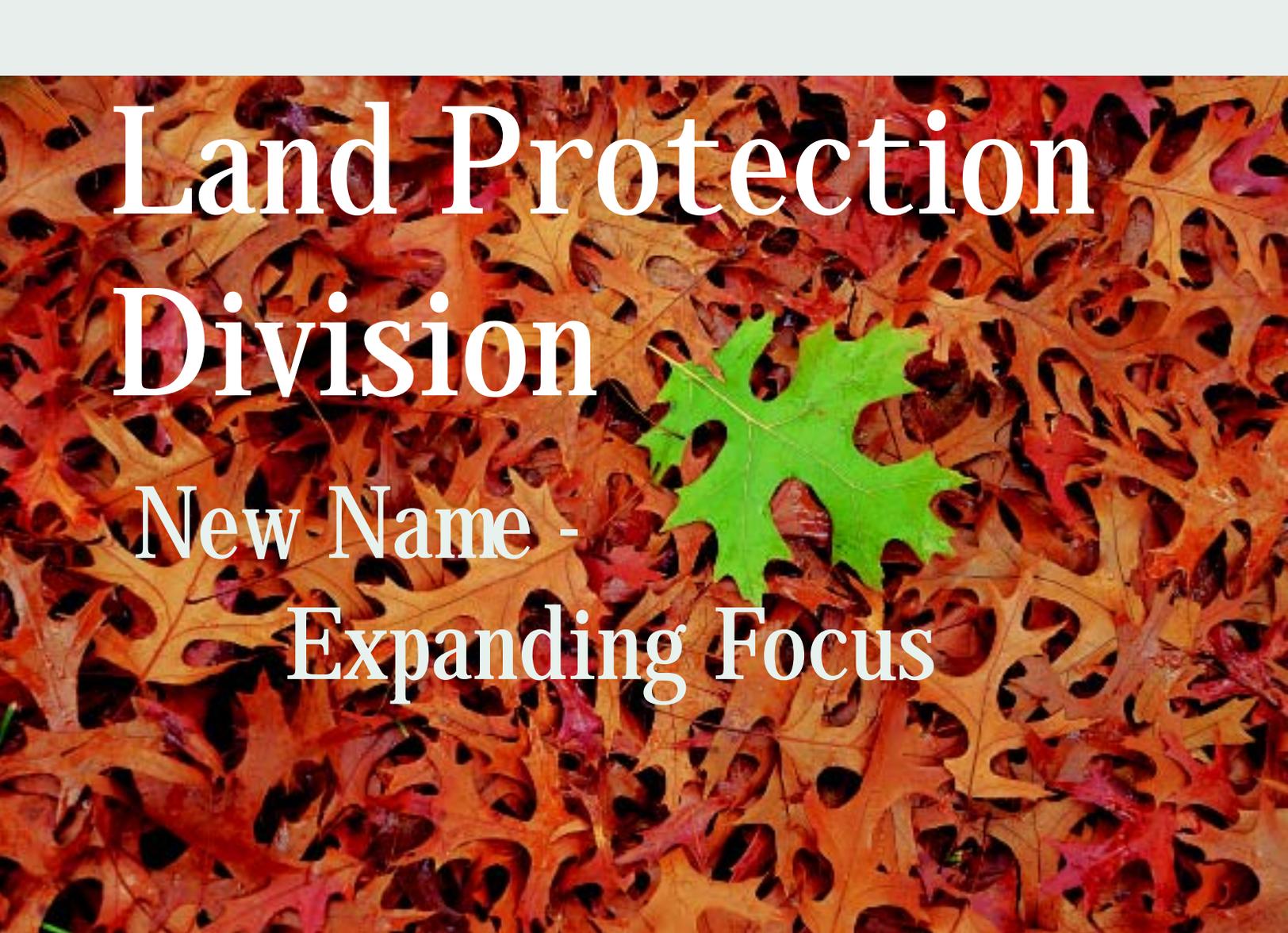


Oklahoma Department of
ENVIRONMENTAL
QUALITY
Annual Report



Land Protection Division



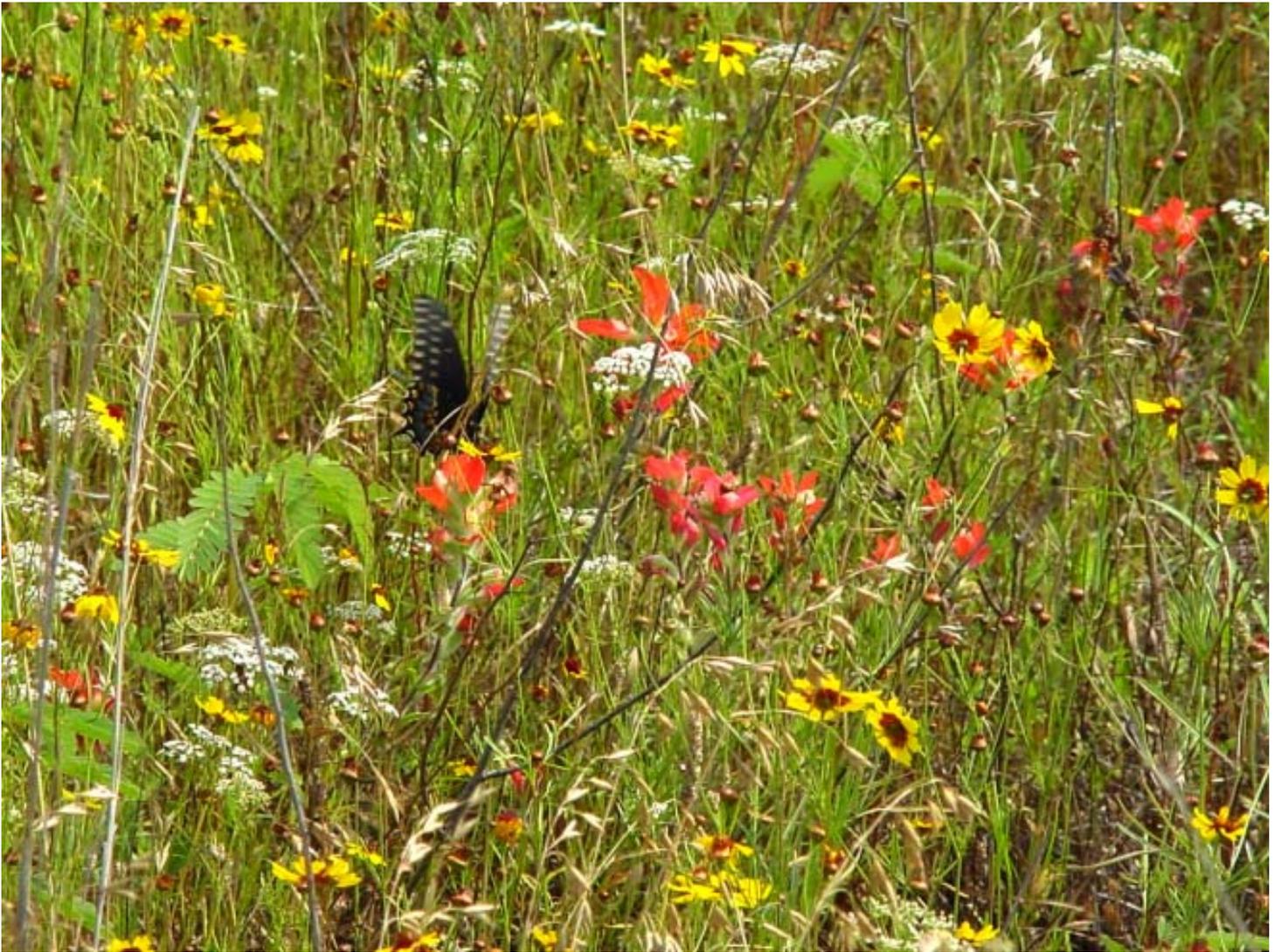
Land Protection Division

New Name -
Expanding Focus

This year, to reflect the division's expanding responsibilities and focus, the name was changed from the Waste Management Division to the **Land Protection Division**. Responsibilities have grown from the regulation of waste disposal to a comprehensive program to ensure that impacted Oklahoma lands are once again viable and productive for future generations. Land Protection regulates the disposal of solid waste, non-hazardous industrial wastes, waste tires, hazardous wastes, biomedical wastes, and the use of radiation. It oversees environmental cleanups of contaminated properties and household and commercial recycling programs, as well as providing environmental education to the public. Protecting the land from improper waste disposal also safeguards the surface water, ground water, and air from these pollutants. Land Protection's efforts to ensure the proper disposal of wastes helps strengthen the natural environment by protecting the state's ecosystems, thereby providing a healthy future

for Oklahomans.

To ensure that Oklahoma's productive farmlands and beautiful, scenic wilderness areas are not lost to development, DEQ encourages the cleanup and reuse of contaminated property. Too often, industrial and commercial facilities close, leaving behind potentially contaminated property and outdated machinery and buildings. These properties remain vacant for decades because the real estate community does not feel that the demolition and cleanup of the property is cost effective and because of the real potential for new owners to acquire environmental liability for any existing contamination. A few of these facilities become Superfund sites [sites listed on the National Priorities List (NPL), the most contaminated sites in the nation]. Other smaller or less contaminated properties have been labeled "brownfields." It is a priority for the Agency to ensure that contaminated properties are cleaned up in a manner that allows the land to be reused in the future.



Pictured are wild flowers growing on a remediated area of the former Kerr- McGee Cleveland Refinery Site

Hazardous Waste



Unfortunately, a major by-product of a modern industrialized society is hazardous waste. The treatment, storage, and disposal of hazardous waste present ongoing challenges for society. An estimated 64,120 tons of these wastes are produced in Oklahoma annually. Stringent controls exist to oversee the disposal of hazardous wastes. The controls are necessary to ensure that such toxic chemicals do not pollute the environment.

Hazardous Waste Compliance Section

The Hazardous Waste Compliance Section (HW Section) consists of three operational Units. These are the Inspection Unit, Enforcement Unit, and the Data Management Unit. Overall, the HW Section is responsible for ensuring that hazardous waste generators and RCRA permitted facilities are in compliance with the federal and state laws. The HW Section is directly responsible for maintaining program authorization

