

Natural OUTLOOK

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

The Sky's the Limit

New EPA Air Standards for Ozone and Particulate Matter Pose Challenges for State

Air quality across Texas has improved in significant ways. From 1987 to 1995, air releases of toxics from manufacturing facilities dropped by 42 percent. This reduction occurred even though there was a 24 percent increase in manufacturing activity over the same time period. Additionally under the former federal air standards, significant improvements were achieved even in the state's four nonattainment areas.

The state's progress has sometimes been overlooked by anxious Texans confronted with the EPA's new public health standards for air.

As the first update in 20 years for the smog, or ozone, standard, and the first in a decade for particulate matter (PM), the new air standards raise critical questions:

What will the impact be on regional economic development and growth?

How much will compliance cost Texas

motorists, local governments, industries, utilities, and small businesses such as the dry cleaner down the road?

What benefits to public health will be provided by the new standards?

Which cities and counties will fall into nonattainment status, and what will it take to attain the new standards?

What happens to metro areas which can't meet the current standards? What standards are they supposed to meet?

What is known is unsettling. Under the new ozone standard, for example, Austin, San Antonio, and the Longview-Tyler-Marshall area probably will not comply. Under the federal Clean Air Act, those areas could face mandatory controls.

Uncertainties abound, especially for fine particulate matter, which has never been regulated in Texas, and for which monitoring

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Houston's
Model Air Program

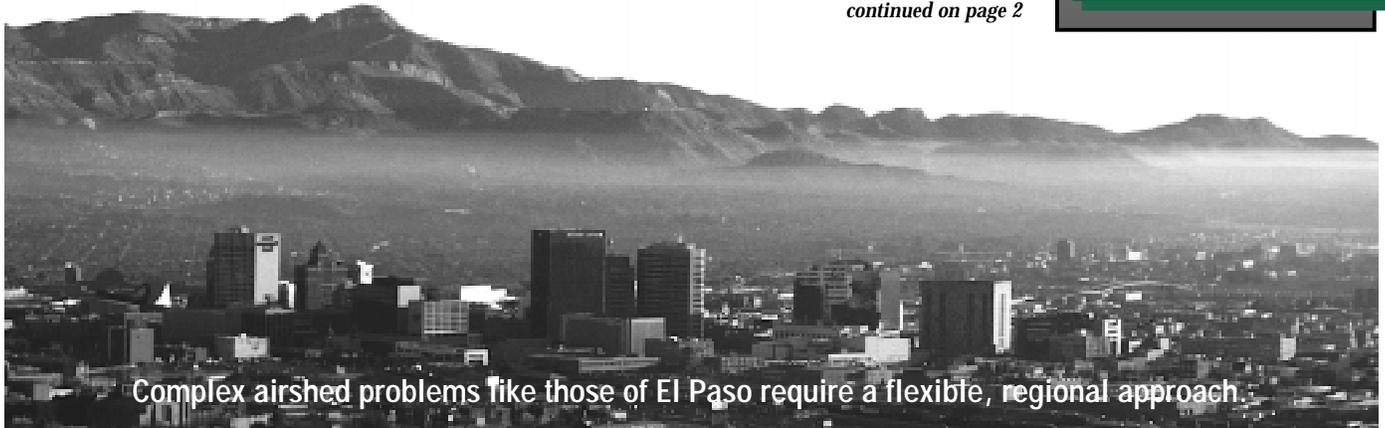
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NAVIGATORS FOR
SMALL BUSINESS
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Complex airshed problems like those of El Paso require a flexible, regional approach.

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data scarcely exist anywhere in the country.

Wary but Willing

TNRCC Commissioner Ralph Marquez believes that the new standards raise many unanswered questions for the future.

One of the greatest concerns is the uncertain scientific basis for evaluating and dealing with particulate matter conditions, Marquez explained. "We don't know what it will take to achieve standards

and whether they're even achievable. We don't know how we're going to make the transition from the current to the new standards."

The commissioner said that another big question, now that the standards have been established, is how much latitude Texas and the other states will have to develop implementation plans.

"The federal government has promised great flexibility with the implementation," Marquez observed. "We hope they stick to that for both the existing nonattainment areas and any new ones. For example, we need time to collect data from around the state to determine the nature of particulate matter in the different areas. Actually, there is a wide range of air contaminants that needs to be measured."

Getting that information is going to be expensive, Marquez added. "We are expecting federal funds for monitoring purposes. Our understanding is that this is a funded mandate.

