ENVIRONMENT

There are six state agencies responsible for environmental regulations. The major tasks of the environmental regulatory agencies are outlined by the Oklahoma Environmental Quality Act (27A O.S. 1-3-101).

ENVIRONMENTAL AGENCY RESPONSIBILITIES

Oklahoma Conservation Commission

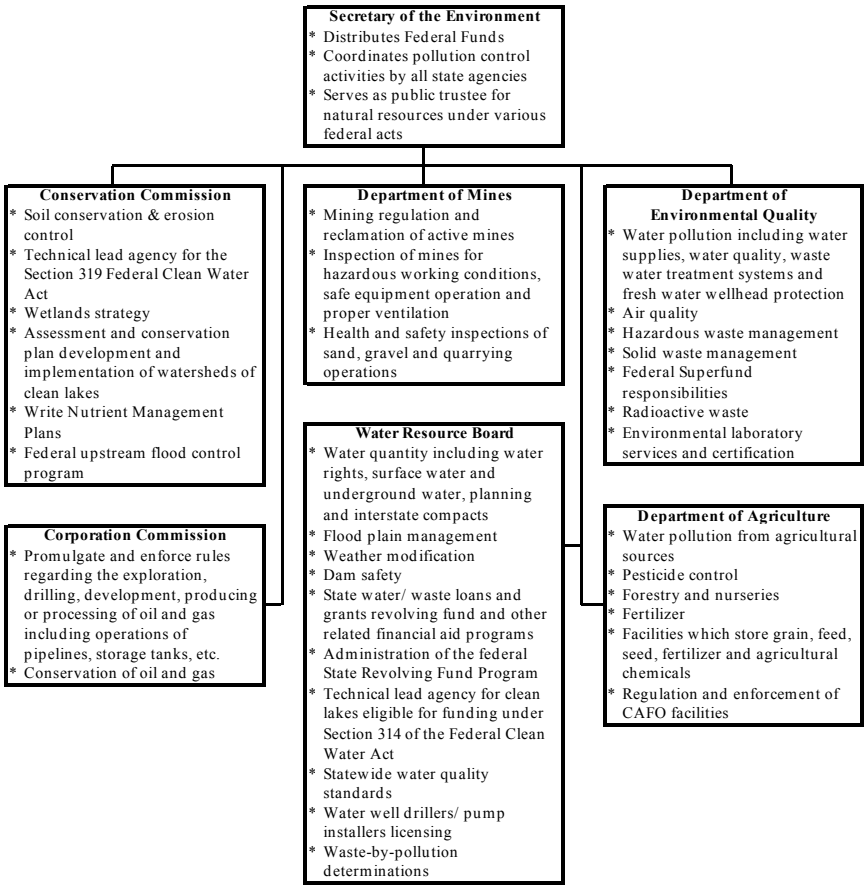
The Conservation Commission's primary responsibilities lie in the preservation and development of Oklahoma's natural resources. The commission has the responsibility for providing assistance to all 88 conservation districts in the areas of erosion prevention and control, prevention of flood and sediment damage, development of water resources, environmental education coordination, administration of the state Cost-Share Program, and maintenance of small upstream flood control structures.

State Department of Agriculture

The State Department of Agriculture was created to protect, improve and develop all of the state's agricultural resources, and to increase the contribution of agriculture to the state's economy. The department forms educational and economic partnerships, encourages value-added processing of Oklahoma's raw agricultural resources, and develops domestic and international markets for the state's agricultural commodities and products. The agency enforces laws and rules pertaining to food safety, water quality, and agricultural-related product or service quality.

Department of Environmental Quality

The Department of Environmental Quality (DEQ) provides comprehensive environmental protection and program management. DEQ is responsible for the principal environmental regulatory functions of air quality, water quality, and solid waste and hazardous waste management.



Oklahoma Water Resources Board

The Oklahoma Water Resources Board (OWRB) manages the waters of the state and plans for Oklahoma's long-range water needs to ensure an adequate supply of quality water. The primary function of the agency has been to administer the state's water rights program, both from ground water and stream water. The OWRB also administers the Clean Water State Revolving Fund (CWSRF) and the Drinking Water State Revolving Fund (DWSRF), which provide loans to qualified entities needing financial assistance to construct water and sewer projects.