from the Environmental Protection Agency and the development of applicable rules. The HW Section may conduct facility inspections and begin enforcement actions to bring facilities into compliance. It maintains a database of all the regulatory actions at each facility. The HW Section also investigates allegations of violations of the state Environmental Crimes Act.

The HW Section helps the regulated community by providing presen-

tations and by performing Customer Assistance Site Visits to help businesses comply with federal and state regulations. This year, the HW Section participated in the development of the Region 6 Inspector Workshop. The HW Section's activities included giving presentations, and reviewing sampling plans and analyzing data, as well as handling numerous written and verbal customer inquiries.

The past fiscal year the HW Section has been involved in and/or overseen the following activities:

Disposal Plan Applications processed:	323	
Inspections performed:	130	
Customer Assistance Site Visits:	13	
Informal (NOVs) Enforcement Actions issued:	54	
Timely issuance:	100%	
Formal (Orders) Enforcement Actions issued:	11	(6 bankrupt, no fines assessed*)
Timely issuance:	100%	
Fines Assessed:	\$49,170*	

Hazardous Waste Management Advisory Council

Member	Professional Realm	Appointing Official	Term
Bob Kennedy	Industry	Governor	3/1/02
Douglas Hawkins	Non-Profit Env. Org.	Governor	3/1/03
Bruce Elwell	Political Subdivision	Governor	3/1/02
Jody Reinhart *	Hazardous Waste Ind.	Speaker of the House	3/28/03
Gerald S. Ihler	Engineering	Speaker of the House	9/11/03
David Bradshaw, P.E.	Geology	Speaker of the House	9/11/03
Steve Tomberlin	Political Subdivision	President ProTempore of the Senate	3/11/03
Michael D. Graves **	General Public	President ProTempore of the Senate	3/11/01
Wesley Anderson	Industry HW generator	President ProTempore of the Senate	3/11/02

* Denotes Chairperson ** Denotes Vice Chairman

The Hazardous Waste Management Advisory Council is responsible for reviewing and recommending rule changes that affect the handling of hazardous waste in the state and that regulate the Brownfields Voluntary Redevelopment Program. The Council met on August 24, 2000; January 30, 2001; and May 3, 2001. This year the Council considered issues concerning: Deferring the requirement that polychlorinated biphenyls (PCBs) be considered a constituent subject to treatment when they are present in soils that exhibit the toxicity characteristic for metals, allocating monies from the Hazardous Waste Fund, adopting by reference new federal RCRA regulations, and, changing of the jurisdiction for Hazardous Waste Transporters from DEQ to OCC.

Hazardous Waste Compliance Section

RCRA Program Requests Additional Authority

In 1985, EPA delegated the implementation of the RCRA hazardous waste program in Oklahoma to the DEQ. With delegation of these enforcement powers, DEQ became the primary Agency responsible for implementing the federal RCRA hazardous waste program in Oklahoma. This year, the Hazardous Waste Compliance Section requested additional authorities under the Resource Conservation and Recovery Act (RCRA). The newly requested authorities include the

power to de-list a waste. This would allow the DEQ to determine if a waste from a facility should be exempted from the label “RCRA listed waste.” The applicant would have to show that its process waste does not meet the criteria for which EPA originally listed that type of waste.