"We want to cooperate with EPA and Texas citizens to achieve cleaner air," Marquez said. "Regardless of whether the EPA's assumptions are correct, the economic impact on Texas will be great."

Clouds of Question Marks

Questions generated by the new limits on ozone and on emissions of fine particles are generating anxiety in the world of industry and business, as well as among local government leaders who want to maintain both a healthy environment and a well-tuned economy in their cities and regions.

Some local leaders are anxious that they

may never meet the standards because of variables they cannot control, such as ozone blown in from other regions, biogenics (plants, trees, wetlands), and weather conditions, according to Chuck Mueller in the TNRCC's Office of Air Policy and Regulations. "They fear that they may achieve reduction after reduction without ever reaching

attainment status," he said.

Certainly, the consequences of non-attainment are significant. The EPA can impose sanctions such as placing growth limits on industrial facilities or withholding federal highway funds. Corporate executives may think twice before expanding into an area labeled as unable to meet federal air standards.

Additionally, nonattainment classification can bring mandatory pollution controls that directly affect most citizens, such as vehicle emissions testing, reformulated gasoline requirements, and vapor-recovery mechanisms at gas pumps.

Interim and Short-Term Measures

While data are being collected and the state implementation plan is being developed, the TNRCC and other agencies and groups recommend that the regulated community

"We want to cooperate with EPA and Texas citizens to achieve cleaner air."

Ralph Marquez, Commissioner

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continue, and where possible, accelerate ongoing clean air programs.

“Areas currently in nonattainment need to continue working diligently toward the current ozone standard,” said TNRCC Chairman Barry McBee. “Likewise, areas currently in attainment need to work aggressively to continue maintaining their status.”

McBee acknowledged that the fate of the state’s flexible attainment regions (in the Corpus Christi area and Northeast Texas) is not yet absolutely certain, although he encouraged them to pursue their current course toward reductions in contaminants.

“The best advice for the interim,” McBee said, “is for members of the regulated community to start going beyond what is currently required.”

Ramón Alvarez, a scientist with the Environmental Defense Fund (EDF), believes that the EPA’s new standards have already helped alert Texans to the need to rethink strategies for air pollution.

“EDF is encouraging cities and counties to take early action,” he said. “A proactive approach can lead to lower costs overall and may help forestall nonattainment status.”

Biggest Benefit for the Buck

Chairman McBee notes that even with the goal of protecting public health, achieving clean air is a matter of prioritizing risk.

“There are not unlimited funds, either public or private, available for addressing all the environmental issues that confront the state of Texas,” McBee said. “The TNRCC has developed tools to provide a sound scientific basis for identifying the issues that most need regulatory attention. The protectiveness and flexibility inherent in the system we have established provide a framework by which

limited funds can be directed to the issues that can provide the greatest health and environmental benefits in the most rational manner.”

The economic concerns of the states are shared by some at the highest levels of the country. A memo President Bill Clinton issued this summer to the administrator of the EPA regarding implementation of revised air quality standards for ozone and particulate matter expressed the executive branch’s resolve “that these new standards are implemented in a commonsense, cost-effective manner.”

“There are not unlimited funds available for addressing all the environmental issues...”

**Barry R. McBee,
Chairman**

The White House directed the EPA to promote market-based strategies as a useful way to reduce the cost of compliance. The federal agency will promote concepts such as the Clean Air Investment Fund, which would allow businesses facing control costs higher than \$10,000 a ton for pollutants to pay a set annual amount per ton to fund cost-effective emissions reductions from nontraditional and small sources.

Commissioner Marquez has proposed yet another way to get the biggest bang for the buck with air quality: Rethink the regulatory strategies for ozone.

“Generally, by continuing to reduce emissions and make every effort to lower ozone in Texas, we are moving in the direction of greater protection of public health,” Marquez said. “Yet we may be reaching a point of diminishing returns with ozone reductions. We need to think carefully about improvements that represent very small health impacts on a limited number of people, particularly when compared with exposure to other airborne toxins. We need to ask whether there has been an overemphasis on ozone. We need to look at the whole mix.”

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Texas Exempt from OTAG Rules

The state received good news this fall when it learned that Texas will be exempt from control recommendations established by the Ozone Transport Assessment Group (OTAG). The group was formed in 1995 by the Environmental Council of the States and the EPA to identify and recommend a strategy to reduce transported ozone and its precursors, which, in combination with other measures, will enable attainment and maintenance of the national air standard. The TNRCC was active in this process, which included states in the eastern half of the country.

