



Customer Services

Customer Services Introduction

The Customer Services Division (CSD) engages in a wide range of multimedia activities with both internal and external customers. Some services, such as the State Environmental Laboratory, have been around a long time. Others – for example, the Oklahoma Public Health Environmental Tracking System (OK-PHETS) – are groundbreaking. Laboratory stories featured in this year’s annual report take readers behind-the-scenes to observe work in the laboratory’s sample-receiving unit, where samples are processed to ensure that analysis will return accurate results. Readers will learn about the lab’s simplified and more effective shipping process for public water suppliers, and training options that take the mystery out of the lab’s data services.

Readers can see how CSD’s public information and graphic arts are a resource to the world, as the division answers questions about environmental matters and provides publications describing what it does. Stories

about the OK-PHETS computerized environmental tracking system introduce the first-ever project for systematically comparing Oklahoma’s environmental and public health data to discover where relationships may exist between the two. Another health-related article explains DEQ’s role in monitoring toxic metals in fish taken from Oklahoma waters and issuing consumption advisories, such as one recently alerting consumers to the mercury levels appearing in our fish.

Readers can familiarize themselves with the SARA Title III program that manages data on where hazardous materials are located across the state, and learn how CSD has streamlined the process for filing that data with DEQ by using the Internet. Another article introduces CSD’s



Oklahoma has many spring blooms like this one to enjoy.

technical assistance for those subject to federal rules governing removal of asbestos-containing materials. This year’s report also spotlights industries that excel in pollution prevention and environmental protection, motivated and supported in part by incentive programs such as the CSD’s OKStar award for Environmental

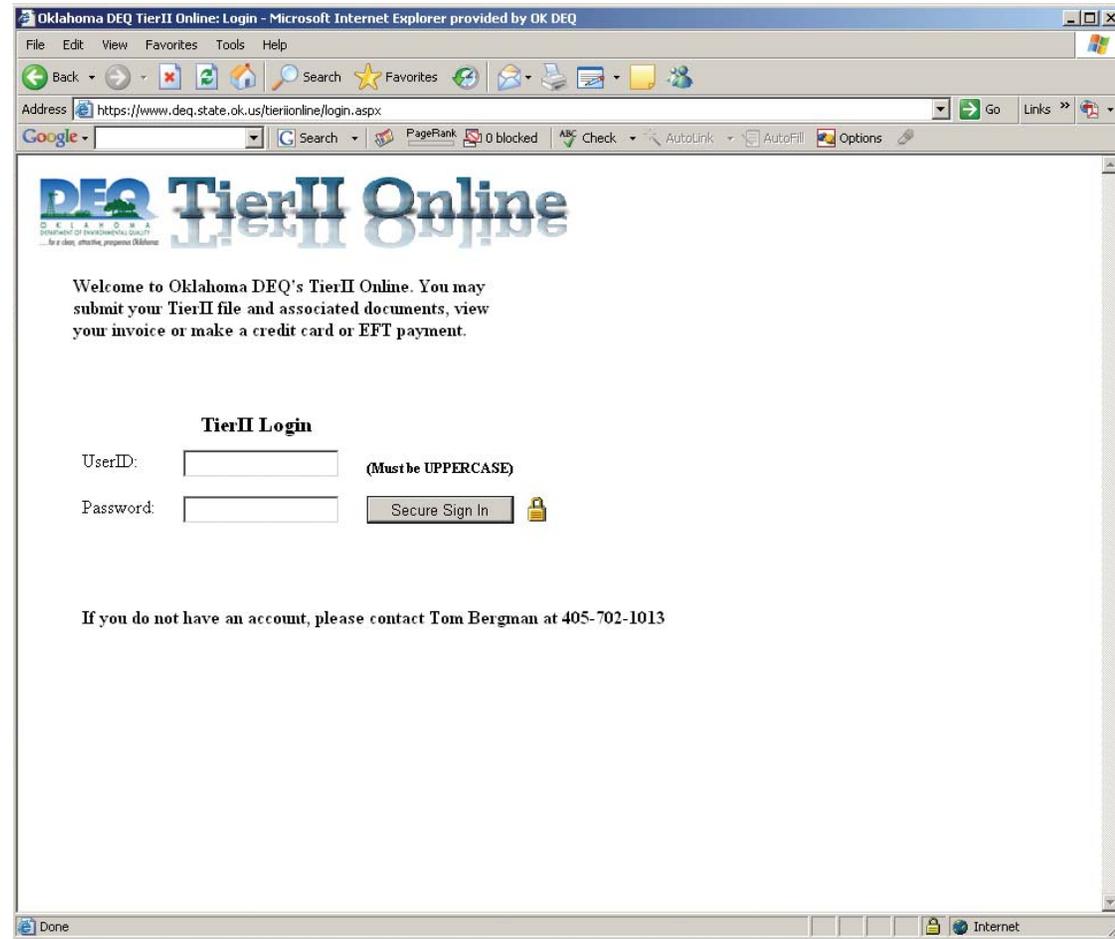
Excellence.