DEQ has also requested authorization for new federal rules promulgated between July 1, 1999, and June 30, 2000. These include rules identifying hazardous waste lands as universal waste and a 180-day waste

accumulation time for the metal finishing industry’s wastewater treatment sludges.

DEQ must ensure that the State has authority to implement RCRA and any amendments or changes in the law that Congress makes as well as any changes to regulations that EPA may promulgate. DEQ presents all new rules to the Hazardous Waste Management Advisory Council for recommendation to the Environmental Quality Board for adoption.

Hazardous Waste Permitting and Corrective Action Section

Wildlife Refuge Planned on Former Land Treatment Unit

Dayton Tire is in the process of developing a former land treatment unit (LTU) into a wildlife oasis. In cooperation with the Wildlife Habitat Council and the Oklahoma Department of Wildlife Conservation, Dayton Tire has developed a Wildlife Habitat Management Plan designed to increase bio-

diversity in the area near its southwestern Oklahoma City tire manufacturing plant. The LTU was formally closed under DEQ permit in 1991, so the project required modification of the permit.

Dayton is devoting 80 acres of its 396 acre site to the project. When finished, the wildlife refuge will pro-

vide a link to habitats to provide a more stable and diverse ecosystem. The land associated with the LTU is crucial to the project. Therefore, the Hazardous Waste Permitting staff worked diligently with Dayton Tire to produce a Class 3 Permit Modification that will remove remaining post-closure permit constraints. The Draft Permit Modification was presented for public review and comment and was approved on June 12, 2001.

The site is located near the northeast corner of Southwest 29th Street and Council Road. Dayton Tire has operated the facility since 1969, and the Land Treatment Unit was built in 1978. When the project is complete, the Wildlife Refuge will be open for the public to enjoy.



This wildlife refuge emerged from a former waste treatment area.



This footbridge allows public access to the refuge.

Radiation Management Section

The Radiation Management Section is responsible for regulating all ionizing and non-ionizing radiation sources within the state with one

exception, diagnostic x-ray machines. The program involves responsibility for some major sources of radiation, such as those used in

nuclear medicine, academic research, and moisture and density gauges for the manufacturing and construction industries.

Oklahoma Receives NRC Delegation

On September 29, 2000, a lone truck left the U.S. Nuclear Regulatory Commission (NRC) Regional Office in Arlington, Texas. Following behind, in a state vehicle, two Oklahoma DEQ employees tailed the truck, making sure it safely delivered the important cargo to a destination in Oklahoma City. They knew this transfer was the culmination of over thirty years of work and were determined that nothing should go wrong and no accident should befall the truck's cargo.

The cargo of the truck wasn't high-level nuclear waste. In fact, it wasn't even radioactive. The truck was carrying about forty boxes of files that were being transferred from federal custody to state custody. These were the files containing the licensing and documentation for over 200 radioactive material licensees in Oklahoma. The transfer of records was part of Oklahoma DEQ fulfilling an "Agreement" with the Nuclear Regulatory Commission for the state to assume regulatory responsibilities over most radioactive

materials that had been regulated by the NRC until that time. This makes Oklahoma an "Agreement State." Oklahoma has been pursuing this status since the mid-1960s, and the long quest to become an Agreement State was now at an end.

As a result of DEQ taking jurisdiction, the Agency will now regulate about 230 users of radioactive materials in fields as diverse as medicine, oil exploration, research, and construction. The federal government retains jurisdiction over several large facilities undergoing cleanup in the state, as well as certain federal facilities.

The DEQ staff had to deal with several challenges early on. Right at the time of the transition, a new technique using radioactive sources to treat patients who have experienced heart attacks was approved by the Nuclear Regulatory Commission and the Food & Drug Administration. Several hospitals in Oklahoma were eager to add this new use to their licenses as soon as possible, and the Radiation Manage-



ment Section rose to the occasion. In addition, an Oklahoma DEQ license had to be prepared as a replacement for the federal license held by each facility. Some of these documents are quite complex, and ensuring that references to equivalent state requirements were in place was a large task.

Radiation Management Advisory Council

Member	Professional Realm	Appointing Official	Term
Burl Nethercutt	Industrial Radiography	President ProTempore of the Senate	3/3/01
George W. Fowler	General Public	President ProTempore of the Senate	1/3/02
Larry Hawkins	University	President ProTempore of the Senate	1/3/03
Karen Jennings	Environmental Organization	Governor	7/1/03
Steve Woods	Engineering	Governor	7/1/02
Donald Brewer	Industry using radiation sources	Governor	7/1/04
Steve Clark	Petroleum Industry	Speaker of the House	6/22/02
Barry Burks	Transportation Industry	Speaker of the House	1/11/02
David Gooden, J.D., Ph.D.*	Medical Industry	Speaker of the House	9/11/03

* Denotes Chairperson

The Radiation Management Advisory Council reviews and approves radiation management rules and recommends them to the Environmental Quality Board for further action. The Council has had a very full agenda for several previous years, as the Re-Right/De-Wrong process and the approval of rules for Agreement State status moved in parallel. By comparison, FY 2001 was relatively a quiet year. The Council approved some non-substantive changes that eliminated some redundant rules regarding the Central Interstate Low-Level Radioactive Waste Compact and made other minor changes.

Out of Sight | Out of Mind

Where Does the Trash Go?

Solid Waste

Oklahomans, like most Americans, do not want to think about what becomes of the estimated 15.2 MILLION pounds of trash they throw away each day. In Oklahoma, most household wastes are put into landfills, although some trash is incinerated, and a small portion is recycled. It is the job of Solid Waste Compliance Section and the Solid Waste Permitting Section to think about the state's trash and what to do with it for years to come. They have to find ways to meet federal and state requirements and the State's disposal needs. In an industry where it sometimes seems that there are no good solutions, solid waste staff has to find solutions because the trash keeps coming.

In the last 36 years, municipal waste disposal has progressed from open dumps, which were often on

fire, to modern, engineered landfills. Regulations had to be developed to make sure that wastes put in the

Solid Waste Compliance

The Solid Waste Compliance Section regulates both active and closed solid waste disposal facilities, including:

- Biomedical Waste Autoclave Facilities
- Biomedical Waste Transfer Stations
- Composting Facilities
- Construction and Demolition Landfills
- Municipal Solid Waste Incinerators
- Municipal Solid Waste Landfills
- Solid Waste Transfer Stations
- Waste Tire Processing Facilities
- Waste Tire Storage Facilities
- Closed Landfills

Monitoring closed landfills is especially important. Improper maintenance and/or reuse of closed landfills can result in erosion of the cap, exposure of wastes, water percolating through the wastes and various other serious problems.