Texas’ exemption is based on OTAG’s determination that the state has minimal impact on ozone transport to the primary targeted nonattainment areas of Chicago, Atlanta, and the Northeast corridor. Unlike many states in the East and South that contribute to ozone formation in the three areas, Texas will not have to abide by the rule promulgated by the EPA.

The rule goes beyond what is required in the Clean Air Act. The federal agency also claims that efforts to comply with the OTAG rules will benefit affected states in their efforts to attain the new national ozone standard.

What’s Texas missing? The EPA is issuing a nitrogen oxides (NOx) budget for each identified state in the proposed rule. States have the flexibility to decide which utilities or other sources will be required to reduce NOx emissions. The goal is to reduce total emissions of nitrogen oxides by 35 percent in the affected 22 states and the District of Columbia.

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The Problem with Fine Particulates

The level of uncertainty regarding the new air standards is highest around the issue of fine particulate matter (PM fine).

Commissioner Marquez has identified three chief areas of concern:

- The relationship between particulate matter and public health is less than perfectly defined.
- We do not yet have a handle on the complex chemistry, nature, and means of control of particulate matter.
- PM fine levels are unknown in Texas cities, and there are no yardsticks with

which to measure them. We have no idea how much is too much.

"We need to learn more about fine particulate matter so we can find a reasonable course of action," Marquez said. "The first step is to determine the levels and types of fine particulate matter. Until we know the levels and the composition, we don't even know which industries and businesses will be affected. We can't define the control strategies until we know the sources of the contaminants. Data collection and analysis could take as long as a decade, but no one knows. It depends on funding and resources."

In addressing the problem of the paucity of data, the EPA is developing a nationwide PM fine monitoring network, paid for with federal funds. There will be sufficient time for implementation of the PM standard, according to Ron Evans of the EPA's Office of Air Quality Planning and Standards. He expects that three years worth of data from the PM fine monitors should be available as early as 2002 or 2003. Evans added that most Texas areas won't be expected to conform to the new standard until 2012—and some areas, not until 2017.

"There will be time to collect data and properly plan," he said.

Marquez, however, maintains that a great

deal of knowledge will have to be developed quickly in order for Texas to make good decisions for the future.

"We can't afford to waste precious resources, time, or money," he said.

The Keys to Implementation

Flexibility and regional control are the operative terms as federal and state agencies begin the long, painstaking work of planning for implementation. The lessons of recent history are not forgotten.

Environmental regulators are realizing that tough, inflexible air standards may have inadvertently contributed to urban sprawl and related social problems, according to Chuck Mueller.

"Strict controls have led many companies to move or expand outside major metro areas, where air quality problems made new industrial facilities problematic," Mueller said. "Population growth, however, has often followed the migrating companies, causing difficulties with transportation and a host of other issues."