Corporation Commission

Established in 1907 by the Oklahoma Constitution, the mission of the Corporation Commission is to regulate the activities of public utilities, oil and gas drilling, production and waste disposal; motor carriers, the storage, quality and dispensing of petroleum products, and other hazardous liquid handlers. The

commission also monitors Oklahoma compliance with a number of federal programs.

The Commission is comprised of three statewide elected officials. They serve six-year terms that are staggered so that a vacancy occurs every two years.

Department of Mines

The Department of Mines protects the environment through the enforcement of state and federal laws related to surface and sub-surface mining. Additionally, the department inspects mines for hazardous conditions, directs special consideration towards working conditions, verifies the safety of equipment operation, ensures proper ventilation, and regulates blasting activities.

CURRENT ENVIRONMENTAL INITIATIVES

The Legislature has supported various programs designed to monitor and remediate the state's natural resources. The following programs highlight the state's commitment to a sound environment.

Water Quality Monitoring (BUMP)

During the 1998 session, the OWRB was authorized and provided funding to implement a coordinated and comprehensive state water quality monitoring effort, known as the Beneficial Use Monitoring Program (BUMP).

Oklahoma's water resources are regulated through the promulgation of water quality standards, required by the federal government and developed by the OWRB. Beneficial uses are assigned to every water segment in Oklahoma. By statute, each state environmental agency is tasked with ensuring the maintenance of these beneficial uses. BUMP is designed to gather scientifically and legally defensible baseline water quality trend data. The data will be used to assess and identify sources of water quality impairment, detect water quality trends, provide needed information for the development of water quality standards, and facilitate the prioritization of pollution control activities.

BUMP is composed of five key elements or tasks, two of which have not been implemented due to funding constraints:

- River and Stream Monitoring: Almost 200 sites are sampled monthly for water quality. These sites are segregated into two distinct types of monitoring activities: fixed sites and rotating sites;

- Fixed Station Load Monitoring: Collection of water quantity flow data is used to track long-term trends;

- Fixed Station Lakes Monitoring: Currently 35 lakes are being sampled. The effort involves the sampling of about three stations per reservoir;

- Fixed Station Groundwater Monitoring: Focusing on groundwater will involve monitoring existing wells. Implementation of this facet of BUMP is being delayed due to lack of funding; and

- Intensive Investigation Sampling: This element, which also is pending implementation, attempts to document the source of water impairment and recommend restorative actions.

Superfund Remediation

The Superfund Program is administered by DEQ in partnership with the U.S. Environmental Protection Agency (EPA), which provides almost all the funding. Superfund is the federal program to monitor and remediate the nation's uncontrolled hazardous waste sites as well as the sites that pose the greatest threat to human health and the environment. Nationwide, EPA has identified 1,238 sites on the National Priorities List (NPL). In Oklahoma, there are 14 NPL sites:

- Oklahoma Refining (Cyril);
- Imperial Refining (Ardmore);
- Hardage/Criner (McClain County);
- Sand Springs Petrochemical (Sand Springs);
- Compass Industries (Tulsa County);
- Tulsa Fuels and Manufacturing (Collinsville);
- National Zinc (Bartlesville);
- Tar Creek (Ottawa County);
- Hudson Refining (Cushing);
- Mosley Road Landfill (Oklahoma City);
- Double Eagle Refinery (Oklahoma City);
- Fourth Street Refinery (Oklahoma City);
- Tenth Street Dump/Junk Yard (Oklahoma City); and
- Tinker AFB (Oklahoma City/Midwest City/Del City).

Rural Economic Action Plan (REAP)

The Rural Economic Action Plan (REAP) was established in 1996 to stimulate the economic development of infrastructure in rural Oklahoma. For FY'03, the appropriations to REAP totaled $19.5 million. OWRB received $4.23 million

and the Oklahoma Office of the State Auditor and Inspector received the balance of $15.3 million.

The $15.3 million portion is divided equally among the 10 Substate Planning Districts for rural economic development planning and implementation of projects. Provisions of REAP restrict grants to cities or towns with a population of less than 7,000. Also, the selection process gives priority to cities or towns with a population less than 1,700.

The REAP portion administered by the OWRB addresses the need for water/sewer project funding in smaller, financially stressed communities. Projects eligible for REAP grants include storm and sanitary sewer construction or repair, water line construction or repair, water treatment, water acquisition, water distribution or recovery, and other water/wastewater projects.