The Solid Waste Compliance Section also manages the Non-Hazardous Industrial Waste Program, the Waste Tire Program, the Recycling Program, and an educational program.

landfill, stayed in the landfill. Other regulations were adopted to ensure the structural integrity of these mountains of trash. Engineered landfills protect Americans from the notorious biological threats caused by unsanitary conditions.

Continued on next page

DEQ Re-Rights/De-Wrongs Solid Waste Rules

Responding to the needs of the regulated community, the Solid Waste Compliance Section has undertaken the task of reviewing and rewriting rules governing the disposal of solid waste in Oklahoma. The goal of this project is to make the rules "user friendly." The project will ensure that outdated and unnecessary language is removed and that all new requirements are added. It will also simplify the language and make the rules easier to read. Alternative methods of compliance

will be included, which may help owner/operators reduce their costs while maintaining strong environmental protection.

The Division wanted the process to be a cooperative effort and invited the regulated community, consultants, municipalities, and interested citizens to participate in the development of the rules. Regular meetings were held to analyze and delineate the areas that needed improvement and to discuss potential solutions. Significant improvements have been proposed and are being incorporated into the proposed rule

changes. The formal rulemaking process will continue into FY 2002.

The hard work of everyone involved in the process and the good will that was built throughout the process will ensure that the new rules are acceptable to the regulated community, the local communities, and the State. Regulating the disposal of solid waste in a consumer driven, throw-away society is a huge responsibility. This project will help everyone better understand the regulatory requirements

Continued from previous page

Solid Waste Permitting

Among the activities that are accomplished in Solid Waste Permitting, oversight of the landfill construction process is being recognized with increasing importance. As permitted facilities advance from permit applications through concept and design to working drawings, the DEQ strives to ensure a successful environmental outcome.

In landfill construction, that means the project has been successfully completed and that design features are in place as required to be protective of the environment. During the past year, DEQ solid waste



Above is an engineered landfill liner installation in process.

permit engineers have been in the field visiting construction projects at critical junctures where regulatory oversight is most helpful to advance the project to completion. On several occasions, DEQ assistance has helped owners and their consultants reach a successful conclusion to the project with minimal cost and maximum environmental protection.

Modern landfills are engineering feats that constantly challenge their operators. Failure of the landfill can lead to serious problems. The Solid Waste Permitting Section is responsible for ensuring that solid waste landfills are properly built and that all regulatory requirements are met.



Pictured here is a slide slope of a lined cell under construction.

Community Based Environmental Protection

The Community Based Environmental Protection Program (CBEP) helps local communities solve their environmental problems. The program brings various federal, state, and local agencies and organizations together to examine the community's environmental problems as a whole and to provide solutions that protect the area's ecosystem as well as the economic prosperity of the community.

In FY 2001, the CBEP program focused on the City of Ft. Towson

in Choctaw County. Ft. Towson needed assistance in upgrading its sanitary sewer system. Upgrades have been made to 3 lift stations; pump vaults have been installed at 132 homes around Lake Raymond Gary; and 66 acres of new sewer lagoons will soon be in use. The City of Ft. Towson was also spotlighted as a success story in an EPA video describing the CBEP program. Citizens of Ft. Towson are pleased with the ongoing revitalization of their town's infrastructure, and they recognize the benefits of teaming up



with federal and state agencies to meet their environmental challenges.

Solid Waste Management Advisory Council

Member	Professional Realm	Appointing Official	Term
Ken Purdy *	Statewide Env. Org.	Governor	3/1/04
Ralph Triplett, Jr.	County Commissioner	Governor	3/1/02
David K. Griesel	SW Disposal Industry	Speaker of the House	3/7/02
Jeffrey A. Shepherd	Engineering	Speaker of the House	6/19/04
Casey Elliott	Transportation	Speaker of the House	9/11/03
Bill Torneten	Geology	President ProTempore of the Senate	3/1/03
Tom Canfield	Political Subdivision	President ProTempore of the Senate	3/11/01
Steve Landers	Industry Generating SW	President ProTempore of the Senate	3/1/02
Jay Stout **	General Public	Governor	3/1/02

* Denotes Chairperson ** Denotes Vice Chairman

The Solid Waste Management Advisory Council reviews proposed solid waste rules and recommends rule changes to the Environmental Quality Board. The Council met on July 13, 2000 and October 12, 2000. The Council considered issues concerning the waste tire program, cost of closure and post closure for solid waste management facilities, and the project to review and rewrite the Solid Waste Rules.

Disaster Response

This winter Oklahoma was hit with a major disaster: one of the most damaging ice storms in the country. While almost any disaster produces debris, disposing of the huge pile of brush generated by the storm almost overwhelmed many local governments. In addition to

DEQ's Environmental Complaints and Local Services Division, Land Protection also played another pivotal role in developing the solution.

In many areas, the only possible solution was burning. Local DEQ officials helped city and county governments identify acceptable loca-

tions for burning. More importantly, they helped each entity comply with the criteria of the Federal Emergency Management Agency to ensure that it was eligible for federal reimbursement.

The ideal way to manage brush is to recycle it by chipping and using the chips as mulch. For many local governments, however, the cost of a chipper prevents this recycling. DEQ can provide government agencies a reimbursement of 20 percent of their investment in recycling equipment. Through this program, DEQ helped the local governments listed to the left acquire brush chippers to process the storm debris.

Counties	Cities	Other
Johnston	Stigler	East Central State University
Pontotoc	Crowder	
Atoka	Madill	
Sequoyah	Davis	
Garvin	Kingston	
Pittsburg	Wynnewood	
Stephens	Spiro	
Pushmataha	Lawton	
Carter	Poteau	
McCurtain	Pocola	
Choctaw	Waurika	
Adair	Marlow	
Latimer		

Compliance Through Cooperation

An abandoned sewage lagoon was one of the relics left from a long abandoned housing development. Located next to a park and a fishing pond, the Southgate lagoon was more than an eyesore — it was an environmental health threat for almost thirty years.

Enforcement in this case was not effective since the owner could never be found. The problem was finally solved

in 2001, by combining the efforts of a number of programs.

The homeowners of the area seized the initiative and with the help of the Grady County commissioners formed a rural sewer district. They received a Community Development Block Grant through the Oklahoma Department of Commerce that allowed them to install a new sewer line. The City of Chickasha allowed them to connect to its sewer system.

Using resources from DEQ's

land restoration program, the Association of South Central Oklahoma Governments was able to clean the old lagoon, close it, and use the sludge to help reclaim a field damaged by historical oil production.

Not one of these actions by itself was capable of solving the entire problem. However, careful planning and creativity resulted in a comprehensive project that made this Grady County neighborhood a better place to live.

