

# WATER QUALITY

## Division

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The Water Quality Division (WQD) manages programs related to Oklahoma's wastewater discharges from industrial and municipal facilities, storage and disposal of industrial and municipal wastewater, and protection of public water supplies. The proper disposal of sludge, a by-product of wastewater treatment, is also under the division's regulation.

Programs include evaluations of stream, lake and groundwater quality, management of storm water requirements and evaluation of public water supply wells. WQD is responsible for the review, evaluation and approval of public water supply and wastewater construction plans, training and certification for public water supply and wastewater operators, laboratory technicians and collection and distribution system workers. WQD maintains an industrial, municipal and public water supply enforcement program for compliance with state statutes and rules designed to protect public health and the environment.

WQD received delegation, or primacy, from EPA for several of its major programs. These programs are Public Water Supply Supervision primacy which, since 1977, enforced the Safe Drinking Water Act amendments; delegation of the National Pollutant

Discharge Elimination System since 1996 for permitting and enforcement of municipal and industrial wastewater; and since 1998, the authority to administer the Drinking Water State Revolving Fund which provides low-cost loans to upgrade municipal drinking water systems.

For further information about the Water Quality Division, please call (405) 702-8100.

### Wastewater Compliance and Enforcement

A new Fish Kill/Spill and Unusual Discharge program was established in FY 2000. Toxic spills, bypasses from wastewater treatment facilities and fish kills are tracked by the Water Quality Division as an aid to identifying stresses and impairments to water bodies. WQD has a system in place to notify other government agencies and retrieve and distribute information from inspectors at the site when an incident occurs.

There were 17 incidents reported with 13 of those confirmed as fish kills. Site investigations, probable causes, remedies and possible enforcement actions are an integral part of the program.

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" ... WHEN THE SUN CAME SHINING AND I WAS STROLLING ..."

## Compliance Inspections

Compliance inspections are performed routinely to ensure compliance with DEQ permits, rules, drinking water standards and statutes.

### Municipal and Industrial Wastewater

The Water Quality Division routinely conducts annual compliance inspections, called Compliance Evaluation Inspections (CEIs), of all major municipal and industrial wastewater discharge facilities.

Inspections are performed on all minor wastewater facilities once per year by the Environmental Complaints and Local Services (ECLS) Division.

WQD conducted 92 CEIs, nine of which were joint inspections with EPA. A total of 1,655 wastewater inspections were completed by ECLS and WQD in FY 2000.

### Public Water Supply

Water Quality Division and ECLS inspected 2,553 public water supply facilities in FY 2000. Some facilities were visited more than once during FY 2000. The Public Water Supply Section visited 431 facilities.

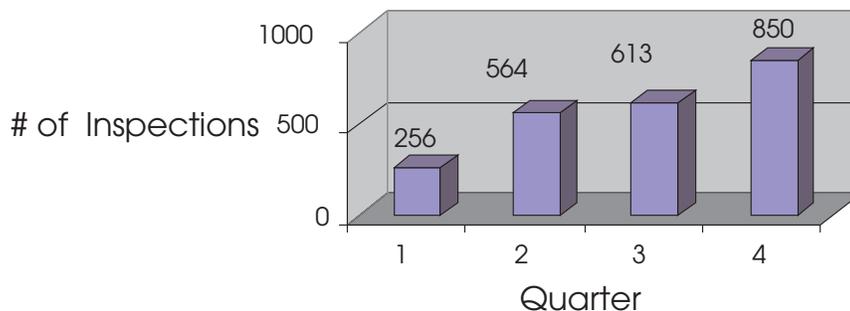
## Compliance Monitoring

Under its primacy agreement with EPA for public water supplies and the EPA delegation of the federal National Pollutant Discharge