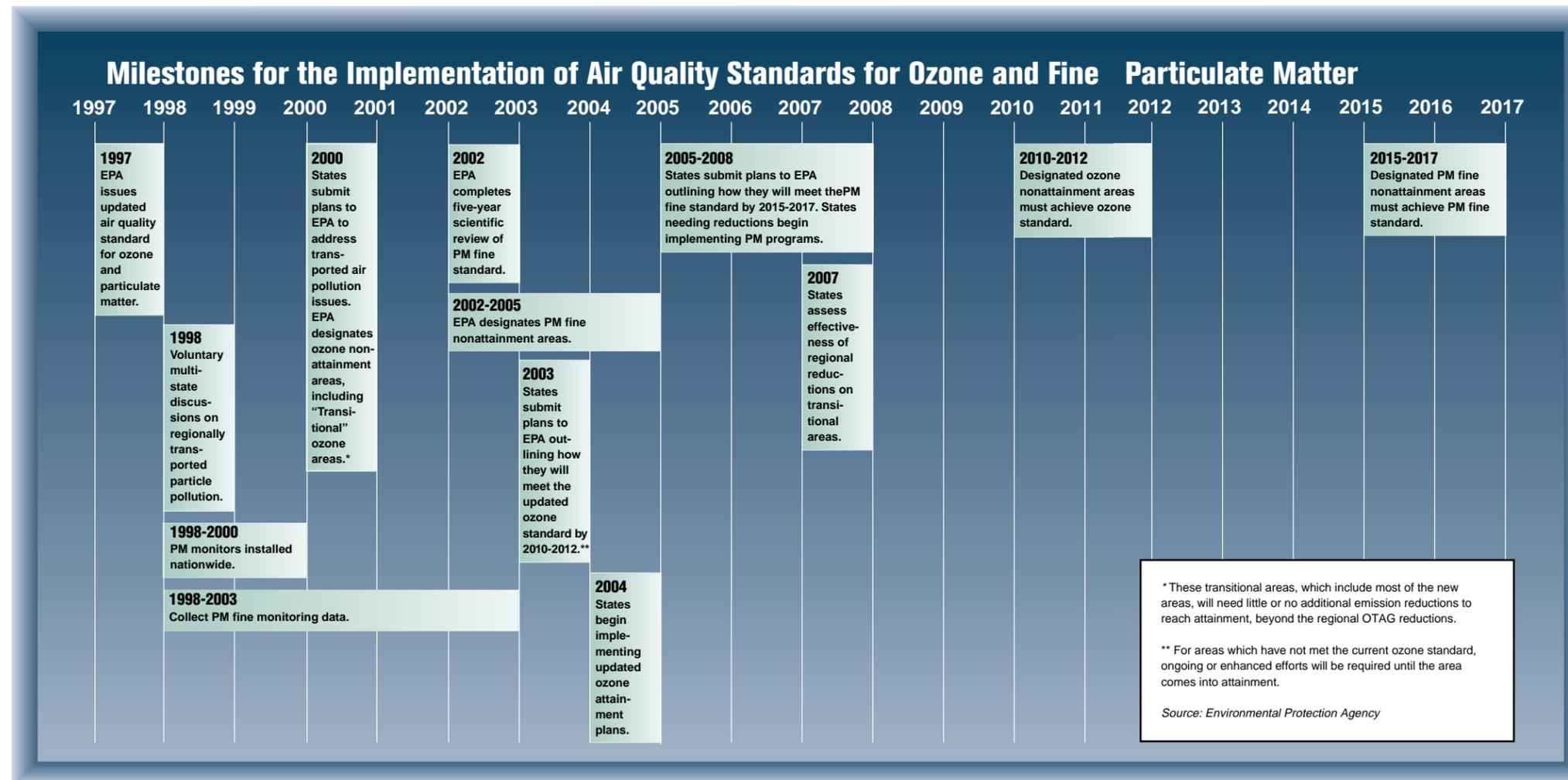
In facilitating the new standard, EPA is encouraging a strong working relationship between business and industry and the states to find appropriate ways to implement standards on a local basis.

"The EPA has established standards as target levels but has not dictated how the states get there," Evans said. "That's where the flexibility comes in. In some cases, controls on utilities or mobile sources will be all that are needed to meet the standards."

Flexibility in implementation, coupled with regional and local planning that considers the complex interaction and movement of contaminants within and between airsheds, will help alleviate economic impacts on small businesses and

"The EPA has established standards as target levels but has not dictated how the states get there. That's where the flexibility comes in."

*Ron Evans,
EPA*



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“Regional air quality planning may help keep the playing field level.”

**Jeff Saitas,
TNRCC**

local entities by making the costs of clean air a regionwide responsibility.

The Big Picture Approach

The TNRCC has been working with national and regional advisory groups set up to implement the updated air standards. The agency is most active in the Clean Air Act Advisory Committee and its Subcommittee for Ozone, Particulate Matter, and Regional Haze Implementation. The TNRCC has been recognized as an influential participant on the national level.

Jeff Saitas, deputy director of the TNRCC Office of Air Quality, notes that the trend toward more regional planning, which predates the new air standards, means that local violations are now always evaluated in the context of regional conditions. “The immediate reaction toward a violation is no longer to clamp down immediately on the local community,” Saitas said. “The entire airshed must be considered.” For example, air quality in El Paso cannot be evaluated without taking the skies over Juarez into account.

According to Mueller, Texas needs to consider what constitutes a manageable region in terms of monitoring contributions to violation of air quality standards. He estimates that the average in Texas ranges from a 200- to 400-kilometer radius for the transport of ozone and other contaminants.

Even though it has been convincingly demonstrated that emissions from Texas have negligible effects on ozone levels and other indicators of air quality in other states (please see related sidebar on page 3), there is ample

evidence that air quality in one part of Texas can have a significant impact on another area within the state.

“We should learn from recent scientific findings about air pollution that Texas can’t afford to ignore the issue of pollution transport,” said the EDF’s Alvarez. “Reducing emissions from upwind electric power plants, for example, may result in greater reductions in DFW ozone levels at a lower cost and more conveniently than through a vehicle emissions testing program.”

The electric power industry also attaches great import to scientific findings, although they tend to quote different studies and reports than do environmental groups.