Environmental Education

Saving the Environment, One Child at a Time



Children are the environment's strongest ally. Most parents will admit that their household recycling efforts are driven by their children. Children are receptive to new ideas, and their future view of the world will ultimately decide the fate of the environment. DEQ understands that teachers need useful and accurate information to help guide their students' environmental learning experience. Land Protection provides teachers with a wide range of educational opportunities and resources. DEQ's environmental education efforts are targeted towards students in grades K-12. DEQ sponsors poster contests, ECOSummits, and community awareness events, and provides educational grants that help children understand man's impact on the environment.

Use Less Stuff

DEQ continued its "Use Less Stuff" waste reduction campaign throughout Oklahoma. Press releases in a variety of topic areas such as water conservation, "green" Christmas ideas, composting, safe alternatives to household hazardous waste, and others were made available for newsletters and educational events.

Recycling

DEQ provides technical support for business and communities in their efforts to promote recycling or pre-cycling. Databases of Recycling centers are kept throughout the state as well as community Household Hazardous Waste collection dates posted on the DEQ web site, in the Land Protection section.

DEQ coordinates the annual telephone book recycling effort with its industry partners and other state

agencies. This effort helps divert tons of paper from landfills each year. DEQ provides technical assistance to other state agencies to maintain or update recycling programs. DEQ also assists schools, colleges, universities that want to start campus recycling programs. "Dumpster Diving" (finding out what is being thrown away) is the first order of business of a good waste audit, and DEQ guides student groups through this process.

DEQ Practices What it Preaches

In addition to its very successful paper recycling program, the DEQ headquarters began efforts to recycle cardboard. These efforts have captured tons of paper products that would have otherwise been sent to a landfill. DEQ headquarters also has a program for glass and plastic recycling.

Superfund, Voluntary Cleanups, and Brownfields

“Historical contamination” is a catch phrase that describes pollution that occurred before pollution laws were passed. Waste disposal practices during the first half of the twentieth century left behind contamination at many former industrial sites. Some sites were heavily contaminated and continue to present serious threats to nearby communities.

To deal with these heavily contaminated sites, Congress passed the Comprehensive Environmental Response, Compensation, and Liability Act of 1980. The law is better known as Superfund because it created a large fund to pay for cleanups at abandoned sites. Superfund provides very strong enforcement

and cost recovery powers to the Environmental Protection Agency because the intent of the law was to force the polluter to pay for the cleanup of these hazardous waste sites.

Superfund was passed to deal with sites that were so contaminated that they presented serious threats to human health and the environment. However, the law had a side effect. Smaller and less contaminated sites began to lose commercial value because lenders would not allow contaminated properties to be used as collateral. They did not want to foreclose on such properties and then be forced to pay to have the property cleaned up. Potential buyers were also leery of these properties. As a

result of these concerns, many properties sit vacant, blighting the community. These properties have become known as “brownfields.”

Land Protection has various options available for the investigation and cleanup of contaminated properties. DEQ works with EPA to implement and oversee the federal Superfund Program in Oklahoma. DEQ also operates a Voluntary Cleanup Program where property owners or responsible corporations can clean up property with advice and oversight from the state. Finally, DEQ manages a Brownfield Redevelopment Program. The Brownfield Program provides legal protection from environmental liability at sites that been cleaned up under this authority.

Site Remediation Section Site Assessment Unit Superfund Investigates Former RCRA Sites

This year, DEQ Superfund Site Assessment staff began investigating two former RCRA regulated facilities. The unusual action was taken due to the existence of potentially serious threats to the surrounding environment from these facilities. Various problems have occurred since the companies closed that have undermined the existing controls at the sites. Community concerns prompted DEQ and EPA to refer the sites to the Superfund program for investigation.

The sites are extremely complicated. One site is a former oil refinery in southwestern Oklahoma that has been idle since the mid - 1980s. The other site is a former commercial waste facility that caught fire and burned in the late 1990s. Site Assessment staff conducted extensive sampling at both facilities. All the information collected during the site inspections will be forwarded to EPA for review and a final determination as to whether the sites will be proposed to the NPL as Superfund Sites.

This photo shows a fire at a former RCRA site.



Remediation Unit

Completion of ORC Superfund Cleanup Ahead of Schedule

The Superfund cleanup of the Oklahoma Refining Company Superfund Site will be finished one year ahead of schedule. The time savings is due to the successful biotreatment of oily wastes and the application of biosolids to the soil to reestablish vegetation. Biotreatment is the process of speeding up nature's own process of breaking down organic matter into inert substances. Oil eating bacteria, which are naturally present in the environment, are encouraged to digest the oil by creating ideal living conditions for the microbe. The biosolids are also natural – they are the dried, aged sludges from municipal sewer lagoons.

Four years of the heavy construction associated with the Superfund cleanup left the site barren. During that time, over 100,000 cubic yards

of wastes were treated and disposed. To make the soil fertile again, biosolids were added to the surface soils. The biosolids supply the needed organic matter and nutrients to support plant growth. This treatment allowed a vegetative cover to be established at the ORC site. The vegetative cover helps prevent wind and water erosion, provides a habitat for wildlife, and beautifies the area. Another benefit of the process is the recycling of the sludge (in this case from the City of Anadarko).

DEQ is the lead Agency overseeing the ORC Superfund cleanup, but it was a joint effort. EPA, the City of Cyril, the Oklahoma Department of Central Services, and the Inter-Tribal Environmental Council provided assistance and support throughout the project.

Superfund Emergency Response Parawax Site Prepared for Redevelopment

The Parawax Reclaimer, an abandoned oil reclamation facility, for years sat on a hill just south of the North Canadian River and east of Eastern Street. Dilapidated tanks greeted the wandering eye and branded the area as blighted. Today, the tanks are gone and the site is getting cleaned up, thanks to a cooperative effort between DEQ, EPA, the Oklahoma Corporation Commission, the US Army Corps of Engineers, the City of Oklahoma City, the US Coast Guard, the Native American Cultural and Educational Authority, the Oklahoma Department of Commerce and the US Fish and Wildlife Service.

The area near the facility is part of the Oklahoma City Metropolitan Area Projects (MAPs) North Canadian River Development Project. A seven mile stretch of the North Canadian River is being transformed into a series of river lakes with trails and recreational facilities. The estimated cost of the river project is \$51.8 million. Wastes and contaminated soils and surface water at the Parawax site threaten the environmental integrity of the river as well as the drinking water supply of many downstream communities. Contaminants include petroleum and polychlorinated biphenyls (PCBs).

The site had been closed since 1993, when the Oklahoma Corporation Commission issued an order to the owner to halt operations and clean up the facility. The owner cited insufficient resources for the cleanup and abandoned the property.



Above is a photo of the Parawax site prior to cleanup.



After these tanks are removed, a view of downtown Oklahoma City will be possible.

Big Sites Do Get Cleaned Up

The federal Superfund program was created by Congress in 1980. The goal of the program is to prioritize and clean up the nation's worst historical hazardous waste sites. Of the 1,468 sites ranked across the nation, Oklahoma

has 13 NPL sites, three of which were added in the past year and a half. Another site was deferred from the NPL to State oversight.