The Customer Service Division’s purpose is to assist as members of the public, and particularly the regulated community, strive to protect the environment. The articles that follow offer a glimpse into how well the division has accomplished its mission in fiscal 2005. ■

Tier 2 Reporting Goes Online

Nearly 15,000 Hazardous Chemical Inventory Reports, known as Tier 2 reports, were filed electronically with DEQ over the Internet for the first time in fiscal 2005. The EPA software Tier 2 Submit, funded by the Office of the Secretary of Energy, is a quantum leap in filing efficiency both for customers and for department staff. Online filers are more apt than paper filers to submit reports on time and accurately. They get immediate confirmation that the filing has been received. Duplicating the paperwork for local emergency planning committees is a thing of the past; the system transmits an electronic copy. The system can also be used to submit site plans and pay filing fees.

In a typical year, the agency processes more than 30,000 Tier 2 reports to track the locations and amounts of hazardous chemicals in storage around the state. The electronic Tier 2 filing system frees time for DEQ staff, who can shift their attention from data entry to compliance assistance. To encourage Tier 2 filers to make the switch,



View of Internet filing screen for online Tier 2 submissions.

as soon as the system became available in January 2005, DEQ offered user training. More than 300 attended, and in fiscal 2005, 45 percent of all reports arrived

online. The system's first-year success is leading DEQ to anticipate that even more Tier 2 reports will arrive electronically in upcoming years.

More information about the Tier 2 program and online reporting can be found on the DEQ Web site www.deq.state.ok.us/CSDnew/saratitleiii/index.htm. ■

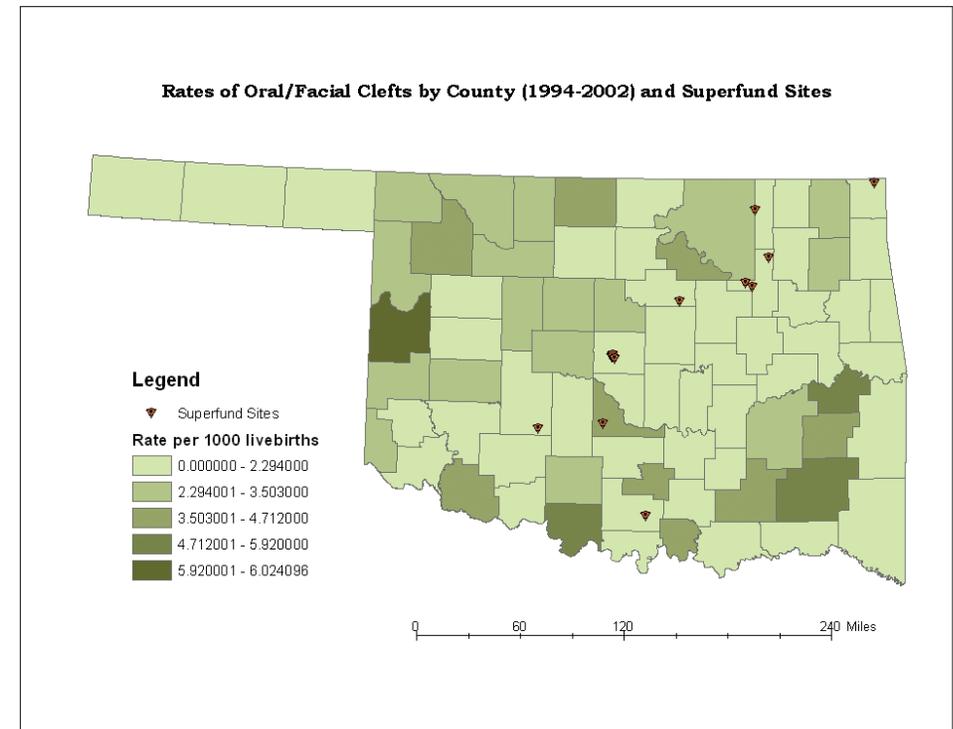
DEQ and OSDH Research Environmental and Public Health Connections