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TAR CREEK

In 1981, the Environmental Protection Agency (EPA) named the Tar Creek site, an area that covers 40 square miles near Picher, Oklahoma to the National Priority Listing (NPL). Governed by the Comprehensive Environmental Response, Compensation and Liability Act of 1980, this designation means Tar Creek has been shown to have known releases or threatened releases of hazardous substances, pollutants and contaminants that can adversely affect the health of people, animals and flora in the area. For the past 22 years state and federal policymakers have been working to identify the responsible parties, measure the impact of pollutants on the population and implement initiatives to clean the site.

This section provides an overview of the site, the environmental impact of the site on the land, people and animals in the area and the policy issues federal and state policymakers must continue to address over the next two to three decades to remediate the site.

BACKGROUND

The Tar Creek Superfund site covers 40 square miles and includes the towns of Picher, Cardin, Quapaw, Commerce, North Miami and Miami and individual and tribal owned land. The site was once part of the world famous Tri-State Mining District producing zinc and lead from about 1890 to the late 1950's. Thousands of tons of ore-containing rock were pulled from the earth from up to 275 feet below ground. Prior to the mining boom, this part of Ottawa County was lush with hay meadows and clean streams with an economy centered on ranching and farming.

Today, the site remains contaminated from the legacy of mining. Seventy-five million tons of mining wastes, called chat, remains on the ground. Hundreds of acres of land are covered by millponds, where waste from ore processing was placed. These wastes contain high levels of lead and zinc that have been and are continuing to be released to the environment.

Approximately 300 miles of underground tunnels are now filled with ground water. Several large areas have subsided or collapsed and new areas have begun subsidence during the past year. The ground water that fills the caverns, known as the Boone aquifer, is laden with metals and discharges in seeps and natural upwellings as well as from mine shafts, open bore holes and subsidence structures. Public drinking water supplies, produced from the deep Roubidoux aquifer, are compromised by contaminated mine water.

FEDERAL INVOLVEMENT

The Tri-State Mining District was not unnoticed by the federal government. In fact, it was made possible, in large part, by the federal government. The mining boom flourished under the watch of the Department of Interior (DOI). DOI was engaged, through the Bureau of Indian Affairs and the Bureau of Mines, in issuing leases to mining companies. The mining companies mined and processed the ore and left the wastes uncontrolled on the ground. The federal government subsidized premium prices for metals during the period of World War II; the effect of this subsidy kept the mines operating during a period when profits were marginal.

In 1981, the Environmental Protection Agency proposed the site for NPL listing and has been working on it ever since. The Department of Interior (DOI) continues to be involved in two important ways: first, DOI is a responsible party under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) and Natural Resource Damages Act (NRDA); and second, DOI is the federal Natural Resource Trustee, responsible for assessing and claiming damages from responsible parties for restoration of injured resources. DOI is also the trustee for many Native American landowners in the area.

HEALTH AND ENVIRONMENTAL CONSEQUENCES

In 1996, testing by several state and tribal agencies showed that 34% of the children in the area had blood lead levels above the level considered safe. Exposure to lead, especially in children from birth to 6 years of age, can result in long-term effects including poor coordination, decreased stature, hearing loss, impaired learning capabilities and other developmental effects and in acute effects ranging from nausea, irritability, lack of concentration, seizures and death. Generations of children in this area have been exposed to lead from mining wastes, including the current generation.

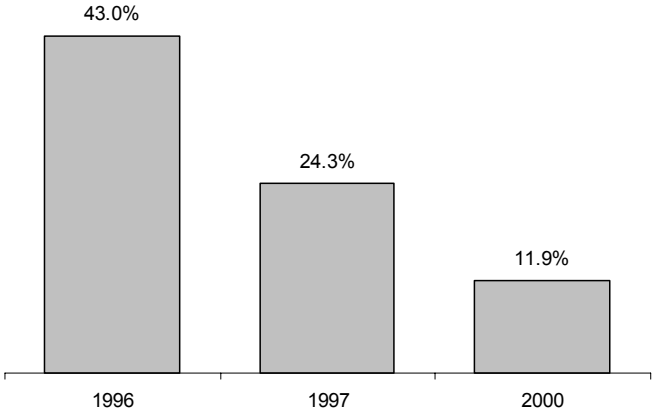
Tribal Efforts Against Lead (TEAL)

The TEAL study conducted by eight tribes* contained a representative sample of 31 census block groups in northeast Ottawa County. The team visited 6,686 homes and identified 474 eligible families, 387 of the families participated.

