the shipping industry.

Transferred by agreement from that agency to the Texas Natural Resource Conservation Commission, the Texas River Cleanup Program enlists a similar partnership of civic organizations, school clubs, government, local employers, and individual citizens. In April 1994, about 5000 volunteers will participate in the first cleanup of the Houston Ship Channel and lower Galveston Bay watershed. Other cleanups are scheduled for Oyster Creek, the Colorado River, and the Guadalupe River. Combined with the regular monitoring of the Texas Watch volunteers, these cleanup drives will not only cleanse the shores and shallows of debris; they will greatly assist the state in protecting our freshwater resources and coastal estuaries.

### 3.4 Clean Texas 2000: Public awareness and education

The fourth component of Clean Texas 2000 is public awareness and education. This critical component has a simple premise: Provide all Texans with a list of practical things they can do to improve the environment because if they know what to do, they'll do it.

A public relations campaign emphasizing radio and billboards targets 80 percent of the state's residents and conveys messages such as "You dump it, you drink it" and "Don't bag it, leave it a lawn." Enhanced by auto bumper stickers, T-shirts, and other promotional materials, the results of this campaign have been impressive. For example, calls to the state requesting information on composting increased 3000 percent after the first campaign began.

In addition, 5.6 million copies of the Clean Texas 2000 Home & Garden Guide will be distributed in 1994; the publication presents numerous things people can do to improve the environment, including how to compost, information on buying recycling products, and methods and products available to gardeners and landscapers that reduce pollution. The Clean Texas 2000 Information Center, established in April 1992, provides free how-to materials on virtually any environmental topic to users of our toll-free telephone service; on the average, the center receives 450 calls a week.

Another goal of the public education component is to provide every school in Texas with an environmental curriculum and to train the teachers who will use it. To date, 2300 elementary school teachers have been trained to present a curriculum on solid waste and recycling through a partnership with the non-profit organization, Keep Texas Beautiful.

### 3.5 Clean Texas 2000: Incentives and public recognition

The fifth component of Clean Texas 2000 provides incentives and public recognition. Each April, outstanding environmental projects and accomplishments are recognized by the Governor at the annual Governor's Awards Banquet for Environmental Excellence.

One award is given in each of the following categories: large business—technical; large business—non-technical; small business; government; civic/ non-profit organization; education; youth organization; media; agriculture; and individual. In addition, a number of special awards may be given.

The initial submissions and awards in that spirited competition presented stunning evidence of what innovation Texans are bringing to protection and improvement of environmental quality. A high school marine science class in Beaumont is studying beach debris and Gulf of Mexico currents to better identify the sources of pollution in the Gulf. In the city of Plano, 75 percent of its 40,000 households participate in a curbside recycling program. The small-town post office in LaPorte developed an inventive and effective means of recycling bulk shipments of undeliverable "junk mail." That technique is now being adapted by postal delivery systems in much larger cities. Among the corporations recognized at the first awards ceremony was Texas Eastman in Longview. This company developed a new valve packing system and testing program that prevents and monitors fugitive benzene emissions ten times better than what is required by law. That technological advance is directly applicable to a wide range of industries. Fisher Controls International in McKinney has established a plan to eliminate all pollution discharges by 1995. They have already eliminated or are recycling 95 percent of all solid waste that previously went to landfills—a 1600 ton reduction, and they have reduced hazardous waste generation by 90 percent.

### 3.6 Clean Texas 2000: Increased efficiency and responsiveness

The sixth key component of Clean Texas 2000 relates to increased efficiency and responsiveness by government. The programs and goals contained in Clean Texas 2000 represent enormous concessions and voluntary efforts by regulated industrial facilities and municipalities. But in helping to design these programs and set these goals two years ago, Task Force 21 made it abundantly clear that state government would have to make improvements and honor its own end of the bargain. Specifically, these advisors demanded and received a commitment by the Texas Natural Resource Conservation Commission to be more efficient with regard to environmental permitting; and to provide a comprehensive range of technical assistance—especially to small businesses and small cities.

Two years ago, at both the Texas Water Commission and Texas Air Control Board, permit backlogs were commonplace. In some instances, it took three to six years for permitting decisions to be finalized. Quite properly, companies argued that if they were willing to commit to pollution reductions that exceeded state and federal requirements, in return they should expect more efficient decision-making with regard to their permit applications. At both agencies, prior to their merger on September, resources were committed and work schedules expanded to eliminate those backlogs. That will be completed in 1994. In addition, we have substantially streamlined the permitting process so that across the board, we will be able to make permitting decisions in about half the time required in the past.