Today, Oklahoma can boast that of these 13 sites, five have been cleaned up (although the investiga-

tion and monitoring of the ground water near these sites continues). Cleanup work at another site is close to completion. Many of these sites were abandoned petrochemical refining and re-refining facilities that left thousands of cubic yards of refining waste in unlined pits and on the ground. This waste was treated to reduce the level and volume of contaminants and then placed in an appropriate disposal facility.

The cleanup of the waste sources paves the way for these sites to be redeveloped and reused. The redevelopment of Superfund sites is a national priority, and the State is also keenly interested in the possibilities. Redevelopment of most of these sites can take place despite on-going ground water remediation. Ground water remediation often requires many years of active or passive treatment to achieve cleanup goals.

The State has begun working on the three new NPL sites. The first step is to define the extent of contamination and to examine the best methods available to clean up the property. Estimates of dates of completion for cleanup range from three to five years, depending upon the complexity of each site.

Pictured here is contaminated debris at a smelter site.



This is a view of a historical waste site.



Tar Creek Superfund Site

A Holistic Solution

In February of 2000, the Governor convened a task force to look into the myriad issues related to the Tar Creek Superfund site. The task force completed its work in October 2000 with a recommendation to construct a natural resource area. The natural resource concept would convert the area into a wildlife refuge and would provide passive treatment of metals contaminated water. This solution should not only address immediate health concerns posed by lead exposure, but also address larger concerns of subsidence of mined areas, open mine shafts and serious drainage and flooding problems in the Tar Creek drainage basin.

While reaction to the recommendation has been mixed, local and state agencies have continued to find ways to fund research into the feasibility of constructing the natural resource as a holistic remedy to the problems in the Tar Creek area.

In the meantime, the DEQ continues to work with the EPA to ensure efforts proceed to remove and reduce immediate health threats to residents in the towns of Picher, Cardin, Quapaw, Commerce and North Miami. The county health department will continue education efforts to reduce exposure to lead. The DEQ provided matching funds for the HUD's lead-based paint abatement in the area, and almost 40 homes have been cleaned of lead-based paint. Removal of lead-contaminated soils in residential yards at 1,542 properties is complete. The removal of the impacted soils at remaining properties should resume soon, but cannot proceed in the re-



maining 550 yards currently identified without the State's 10 percent matching funds. These efforts combined have been dramatically successful as evaluated by a 50 percent reduction in blood lead levels of children in the area.

EPA extended sampling efforts to high access areas in the City of Miami and discovered chat with elevated lead levels in some of these areas. EPA will expand sampling in the City of Miami to confirm any areas that require remediation.

The practice of using chat for gravel in construction activities, including its use as bedding sand for utilities in home construction, is an area that DEQ is seeking further investigations by the EPA. The extent of homes with this problem is

unknown, but the prevalence of the chat material and its extensive use as a construction material indicates that the number of homes may be very large.

DEQ also continued investigating the quality of water supplied to residents in these towns by the deep Roubidoux aquifer. See "DEQ Provides Clean Water to Ottawa County" in this report for details on progress on ground water quality.

One of the DEQ's goals for the coming year is to aggressively seek involvement and coordination of numerous federal agencies that have the expertise and authority for potential solutions to the problems plaguing northern Ottawa County. DEQ will continue to coordinate efforts at the state Agency level.

DEQ Provides Clean Water to Ottawa County

The Tar Creek Superfund site in northern Ottawa County suffers many environmental problems caused by former mining activities in the area. One problem for the small towns in the area is providing good quality drinking water to their residents. Acid mine water has contaminated the shallow Boone aquifer. Although no one uses the Boone for drinking water, they have to drill through it to get to the deeper Roubidoux aquifer. The acid mine water in the Boone found ways into the water supply wells. The acid could have either damaged the well casings, or it could have made its way down the well hole and polluted the Roubidoux. The Roubidoux supplies drinking water to most of the residents of the towns of Picher, Commerce, Quapaw, Cardin, and North Miami. Their water was red, it tasted and smelled bad, and it discolored light clothing. Even though the water met the drinking water standards for health, it did not meet the standards for aesthetic quality. It was an unpleasant, day to day reality for the residents in these communities.

In 1996, the DEQ, with funding



from the EPA, began investigating the cause of the poor water quality. It was important to find out if the Roubidoux had also been polluted or whether water from the Boone was getting into the water supply. After extensive investigation, DEQ discovered that the poor water quality resulted from the acidic water in the Boone corroding the steel water production pipes.

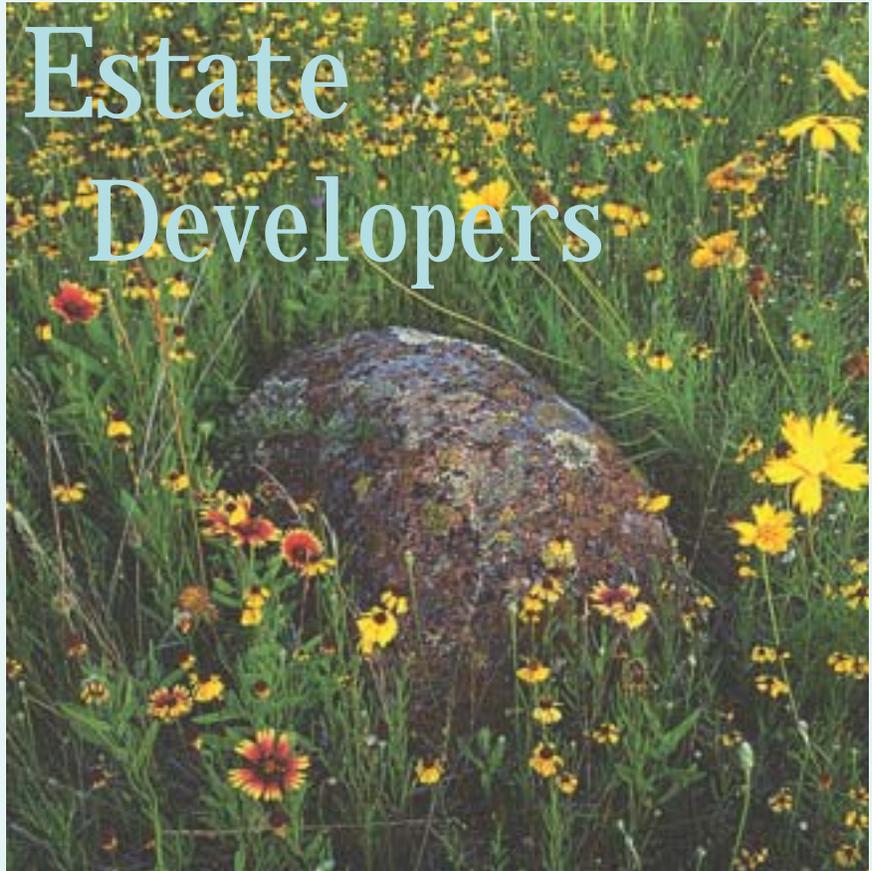
For this investigation, the DEQ drilled five monitor wells. Special care was taken in the construction of these wells to ensure that the acidic Boone waters could not corrode the well casings and also to ensure that the wells would meet public drinking water well stan-

dards. Three of these wells produce excellent quality water and will ultimately be deeded to the towns to replace their existing drinking water supply wells. One well has already been dedicated to the Town of Picher and has greatly improved the town's water quality.