“We believe that good science should be used to determine the proper strategies for ozone control,” said Dick White, environmental vice president for Texas Utilities in Dallas. “The TNRCC and local governments have good studies underway, including improved emission inventories, air sampling, and air modeling. These studies are based on sound scientific techniques and processes that will help identify effective control strategies to achieve the ozone standard.”

Saitas summarized the TNRCC’s position as the state enters the monitoring and planning stages that must precede implementation.

“The challenge is to keep efforts to be in attainment from becoming a virtual cap on economic growth and development. Regional air quality planning may help keep the playing field level.”



Houston Clean Air Program a Model for Texas Cities

Several years ago an air quality program designed to induce employers to encourage a certain percentage of employees to car pool was introduced in Houston. The "employee trip reduction program" was a well-intended idea, but it eventually became apparent that administrative, public information, and other expenses were making the cost per ton in the reduction of air contaminants prohibitive.

The commuter program did, however, generate a positive byproduct. It motivated a group of Houstonians to develop a regional air quality plan tailored to the city's needs and based on common sense, good science, and local data.

"We decided we need to find ways to get the maximum health benefit for the dollar," said Dewayne Huckabay, chair of the Houston-Galveston Area Council's Regional Air Quality Planning Committee. "We want to spend it where it will do the most good."

The result of the coalition's efforts was the Houston Air eXcellence and Leadership (HAXL) program, which proposes to examine health effects of Houston air and conduct atmospheric chemistry-related research programs for the Houston-Galveston airshed. The research, with an estimated price tag of approximately \$15 million, will provide the basis for calculating benefits resulting from alternative air pollution control strategies by determining the health impacts associated with various air pollutants and the feasibility of pollutant control scenarios.

If it works the way its developers intend, HAXL will produce information that will allow air pollution control policy to be directed at the pollutants causing the most serious health impacts, whether they be national criteria pollutants (targeted by the EPA) or other pollutants such as air toxics.

HAXL has been generally supported by the TNRCC, according to agency Commissioner Ralph Marquez, who praises the plan's performance- and results-oriented approach.

"It goes beyond what EPA has recommended and targets the most significant contributors to air pollution," Marquez said. "It is a tailored approach to the specific needs of Houston that provides the maximum protection for local citizens based on available resources."

"In terms of its flexibility, its attention to local conditions, its wise management of funds, and its respect for sound science," Marquez said, "HAXL provides a model for other Texas cities grappling with similar problems in air quality."

One of the program's greatest strengths is its holistic approach to air quality. Historically, air rules have been segmented by contaminant.

The core of the HAXL concept is that all aspects of air pollution should be considered for control. Ozone formation is only one of the many processes in urban air pollution. HAXL focuses on multiple contaminants: ozone, particulate matter, and hazardous air pollutants (HAPs).

Another HAXL premise is that certain types of emissions may be associated with multiple pollutants in the atmosphere. For example, it is possible that volatile organic compound (VOC) emissions may not only play a role in ozone formation, but also might be hazardous air pollutants or linked to PM fine formation. A control strategy that focused on these VOCs could generate greater health benefits associated with the reduction of ozone, fine particulate matter, and HAPs than an ozone-only strategy.

Major goals of the HAXL program are to:

1. Gain a scientific understanding of Houston's air pollution problems.
2. Identify and estimate costs of control strategies for pollutants.
3. Develop air pollution control strategies that optimize public health benefits for the dollars spent.
4. Lower the exposure of Houston's citizens to pollutants with direct health effects.
5. Implement Clean Air Act (CAA) programs for the first six years of the program while developing alternative strategies.
6. Develop a post-2002 plan for improvement of air quality that optimizes health benefits and the cost of control strategies for all air pollutants.

Marquez said he is impressed that HAXL attempts "to realize greater health benefits in Houston for equal or less costs than are required under current Clean Air Act strategies. Naturally, it takes considerable money to implement such a plan. But remember that air is a regional problem by nature, so the costs can be distributed throughout the airshed."

The program is committed to stakeholder involvement and the participation of all affected parties in the processes leading to the development of these strategies. To date, extensive coordination has been maintained among the EPA, the TNRCC, environmental groups, industry groups, and local government representatives. As the HAXL project develops, a local stakeholder group and a forum of nationally recognized experts will be established to guide the research evaluation and decision-making process.

The big question for the HAXL planners is how the program would play out under the new EPA ozone and PM fine standards.

"We had counted on having time to collect, analyze, and assess data, and also to make recommendations, but we may be required to develop a plan next year that we have to comply with by 2007," Huckabay said. "The dilemma is that without time, we cannot make educated decisions. The HAXL approach would not be meaningful without extensive local research upon which to base locally effective solutions—from both a cost and a health basis."