Environmental health is a significant factor for human health and development, but we are still learning exactly when and where they connect. In fiscal 2005, the Oklahoma State Department of Health (OSDH) and DEQ initiated a joint effort to shed light on the relationship between environmental hazards and specific public health concerns. The agencies' first cooperative project used a Geographic Information System (GIS) electronic system called OK-PHETS — Oklahoma Public Health Environmental Tracking System — to examine the connection between oral/facial cleft birth defects in Oklahoma and known environmental hazards. The OK-PHETS project brings together DEQ environmental data and OSDH health outcome data. The system allows researchers to overlay the different data sets on a map and to identify any relationships that may exist.

Oral/facial clefts are a congenital birth defect in which the

palate, lip or both do not completely join during early prenatal development. Genetic, lifestyle and environmental factors all have been implicated in the defect. Researchers found that oral/facial clefts more commonly occurred in the southeast part of Oklahoma, but few environmental hazards have been identified in that area. For example, statistical analysis revealed no significant relationship between county oral cleft rates and the locations of potential environmental hotspots such as Toxic Release Inventory (TRI) facilities, Superfund sites or air emissions sites. These results, while not conclusive, suggest that genetic and personal lifestyle factors may be more strongly related to the defect than environmental hazard factors. In the near future, such studies will be even more informative as OK-PHETS adds additional air quality, water quality and Superfund data to the tracking program's database and refines its analytic methods.

Even the finding that known en-

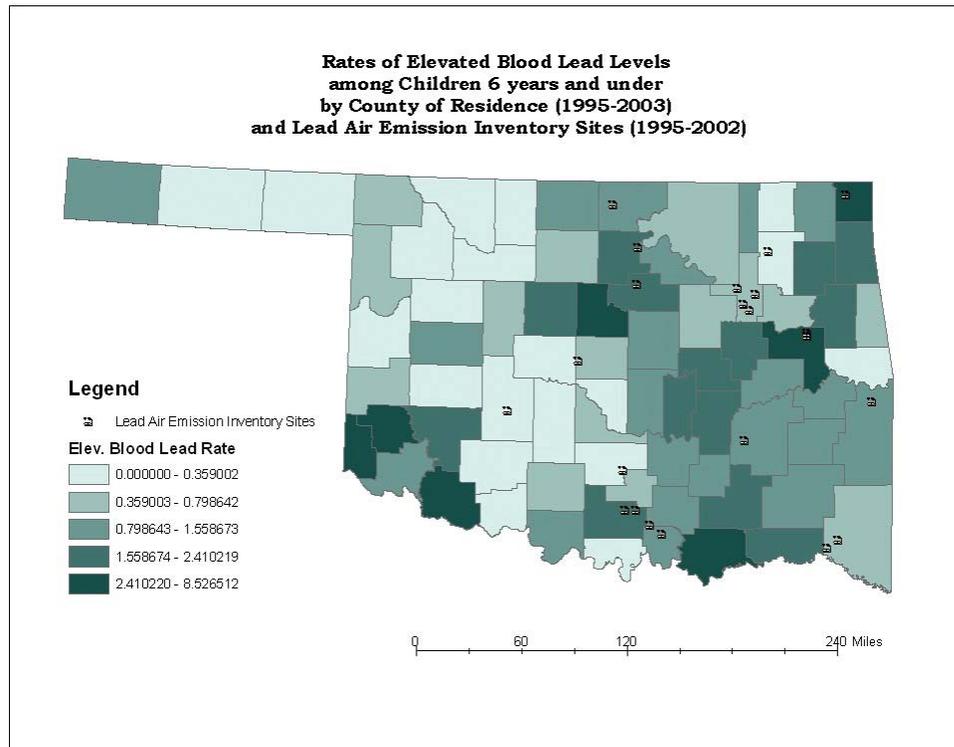


Rates of Oral/Facial Clefts by County (1994-2002) and EPA Superfund Sites

vironmental hazards may not be significantly related to the occurrence of oral/facial clefts in Oklahoma refines our knowledge, guiding public and other health professionals to focus on more significant prevention

factors. This DEQ-OSDH partnership can be counted on to add substantially over the years to our understanding of environmental interactions with public health. ■

DEQ and OSDH Investigate Childhood Lead Poisoning



Rates of elevated blood lead Levels among children, age 6 or younger (1995-2003) and Lead air emission inventory sites (1995-2002)

Childhood lead poisoning remains a serious, preventable environmental and public health problem. Even with all the national attention the issue has received, about one million U.S. children six years old and younger still have blood lead levels (BLL) of at least

10mg/dL. This level is high enough to adversely affect intelligence, behavior and development. Nearly all childhood lead poisoning cases are linked to some kind of environmental exposure. The potential hazards are well known: lead-based paint from pre-1978

housing, lead water pipes and commercial lead releases and emissions.