## Water Quality Inspection

|                              | QTR 1 | QTR 2 | QTR 3 | QTR 4 | TOTAL |
|------------------------------|-------|-------|-------|-------|-------|
| <b>Public Water Supply</b>   |       |       |       |       |       |
| Inspections                  | 256   | 564   | 613   | 850   | 2,553 |
| <b>Municipal Wastewater</b>  |       |       |       |       |       |
| Inspections                  | 252   | 280   | 296   | 389   | 1,217 |
| Monitoring Inspections       | 11    | 15    | 24    | 35    | 85    |
| Pretreatment Inspections     | 2     | 3     | 6     | 14    | 25    |
| Compliance Evaluation (CEI)  | 8     | 12    | 14    | 26    | 60    |
| <b>Industrial Wastewater</b> |       |       |       |       |       |
| Inspections                  | 20    | 50    | 77    | 88    | 235   |
| Compliance Evaluation (CEI)  | 2     | 8     | 10    | 13    | 33    |

## Public Water Supply Inspection



Elimination System (wastewater systems), WQD ensures that all public water supply systems and wastewater systems are in compliance with state and federal regulations. One facet of accomplishing this task in these programs is the submission of laboratory analyses by the systems.

### Public Water Supply

The Water Quality Division administers the public drinking water program. WQD manages the requirements of the 1974 Safe Drinking Water Act (SDWA) and the subsequent 1986 amendments to the law. Through the Public Water Supply program, national limits on the maximum contaminant levels (MCLs) in drinking water are set to ensure that the water is safe for human consumption. Public water supply systems monitor their water for contaminants and report the monitoring results to WQD. Generally, the larger the population served by a water system, the more frequent the monitoring and reporting requirements. This monitoring verifies that the levels of contaminants present in the water do not exceed any MCL. If a public water supply fails to have its water tested as required, or to report test results incorrectly, a monitoring violation occurs.

A minor monitoring violation occurs when the system fails to take the required number of samples and a major monitoring violation occurs when a system fails to take any samples for the compliance period. The PWS program currently oversees 1,689 water systems in Oklahoma. A total number of 445 MCL and monitoring violations were reported for FY 2000. There were 212 MCL violations, 202 minor monitoring violations, and 31 major monitoring violations. The number of systems reporting these violations was 133 or eight percent of the total number of systems.

### Municipal and Industrial Wastewater

Oklahoma has 654 wastewater discharge facilities. These facilities are required to provide WQD a Discharge Monitoring Report (DMR)

each month. The DMR summarizes the monthly average sample results for the permitted constituents discharged in the wastewater. During FY 2000, 1,882 permit violations were reported through the DMRs.

## Enforcement

Enforcement activities are conducted in the same manner for both PWS and the Municipal/Industrial enforcement programs. Generally, if a violation is detected through an inspection or monitoring and the violation cannot be resolved between the facility and WQD on an informal basis, formal enforcement actions must be considered.

In some cases, it becomes necessary to issue enforcement actions to cause the facility to return to compliance. Administrative enforcement orders are issued for public water supply and municipal and industrial wastewater to ensure the rules and permits of Oklahoma are properly implemented. WQD initiates and expands informal enforcement actions to formal enforcement actions against facilities in noncompliance status and WQD assesses and collects penalties as necessary. These actions outline the appropriate steps for facilities to come into compliance.

A Notice of Violation (NOV) is the lowest level of formal enforcement action issued to facilities for exceeding permit limits or failing to meet rules and regulations concerning matters such as construction deficiencies, monitoring or operating procedures.

A Consent Order (CO) is typically the next order issued. The CO is an order, which contains an agreement between the facility and WQD that contains deadlines for correcting the cited violations.

An Administrative Compliance Order (ACO) is an order that is issued when there is significant health hazard or the facility refuses to sign a CO. In an ACO, Water Quality Division identifies what

tasks must be completed and sets deadlines for the completion of these tasks. Both the CO and the ACO have specified fines for failing to meet the required deadlines.

A Boil Advisory is an enforcement document unique to the Public Water Supply program. It is issued to public water supply systems that have "acute" or "fecal positive" bacteriological violations. Boil Advisories require immediate notice to all consumers informing the public how to make the water safe for human consumption.

### Public Water Supply

In FY 2000, WQD issued 17 Boil Advisories, 182 NOVs and 39 Consent and Administrative Compliance Orders for public water supply violations.