SIX-MONTH STUDY SEEKS WAYS TO BOOST AGENCY EFFICIENCY AND EFFECTIVENESS

When a citizen calls the TNRCC to say that something smells bad, or to report that she is sick due to some contaminant in the environment, the agency typically responds by sending an inspector to investigate. Often, this leads to a solution to the problem. Sometimes, however, by the time the investigator arrives, the wind has shifted, or there is not a measurable problem while the staff person is present at the site of the complaint.

This situation highlights a shortcoming in the administration of environmental law in Texas, according to Jeff Saitas, deputy director of the TNRCC Office of Air Quality.

"Texas citizens issue this challenge every day: 'Prove to me that my family and I are safe,'" he said.

In seeking to improve its ability to serve and protect communities and the environment, the TNRCC faces a special challenge in a time of tight public funding. It is increasingly difficult to secure the resources needed to adequately safeguard citizens with current business practices.

To this end, the TNRCC has hired a consulting firm to examine the agency's business processes and organization to see if a shift in focus will increase overall effectiveness in meeting the agency's mission.

The six-month study begins in November, with preliminary findings pro-

vided by February 1998. The final report and recommendations are due May 1. The contractors conducting the study are A.T. Kearney and TechLaw Inc. The Virginia-based firms have experience with business re-engineering and similar studies with four state environmental agencies.

"Our goal is to enable the agency to maximize the use of compliance, planning, and risk data to produce the most protective and efficient system of environmental protection possible," said Dan Pearson, TNRCC executive director. "We want to make sure our permitting approaches contribute to this. We also want to ensure compliance through the most

efficiently organized and technically proficient approaches available."

The study will explore ways for the agency to improve its ability to assure citizens that they are safe.

"People want to be assured that facilities operate properly, and that businesses will be held accountable if

they operate irresponsibly," said TNRCC Chairman Barry McBee. "I am proud of our employees, who every day

endeavor to meet both the requirements of the law and Texas citizens' reasonable expectations."

Pearson wants to see the agency do a better job of satisfying people's need to know that their health is being protected. "Part of the problem is compliance, but we have to take what we have and improve on it," Pearson said. "Can we, for example, make better use of data, or use more monitoring to replace inspections? When people want to know if they're safe, the answer lies in better use of resources."

TNRCC Commissioner Ralph Marquez pointed out that the organization conducting the study will act as a

management consultant, providing a level of objectivity but drawing on the wealth of agency technical knowledge and expertise.

TNRCC administrators feel that the study's cost will be money well spent.

"The study is not about shaving time off the permitting process, nor is it about reducing the number of employees," Marquez said. "It is about protecting the public and our resources, improving the regulatory process, and finding greater efficiency."

The commissioner added that the study is targeted and has specific, relatively short-term goals. "It would take years and probably \$20 million to re-engineer the entire agency," he said. "Rather, we want the consultant to tell us what can be done in six months. We want something accomplished."

In the study, the TNRCC seeks to answer a challenging question: Are agency resources strategically distributed to provide maximum protection for public health and the environment?

Joe Vogel, deputy director for compliance and enforcement, observes that the TNRCC must consider whether there are enough resources to inspect every

permitted facility and ensure that it is doing what it is supposed to do.

Part of the answer is increased monitoring, Vogel said. "We need to consider the option of giving more responsibility to the regulated community, but at the same time monitoring them as comprehensively as possible. It is a matter of accountability. The study will help us make such determinations."

Environmentalists have expressed concern about the concept of reevaluating business processes within the agency.

"I disagree that processes should be modified if that means more permits by rule and less public participation," said Jim Blackburn, an environmental attorney in Houston. "Permits by rule do not provide adequate opportunity for public participation. I'm not willing to trade that for effective enforcement."

Blackburn believes the TNRCC needs to establish "a credible enforcement position." In his view, effective enforcement gives citizens a high enough comfort level so that they can make concessions on a permit-by-permit basis. "With current enforcement policies, citizens feel

compelled to fight permits as the most effective way of protecting their personal property and health interests," Blackburn said.

He concluded by proposing an alternative approach to the reallocation of resources. "Quite frankly, a lot of time is wasted at the agency in processing poor permits that are substantively deficient and barely meet requirements," Blackburn said. "With more effective screening on the front end, the agency could free up resources for enforcement."

Saitas agrees that permitting is critical, adding that people in a community where a new plant is being built want to know that it will be safe before it is built, not afterward.

"We need to prove safety before the fact and increase the commitment after the fact to maintain and ensure safety through compliance and monitoring," he said.