DEQ and the Oklahoma State Department of Health (OSDH) recently completed a collaborative investigation of the connection between childhood blood-lead levels in Oklahoma and environmental lead hazards. Using Geographic Information Systems software and data from the Oklahoma Childhood Lead Poisoning Prevention Program, OK-PHETS (Oklahoma Public Health Environmental Tracking System) researchers mapped and analyzed the home locations of children tested for lead poisoning, comparing them to the locations of environmental lead hazards such as Superfund sites, Toxic Release Inventory sites and Air Emission Inventory sites.

Researchers found that from

1995 to 2003, the annual number of children tested in Oklahoma had increased while the number of elevated blood-lead cases had declined. Elevated blood-lead levels were highest among children between 12 and 23 months of age. Levels were slightly higher in areas within three miles of environmental lead hazard sites, but even these levels were much lower than the 10 ug/dL that health officials consider a threat.

So far, lead exposure from housing built before 1978 appears to be the greatest lead-poisoning threat for children. DEQ plans further research incorporating housing age into the analysis to determine the extent of the lead-based paint hazard. Working together and using the best available technology and analytic methods, DEQ and OSDH are adding to our knowledge of the links between the state's environmental hazards and human health. ■

SEL Tests Water Samples from Around the State

Can Oklahomans safely drink the water from their private wells? Should kids be allowed to swim and fish in their farm ponds? The State Environmental Laboratory (SEL), operating within CSD, tests water samples from lakes and streams, public water systems, private wells and other sources, reporting back to customers on water composition and contaminants. SEL sample-receiving staff process about 30,000 samples every year.

The majority of water samples come to the lab from other DEQ programs. For example, the 1,700 public water supply (PWS) systems around the state periodically submit samples of drinking water to test for regulated contaminants. DEQ's Land Protection Division brings samples of liquids and sediments from landfills and from monitoring wells at Tar Creek and other remediation sites. Complaint-related samples from the Environmental Complaints and Local Services (ECLS) Division are generally "unknowns." For example, an



Tammy Mayes, Laboratory Technician, receives Beneficial Use Monitoring Program samples from Scott Howard and Krystal Bonsall, field personnel from OWRB.

ECLS sample may be submitted because a citizen is concerned with runoff, or a fish kill has oc-

curred, or an environmental investigation is underway.

SEL also analyzes samples from

external customers: other state and federal agencies and the general public. The Oklahoma Wa-

ter Resources Board (OWRB) takes samples from Oklahoma lakes and streams being studied by state water quality programs. OWRB and other agencies can arrive with several ice chests filled with bottles of stream or lake water. PWS operators frequently collect and deliver their samples on the same day, assuring that they reach SEL within the lab's required holding limits. Private citizens most often submit samples to check well-water quality, but sometimes they ask other questions such as whether their cows will drink their pond water, or where the water in the basement might be coming from. They often drop off samples on lunch breaks or as they run errands. The sample-receiving unit, located on the first floor of the DEQ building, offers easy access for both internal and external customers.

Customers can mail samples or bring them in person. At the sample-receiving unit, the samples are prepared and distributed for analysis. Pertinent information about each one is logged and the sample is assigned a unique number; preprinted numbers are attached to the sample container and its log-in form. Receiving staff check samples for correct preservation (on ice or acidified or both),

temperature and general condition, and note the results on the log-in form. The sample is then refrigerated and added to the unit's chain-of-custody sheet.

Laboratory staff pick up samples from the receiving unit, taking them to the appropriate labs for analysis. Here, information from the

log-in form is transferred to the electronic Laboratory Information Management System (Aquarius) and the parameters to be analyzed are recorded. Each laboratory unit then analyzes its part or parts of the sample, recording the results in the Aquarius database. The lab generates a customer report for sample-

receiving staff, who mail the reports to customers and place copies in DEQ's permanent records.

Regardless of how and when samples arrive, sample-receiving staff are ready and able to assist, so that SEL can promptly and accurately answer customers' questions about their water samples. ■

Shipping Updates Improve Water Analysis Turnaround and Quality



Jayme Jones prepares new Igloo-style shipment containers.