In doing so, we have found this exerts a significant favorable impact on the environment. Quicker turnarounds benefit all parties. Most of the permit applications processed each year do not concern construction of new facilities. Rather, they are renewals, at intervals of five to ten years, of existing permits. Because of changes in federal and state regulations, the renewed permit usually carries with it tougher environmental protection guidelines than the ones preceding it. So when the Texas Natural Resource Conservation Commission processes these permits applications at a greater rate of speed, it benefits industry while at the same time implementing more stringent environmental standards. For example, under federal law the state is required to upgrade its water quality standards

every three years. We did that in Texas in 1991, and are in the process of again upgrading in 1994. The change in standards in 1991 has had the effect of reducing, on the average, permitted water pollution discharge by as much as 35 percent.

In response to the request for a comprehensive set of technical assistance programs, we first put in place a wide range of seminar-style sessions relating to every program we administer. They are offered to regulated entities on an ongoing basis at a very low cost. Over 50 major technical seminars will be held in 1994. In addition, a team of engineers provides on-site assistance to help industries solve pollution problems, and industry-specific workshops are then held to transfer this appropriate pollution prevention technology to similar kinds of businesses.

Special emphasis on all our programs is given to small businesses, including workshops, training, technical assistance, and regulatory considerations. For example, in the attempt to achieve compliance with the Federal Clean Air Act, it is extremely important to reduce in every way possible the financial burdens imposed by those requirements on small businesses—the sector where much of the new jobs creation in Texas is taking place. For small businesses such as bakeries, dry cleaners, and printers, the cost of achieving compliance has been projected at \$1-3 billion. We are working closely with business representatives and reassessing state air control standards to identify ways their emissions could be reduced more cost-effectively. Recently, these discussions and on-site consultations identified measures in which printers in Texas' non-attainment areas can achieve about the same pollution reductions at a cost trimmed from \$40 million to \$6 million.

#### **4 BEYOND COMMAND AND CONTROL: A NEW PARADIGM**

Much remains to be done in the years ahead. Texas must build on these partnerships in a way that achieves real results. We need to convince every one of the companies which generate almost all of the pollution in Texas to join Clean Industries 2000 and embrace its agenda and goals. We are committed to accomplishing that by 1996. We have to continue and expand our efforts to reduce the municipal solid waste stream. Some mandates may be required—such as a ban on yard waste in our landfills. Additionally, we need to facilitate development of new markets for recycled materials. Under the provisions of the Federal Clean Air Act, in non-compliance areas air emission credits are necessary if new businesses are to be established; these critically important air emission credits can be gained in large part through aggressive promotion of clean-burning, alternative motor fuels. We need to devise new strategies that address the unique needs of small towns and agriculture. And a comprehensive pollution-prevention initiative for the Texas-Mexico border—encompassing hazardous and solid waste management, air quality, water purification, and wastewater treatment—must bring real environmental quality and protection to people who live along the Rio Grande.

But in a broader context, we need to fundamentally re-examine the way we are managing the environment and its protection. Our emphasis should be on reducing pollution—not on dictating engineering, technological, and manufacturing processes. If we continue to draw such close and narrow focus on each medium of pollution, the risk we run is that while minimum environmental standards appear to be met, in reality the pollution is just shifted from one medium to the next—from air to water to hazardous waste. The net pollution of the global environment could remain the same.

The entire environmental philosophy of command and control so prevalent in the United States needs to be reconsidered. In the future, we may need to rethink and rebuild our paradigm. Instead of placing all our emphasis on a set of technology-based standards, we ought to consider an optional set of performance standards in which regulated industrial facilities and municipalities are directed to reduce their air pollution, water pollution, and waste generation by a certain percentage within an established time frame. This could be coupled with independent environmental auditing and computerized monitoring systems. As we have found in certain enforcement agreements in Texas, the technology already exists. Terminals at the industrial site and terminals in our regulatory offices enable both parties to agree definitively on how much pollution is being generated and how much

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is being reduced. Instead of the prevailing myopia—which is clearly failing to measure up to the tasks we have assigned it—we need to adopt a more holistic, facility-based approach that establishes performance standards of pollution reduction over reasonable periods of time. And tools at our disposal such as environmental auditing, computerized monitoring systems, public outreach, technical assistance, and incentives can help ensure consistent high levels of compliance.

At the Texas Natural Resource Conservation Commission, we have adopted an outlook that we have to be bold enough to recreate; and courageous enough to do things differently. The old approach to environmental policy and enforcement in Texas has not worked as well as we need; and there is no evidence it will ever protect public health, safeguard our natural heritage, and preserve the prosperity of generations to come. Driven by necessity, and enabled by a major shift in public sentiment, a partnership of government, individual citizens, and businesses has in this decade set the tone for a new era of environmental policy and enforcement in Texas. We have been presented with a window of opportunity. We know we cannot allow that opportunity to fade, and that window to close.