The high cost associated with monitoring and ensuring compliance, particularly with air pollution, has kept most states from doing the job they would like to do in this area, Saitas continued. "Our greatest hope lies with new technology being developed to make permanent,

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"We need to consider the option of giving more responsibility to the regulated community, but at the same time monitoring them as comprehensively as possible."

**Joe Vogel,
TNRCC**

"Our goal is to enable the agency to maximize the use of compliance, planning, and risk data to produce the most protective and efficient system of environmental protection possible."

**Dan Pearson,
Executive Director
TNRCC**

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extensive monitoring an affordable reality.”

One promising venture in this direction is a collaboration among the TNRCC, Texas Instruments, and Koch Refining to develop an in-stack monitor that incorporates semiconductor technology. If the cost of these remote sensors follows the way of the cost of personal computers, then the states would be able to afford as many of them as would be needed.

“Once the price went down, we would be able to ring a plant site with them,” Saitas said. “The monitors would be tied to the closest

TNRCC regional office. So if a person called to say the air is making him sick, we would be able to access real-time data online and respond almost immediately. That’s an important goal: real-time, data-driven response to citizen concerns.”

TNRCC Commissioner John Baker looks forward to the commonsense approach to environmental regulation that technical advancements will allow.

“As monitoring technology continues to improve and costs become more reasonable,” Baker said, “it makes sense that we focus more on the bottom line; that is, air

and water quality. Environmental regulation will become more protective of the environment and public health and safety.”

Vogel acknowledges that some people might conclude from certain aspects of the study that the agency is planning to move almost totally to an emphasis on enforcement but said that the TNRCC will maintain its preference for compliance.

“The great majority of businesses respond well and in good faith,” Vogel said. “The agency study should be viewed as an opportunity for fine tuning and problem solving.”



A FRESH LOOK AT THE WAY THE TNRCC DOES BUSINESS

The review of TNRCC business processes and organization review has two chief goals: 1) To maximize the use of environmental, compliance, planning, and risk data to ensure compliance through the most efficient, technically proficient approaches; and 2) To produce the most protective permits possible in the most efficient manner.

To achieve these goals, the study will focus on three areas:

- **Monitoring/compliance.** The review of compliance business processes will focus on strategies for using new or established environmental monitoring technologies to better ensure compliance. The study will identify strategies to receive and manage compliance-oriented data more efficiently and will propose a strategy for identifying facilities or groups of facilities posing the most significant potential environmental risks.
- **Assessment/planning.** The study will review the integration between regulation development and environmental assessment and agency planning and will recommend ways to use data better to diagnose environmental problems. It will determine whether traditional partnerships with outside entities can be restructured to provide greater assistance for environmental assessment and planning. Additionally, the agency review will look at the risk-based prioritization approach to directing technical assistance to specific sections of the state.
- **Permitting.** The study will determine if permitting can be streamlined or performed more effectively through procedural, regulatory, or organizational changes. It will examine how data from inspections, monitoring, and enforcement feed back into the permitting process and will determine how pollution prevention can be made an integral part of permitting. The study will also identify successful approaches used by environmental agencies across the country for assessing cumulative risks posed by multiple pollution sources.

Beyond Compliance

EnviroMentor Program: Navigators for Small Businesses

Electro-Chem Etching, a printed circuit board manufacturer in Houston, had received a violation notice and enforcement action by the TNRCC was imminent. Seeking a way to come into compliance, Sean Martin, a process engineer with the \$2 million firm, called the TNRCC's Small Business Assistance Program.

Agency staff directed him to the EnviroMentor program, which matches volunteer professionals with small business owners to improve compliance with environmental regulations.

Martin was referred to mentor Terry Thompson, an engineering manager with Exploration Technologies Inc., an oil exploration and environmental assessment firm in Houston.

With Thompson's help, Electro-Chem modified its procedures to avoid problems with reporting and the Notice of Registration.

"Terry didn't do the work for me," Martin said. "He steered me. He was like a navigator for Electro-Chem for awhile. I now have a view of the whole enchilada. I know now where to go for the information I need, and how to find the answers to TNRCC's questions."

Martin recommended the program to other small business owners. "Having an enviromentor can take the fear factor out of the process. The TNRCC is not a big, black cloud out to shut down business. Now I know that if I make a reasonable attempt to comply, the TNRCC will work with me to find a common solution."

Volunteers get back as much as they put into the program, according to Thompson. "It is satisfying to learn something new and to help someone else at the same time. I had just finished a paralegal course when I started working with Sean. This gave me a chance to apply the principles I had learned. I

was glad to help Sean learn and to explain the rationale of regulations to him so he could avoid compliance problems."