Testing was completed on one child from one to six years of age from each eligible family.

* The Peoria Tribe, in a united effort with the Quapaw Eastern-Shawnee, Miami's, Seneca-Cayuga, Modoc, Ottawa and Wyandotte nations of Oklahoma.

Percent of Children with High Lead Levels
1996 Through 2000



Successful ongoing efforts to reduce the amount of exposure of children to lead have included education, yard remediation, and lead paint abatement. These have been successful at reducing the number of children with high blood lead levels.

Abandoned mine workings, open shafts, and subsidence all pose undue hazards to people, livestock and wildlife in the area. Mine water, once acidic, discharges to Tar Creek, Beaver Creek and other creeks in the area. Little or no fish are found. The area is plagued with flooding that is exacerbated by chat in stream channels.

HISTORICAL APPROACH

Tar Creek is a very large and complex site with complicated environmental issues as well as a complicated social and political setting. It does not fit completely within any one federal program. This is evidenced by the historical approach to the site by EPA. EPA has spent almost $90 million on the site and has not and in the end will not fix all the problems. EPA's early activities in the 1980s were directed at improving stream water quality by diverting inflow to and outflow from the mine workings; the remedy was not successful in achieving that goal.

In 1995, with information on children's elevated blood lead levels, the EPA began to remove lead contaminated soil from residential yards and other areas frequented by children like playgrounds, parks, and daycares. Relocation of residents in the heart of the mining area was considered but local citizens are divided on this issue. The yard remediation continues today. Yet chat piles loom in and around these areas and chat has been used locally for county roads. This leaves the potential for recontamination high and the potential for continued exposure to lead even higher. For almost two years, EPA has been negotiating with primary responsible parties (PRPs), a handful of mining companies and the DOI, to conduct investigations of the mining wastes.

CURRENT PROJECTS

The goal of the recent $4 million legislative support for the Tar Creek area is to work toward a solution that will address the health effects of the mine wastes on the impacted communities and to address some other issues in the area. The chat can be used as an economic resource if it is encapsulated. OU and OSU are developing documentation of the safety of chat in an asphalt matrix as well as the optimum mix for such asphalt through grants from the Department of Environmental Quality (DEQ).

The Oklahoma Conservation Commission will pilot a project to reclaim and restore a portion of the land that has chat impacts (without the pile of material still remaining). Yard cleanups will continue with the state's 10% match being $2.6 million. Grand Gateway Economic Development Authority will continue to test and remediate (based on an income/need formula) homes with lead-based paint that adds to the burden of lead in children. They will also seek additional funding for a rail spur that could ease the removal of over 75 million tons of remaining chat material.

The Oklahoma Attorney General's office will contract for Oklahoma's portion of the Natural Resources Damage Assessment needed to pursue claims against the responsible parties. Water quality studies of the Tar Creek Basin and Grand Lake (the downstream receptor for waters from the Spring and Neosho Rivers) will be coordinated through the DEQ Water Quality Office in Grove. Using Geographic Information Systems, the DEQ will track data from historical studies and current efforts in order to map the progress of remedial and restoration efforts. The federal, state and private efforts will be coordinated by DEQ so that a comprehensive, holistic solution for the environmental and health problems in the area can be developed and implemented. This coordination will keep projects moving, provide accountability for the money spent, prevent duplication of efforts, and ensure that the many concerns of citizens in the area receive consideration. There may not be one simple solution to the entire problem, but there are now concrete steps being implemented to reduce the burden of contamination for Ottawa County and Tar Creek.

MAJOR PROJECTS SUPPORTED

Project	Cost	Partners
Residential Remediation	$2,600,000	DEQ-EPA, Grand Gateway/ HUD
Land Reclamation	$500,000	Conservation Commission
Safe Chat Use/ Chat Removal Projects	$500,000	OU/ OSU, Grand Gateway
NRDA Assessment	$200,000	AG/ DOI
Project Coordination	$200,000	DEQ/ EPA