The water quality in two of DEQ's wells has not been good, and the DEQ continues to look for the cause of the problem and for potential remedies. The DEQ continues monitoring water quality in the area and remains optimistic that new wells, if carefully constructed, will be able to produce excellent water to the residents of northern Ottawa County for a long time.

Voluntary Cleanup Program Voluntary Cleanup Program Assists Real Estate

Developers



At the end of FY 2001, the staff of the Voluntary Cleanup and Brownfields (VCP) Section, with additional assistance from the staff of the Site Remediation Section, provided oversight for site characterization or site remediation at 101 sites. During FY 2001, 17 sites were closed with no further action required. The environmental concerns at these sites are predominately soil and groundwater contaminated by hydrocarbon based chemical products. The following are examples of sites that were closed.

As part of a real estate transaction, a property owner in Muskogee had an environmental assessment of his property completed. A local bank was interested in locating on the property and raised concerns about a reported liquid ammonia spill that had occurred on the property. Records indicated that a cleanup of the site was completed, but the bank wanted to make sure

that it had been cleaned to levels that were safe for commercial reuse. The landowner requested the VCP staff to evaluate whether the soil removal action was adequate or whether other environmental concerns existed. The VCP staff found that the site met the state's environmental requirements for commercial reuse and that no further environmental cleanup was needed. The bank opened for business at this location in July 2001.

For several years, the City of Oklahoma City has been in the pro-

cess of revitalizing its downtown area. During the demolition and construction activities at the site of a new library and learning center, the City discovered soil contaminated by an old hydraulic lift. The City requested the VCP to provide oversight during the evaluation and remediation of this contaminated soil. With timely assistance of the VCP staff and the environmental consultant, construction of the building was not delayed, and the Center is well on its way to being completed.

Voluntary Cleanup and Brownfields Section

Brownfields Program Receives \$1 Million from EPA



This photo shows Governor Keating accepting the \$1,000,000 check from Greg Cooke, the Regional Administrator for EPA Region 6.

DEQ received a \$1 Million Pilot Grant from EPA to seed a Brownfields Cleanup Revolving Loan Fund. The fund will provide low interest loans to qualified borrowers for the cleanup of brownfield sites in Oklahoma. The loan fund will be open to private parties, local governments, and tribes. The fund is expected to be operational in June 2002. EPA awarded the Pilot Grants after a national competitive process that was

open to local, regional, tribal, and state governments. DEQ applied for the grant in an effort to meet the needs of brownfield developers and property owners throughout the state. Lack of financing for the necessary environmental cleanup had been identified as a major barrier to the reuse of brownfields.

Brownfields are properties that have lost commercial value due to the fear that they might be contaminated with hazardous wastes. The

commercial real estate market feels that it would not be cost effective to develop these properties. Therefore, many old industrial sites sit vacant potentially contaminating the surrounding area and providing an attractive nuisance to area children.

The DEQ will work with the Oklahoma Department of Commerce in the management of the fund to promote re-use of these sites.

Oklahoma Department of ENVIRONMENTAL QUALITY Report



Administrative Services Division

DEQ's Administrative Services Division

Administrative Services is the management and operational arm of DEQ and includes the Office of the Executive Director, Legal Services and Support Services.

The Office of the Executive Director is responsible for mission development and goal development, departmental vision, policy and direction, and final authority for permit approval, administrative orders, rules development and litigation. The General Counsel is housed in this office, and through the Agency's

Legal Services, oversees the legal affairs of the Agency. Additionally, the Office of the Executive Director serves as the initial point of contact for the Governor's Office, the Legislature and other state and federal agencies. The Agency's public information office that handles media relations is also managed and coordinated through the Executive Director's Office.

Support Services provides all fiscal, personnel, building infrastructure and information management services for the Agency.



Above are Ellen Bussert and Larry Gales discussing building infrastructure.

DEQ nears completion of the first phase of CCRA

After four years of effort, the DEQ is approaching the realization of several long-term personnel goals associated with the opportunity to better manage the pay and performance of its employees. Historically, state government has lagged behind its private sector counterparts in rewarding good performance and improving poor performance. These inadequacies have been evidenced by high turnover

rates, less than desirable employee morale, burnout of high achieving employees. With the advent of the Compensation Classification Reform Act (CCRA), DEQ's managers and employees have been afforded the opportunity to improve compensation as a function of performance.

The CCRA provided the state with the tools needed to bring its personnel management system into

better alignment with current best personnel practices. The Act was intended to provide for a better employee classification system, a more competitive compensation system and a holistic performance appraisal system. Prior to the development of the actual legislation, knowledgeable individuals from the DEQ participated on many of the various task forces put in place to seek and act upon input provided by the various

stakeholders. This process and DEQ participation has resulted in a reduction of the number of classifications for state employees and a set of clearer job descriptors for each of these classifications; a performance management process that encourages buy-in from both employees and managers; and a compensation system that contains heretofore unavailable opportunities to increase the financial compensation for those employees who do their jobs in an acceptable fashion.

From its onset, the DEQ has sought to maximize the opportunities for pay increases that were provided by the CCRA. The Agency has been able to use four of the six initially authorized pay movement mechanisms to provide at least one pay increase to approximately 80 percent of the employees of the Agency. Additionally, the Agency was authorized to make a market adjustment to the salaries of incumbents in the Engineering Intern and Professional Engineer job families. However, with the authorization of Pay for Performance, all employees

who do their jobs will be able to receive routine pay increases that are directly related to how well each performs.