Thompson's contributions included researching and explaining TNRCC regulations, teaching techniques for flow charting waste streams and waste management units, and technical assistance and training for revisions to the Notice of Registration.

Thompson recalls that he joined the TNRCC's volunteer program because of a "sense of fairness." He said he was bothered by the fact that small companies often face exorbitant costs to comply with regulations.

The mentor donated 43.5 hours, valued at \$2,550—a large sum for most small businesses. This is an example of how the EnviroMentor Program can provide companies with a way to achieve compliance at low or no cost.

"I enjoyed the challenge," Thompson said. "The firm had 17 violations. It was like solving a mystery or a puzzle. We felt a sense of accomplishment each time we checked off one of the violations."

Although

Electro-Chem has received its letter of compliance from the TNRCC, the company has continued its efforts to improve its environmental performance. For example, Martin reports that they are working on waste minimization and reduction with efforts such as recycling used circuit boards. Additionally, by next year the company will reduce annual water use from 1 million gallons to 800,000 gallons, and they plan to continue reductions in subsequent years.

"It has been a positive experience working with Sean Martin and Electro-Chem," Thompson concluded. "I plan to become an enviromentor again."



Sean Martin (foreground, with cap), an engineer with Electro-Chem Etching Co. in Houston, consults with mentor Terry Thompson on the process of circuit-board manufacturing. Thompson, a volunteer in the TNRCC's EnviroMentor program, has supported Martin in his successful efforts to bring Electro-Chem into compliance and improve overall environmental performance.



Tanks Are in Order

Operators Comply with Petroleum Storage Tank (PST) Rules

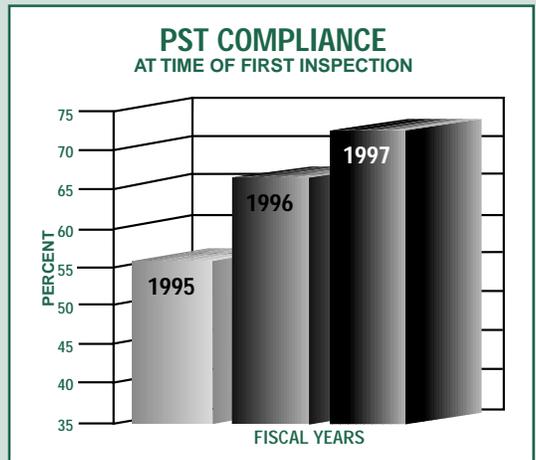
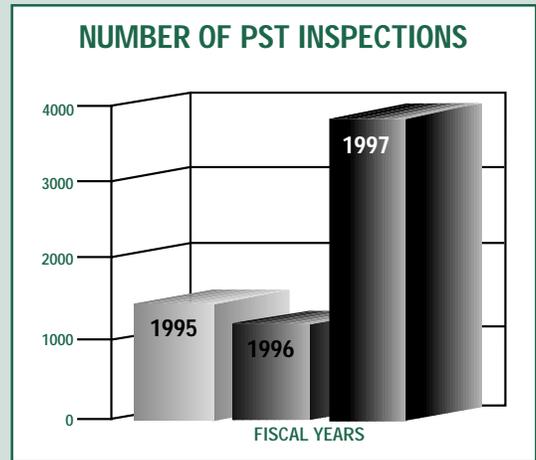
Underground petroleum storage tanks are among the largest contributors to groundwater pollution in Texas. So it was of concern when a decrease in the number of PST inspectors in 1996 brought a corresponding decline in the number of inspections. In 1997, however, the TNRCC's Office of Compliance and Enforcement found a way to more than triple the number of inspections—without increasing staff.

Inspectors were told to spend less time reviewing records during their visits and focus on two points: 1) Did the stations have the required equipment to detect releases and contain spills and overfills? and 2) Were the operators using the equipment?

With the streamlining, the number of inspections skyrocketed. The initial estimate was that it would take a total of 7-10 years to inspect all PST facilities in the state; the estimate is now 3-4 years. There was also an increase in enforcement actions, including the well-publicized closure of several gas stations.

Word got around, and inspectors in FY97 found nearly three-fourths of all stations in compliance at the time of the first visit. **Among those stations that were inspected, 99.5 percent ultimately came into compliance.**

"The regulated community asked us for a program like this," said John Young, TNRCC director of field operations. "They wanted to level the playing field so everyone had to pay the costs of compliance."



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