The State Environmental Laboratory (SEL) has improved turnaround time for reporting test results on drinking water samples with some simple changes in shipping protocols. Professional guidelines suggest that laboratory sample-receiving units should accept samples for analysis only when they meet prescribed standards for chain of custody, preservation, temperature, in-transit times, and container size and construction. For example, samples must arrive on ice, at temperatures of 2 to 6 degrees Centigrade. After SEL instituted some new shipping methods, in-transit breakage and the number of samples arriving above those temperatures had decreased, reducing resampling-related delays.

Specifically, the lab has replaced its former styrofoam-lined, cardboard boxes with round, plastic Gott or Igloo-style coolers that can be filled with ice and sealed against leakage. Glass bottles are placed in plastic sleeving and all bottles are shipped to samplers in recycled insulating material. Samples are returned to SEL with the sleeving around the bottles, packed on ice. Packed securely in this way, samples rarely arrive with breakage or outside the acceptable temperature range. The bottom line: faster service and higher quality analyses of drinking water samples for DEQ customers. ■

Community Development Day at the Capitol: Legislators Appreciate DEQ's Environmental Awareness Programs

Erin Cayton, Denise Harkins and Pat Sullivan represent DEQ at the annual Community Development Day.



Oklahoma state senators and representatives took advantage of Community Development Day at the Capitol to listen to individuals from DEQ and other organizations

show-and-tell about their respective public service goals and achievements. DEQ's Denise Harkins, Pat Sullivan and Erin Cayton focused on the accom-

plishments of three programs: Oklahoma Environmental Education, Air Quality Index E-Alert and Small Business Assistance. As the day passed, several legislators ex-

pressed a heightened awareness and appreciation of DEQ's successes with its public education and technical assistance programs. This year's Community Development Day at the Capitol took place on March 17. The annual event provides Oklahoma businesses, agencies and organizations with a forum for talking with legislators about their work and their achievements, as well as a chance to network with one another. ■

SBAP and DEQ Host Federal Asbestos Standards Workshop

Representatives from Oklahoma universities, the flooring industry, asbestos and demolition contracting, and other sectors with an interest in asbestos removal attended informational workshops hosted by DEQ's Small Business Assistance Program (SBAP) on behalf of the Air Quality Division (AQD) last March. AQD requested that SBAP host the refresher session on the National Emissions Standard for Hazardous Air Pollutants (NESHAP) for asbestos, in part to announce that future violations would trigger stricter enforcement of the Asbestos Penalty Policy, including fines.

SBAP drew a wide audience from across the state with its effort to identify and invite all affected sectors. Along with the outreach campaign of invitational letters, e-mails and reminder cards, SBAP offered online registration as an added convenience. As a result, both the Oklahoma City and Tulsa workshops were well attended with 60 representatives from 41 facilities. Many expressed appreciation for the workshop and for the continuous ef-



Asbestos Outreach presentation.

fort DEQ invests in keeping the community it regulates well informed. As-

bestos outreach materials can be found on the DEQ Web site at

www.deq.state.ok.us/CSDnew/SBAP/asbestos/index.htm. ■

Taking The Mystery Out of Black Box Technology



Jeff Franklin makes Black Box Technology presentation at the OCLWA Conference.

Jeff Franklin of the State Environmental Laboratory (SEL) presented *Taking the Mystery Out of Black Box Technology* at the annual Oklahoma Clean Lakes and Watershed Conference, held in

March 2005. The “black box” image suggests something magical happening behind the scenes. A common misconception is that lab analysis is a kind of black-box technology – that simply testing a

water sample will unlock all of its many mysteries.

In fact, each lab test tends to have a fairly narrow and specific objective. The particular analysis conducted depends on the question that the customer asks. To answer several questions about one water sample will usually require more than one analysis. Laboratory analysis reveals a great deal, but it does have technical limitations. Many factors, including the condition of the sample, will affect the quality of the data produced for better or worse.

Franklin’s presentation illustrated what customers can do to help SEL attain its goals of improved data quality and improved customer service. He

demystified frequently misunderstood analytical elements such as Method Detection Limits (MDLs) and Reporting Limits or Practical Quantitation Limits (PQLs). Franklin described how and why these elements are affected by different analytical methods, instrumentation and sample type, using samples of low-hardness metals as examples.

The key that opens SEL’s “black box” is communication – direct, precise and frequent. Clear communication between customer and lab staff early in the process, before a sample is ever analyzed, assures a mutual understanding of the purpose, potential and limitations of the analysis before the work begins. ■