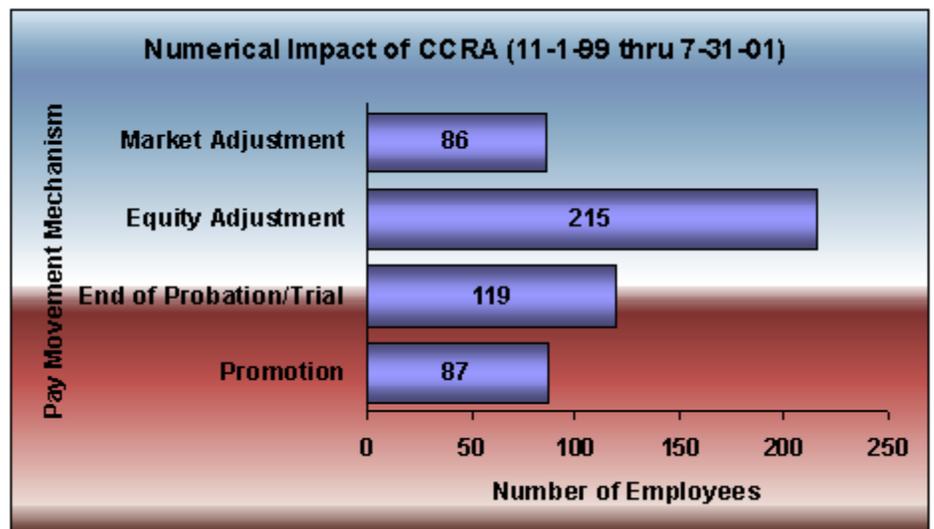
With the advent of CCRA, the State of Oklahoma has made signifi-

cant progress with management of its personnel system. All agencies are now better able to evaluate the performance of their employees and to provide pay increases on an annual basis. Salaries are now more in line with the private sector, and the state is now more competitive in recruitment of new employees and retention of seasoned veterans.

The graph at the bottom of this page compares the duplicated number of employees who were impacted by the various pay movement mechanisms authorized by the CCRA during the period of November 1, 1999 through July 31, 2001. This duplicated count

“ . . . the DEQ is approaching the realization of several long-term personnel goals associated with the opportunity to better manage the pay and performance of its employees.”

represents a total of 507 actions, the impact of which is that approximately 80 percent of the Agency’s employees received at least one pay increase.



Information Management Team Contributes to the DEQ Cause

The Department of Environmental Quality's Information Management Team consistently provides an underlying infrastructure upon which the Agency's employees and customers rely to conduct business. The maintenance of this foundation of hardware and software applications largely goes unheralded as it is taken for granted by most. This is actually a tribute to the efficiency and effectiveness of the Information Management Team.

More obvious accomplishments include implementation of Microsoft Exchange Server along with Office 2000 as a robust productivity and communications solution for the Agency. Deployment of virus scanning policies and mechanisms was another important achievement. Streamlined work-flow processes for getting new employees on line, network security improvements through implementation of network address translation, centralization of oracle and file server tape backups, installation and configuration of internal DNS servers, acquisition and implementation of Symantec Ghost to aid in computer deployment, improved high-speed connectivity to many local offices, and ongoing replacement of older, less capable computers and operating systems are just some of the many contributions the Information Management Team has made in the arena of infrastructure.

An important contribution made to Oklahoma communities has been DEQ's "PC's for Schools" program where surplus computers and peripher-



als have been presented to public schools for their use. In return, the schools agree to implement programs designed to promote environmental consciousness for our state and local populations. This program, initiated by Executive Director, Mark Coleman and endorsed by Governor Keating has received much praise.

In addition to these wide-ranging efforts, the Information Management Team develops and maintains specific application software for the organization. This year, new software has been developed to assist the finance and human resources departments by tracking and reporting fixed asset and employee information. The team assisted in deployment of web-based Operator Certification Testing via the DEQ web-server. The many existing programs such as Aquarius, BACT, SDWIS, Permit Status, Facility Management require regular maintenance and modification. Our small but dedicated programming staff works diligently to respond to ever-changing needs.

The references above represent only a portion of the routine and special projects realized through the efforts of the Information Management Team. We take pride in our Agency, its commitment to environmental quality for Oklahoma, and the contribution we can make to this cause.

Deq Purchasing Official Receives Certification



Pictured at the 2001 Oklahoma Association of Professional Procurement Officer and Chapter installation ceremony.

Left to right:
Lisa Martin -
Recording Secretary
Sylvia Petry -
Vice President
Laura Lovell -
President
Reji -
Treasurer
Elaine Taylor -
Membership Chairperson

In Support Services, DEQ's Purchasing Official, Elaine Taylor, has received the certification of Certified Procurement Officer with the State of Oklahoma and Certified Professional Public Buyer through education and examination and issued by the Universal Public Purchasing Certification Council through the National Institute of Governmental Purchasing, Inc. Elaine has played a key role in establishing an Oklahoma Association of Professional Procurement Chapter and currently holds the office of

Membership Chairperson with this organization. The education and continuing professional development of those individuals involved in public purchasing has been a primary objective of the National Institute of Governmental Purchasing since its founding in 1944.

Purchasing plays a strategic role in most organizations, and the competency of its purchasing personnel can become the critical element and focus in the spending of tax dollars. The trend in governmental purchasing is for mandatory certification of

procurement professionals. This designation communicates to the taxpayer that the public employee who is involved in tax dollar spending has reached a specific level of education and experience and is knowledgeable about government purchasing. Certification also reflects established standards and competencies for those engaged in governmental purchasing, and attests to the purchaser's ability to obtain maximum value for the taxpayer's dollar.

Employee Recognition Committee Rewards Fellow Employees

Pictured to the right is Sandra McClain, Employee of the Year for FY 2001.



DEQ recognizes employees for their contributions to the Agency through an employee recognition program. The purpose of the program is to recognize employees and promote good working relationships throughout the Agency. The program includes an Employee of the Quarter Award, Employee of the Year Award, social functions for Agency employees, and Job Well Done awards for supervisors to award to outstanding employees.

The Employee of the Quarter is nominated by fellow co-workers for outstanding contributions to the Agency in the areas of Customer Service, Teamwork, Problem-Solving Initiative and Leadership. The selected employee is awarded a certificate plaque, and is given a gift certificate and a photograph to display during the next quarter of the fiscal year.

The Employee of the Year Program recognizes one employee from the four quarterly winners for exceeding standards in service to the Agency and the citizens of Oklahoma. The Employee of the Year is awarded a personalized plaque, has their name added to the traveling Employee of the Year plaque, is given a gift certificate and a photograph to display during the next fiscal year.



Listed from top left clockwise, Sandra McClain, ASD; Sam Canella, AQD ; Jon Roberts, LPD; and Mary Johnson, LPD. The Employee of the Year for FY 2001 is Sandra McClain.

The Employee Recognition Committee honors the Agency employees during the Public Employee Recognition Week in May of each year. Snacks are served, prizes are awarded and a luncheon is provided for all employees.

Job Well Done awards recognize the contributions of DEQ employees to the Agency and provide an opportunity for supervisors to commend employees for their work. The purpose is to encourage positive employee morale, to recognize a job well done, to encourage a better job performance and to improve communication between supervisor and employee.