### Municipal and Industrial Wastewater

There were a total of 88 NOVs and 83 Consent and Administrative Compliance Orders issued for wastewater violations.

### The Public Water Supply Program

The State of Oklahoma's Public Water Supply program currently oversees 1,717 active public water supply systems, which meet the federal definition of a public water supply. The Safe Drinking Water Act defines a public water supply as a system that provides water via piping or other constructed conveyances to the public for human consumption. These water supply systems serve approximately 3.45 million customers. Of the 1,717 active public water supplies in Oklahoma, 246 systems use surface water as their

## Water Quality Enforcement Administration

|                              | QTR 1 | QTR 2 | QTR 3 | QTR 4 | TOTAL |
|------------------------------|-------|-------|-------|-------|-------|
| <b>Public Water Supply</b>   |       |       |       |       |       |
| Boil Advisories              | 4     | 6     | 3     | 4     | 17    |
| Notices of Violation         | 55    | 58    | 43    | 26    | 182   |
| Consent / Final Orders       | 3     | 6     | 15    | 15    | 39    |
| Fines Paid (in thousands)    | 0     | 1     | 3.1   | 2.8   | 6.9   |
| <b>Municipal Wastewater</b>  |       |       |       |       |       |
| Notices of Violation         | 18    | 11    | 14    | 21    | 64    |
| Consent / Final Orders       | 37    | 38    | 20    | 18    | 113   |
| Fines Paid (in thousands)    | 68.8  | 3.3   | 13.8  | 4.9   | 90.8  |
| <b>Industrial Wastewater</b> |       |       |       |       |       |
| Notices of Violation         | 3     | 5     | 2     | 9     | 19    |
| Consent / Final Orders       | 2     | 2     | 5     | 1     | 10    |
| Fines Paid (in thousands)    | 0.05  | 0.1   | 7.5   | 1.5   | 9.15  |
| <b>Storm Water</b>           |       |       |       |       |       |
| Notices of Violation         | 2     | 1     | 1     | 1     | 5     |
| Consent / Final Orders       | 0     | 0     | 0     | 2     | 2     |
| Fines Paid (in thousands)    | 0     | 4.8   | 0     | 0     | 4.8   |

source of water, 830 are groundwater systems and 641 purchase their water. All public water supplies are classified according to the number and type of persons served. Currently, 1,240 water systems are classified as community water systems (such as towns and rural water districts), 124 are classified as non-transient, non-community water systems (such as schools or factories) and 353 are classified as non-community water systems (such as rest stops or parks). There are also much smaller systems, which are referred to as minor water systems. Water Quality's PWS program issued 786 enforcement actions in response to 627 MCL, Treatment Technique, and Monitoring violations.

### Consumer Confidence Reports

As a part of the 1996 Amendment to the Safe Drinking Water Act, community water systems with at least 15 service connections are required to provide Consumer Confidence Reports (CCRs) to their customers and consumers. CCRs provide information about the quality of their drinking water, which includes concentrations of detected contaminants, sources of raw water, treatment, compliance with federal and state regulations, sources of contaminants and possible health effects. CCRs were required for the first time in 1999. Of the 1,155 systems required to distribute CCRs, only 30 failed to do so by the due date. Seven systems submitted their reports late, leaving 23 systems, or two percent, that have failed to comply with this new regulation. This 98 percent compliance rate was due to cooperative technical assistance and training of the CCR coordinator, public water supply District Engineers and county Environmental Specialists.

### Area-Wide Optimization Program

The Area-Wide Optimization Program is dedicated to evaluating and optimizing the performance at existing surface water treatment facilities in order to maximize public health protection

from microbial contaminants. The program is comprised of two components: the Comprehensive Performance Evaluation (CPE) and Performance Based Training. A CPE is a thorough evaluation of the design, operation, and administration of a facility. Performance Based Training is the systematic addressing of factors identified during the CPE. WQD's Public Water Supply Section currently has five engineers fully certified to conduct CPEs and five other trained engineers. Performance Based Training is in the development stage.

### Surface Water Treatment Conference

On June 8, 2000, WQD's Public Water Supply Section sponsored a Surface Water Treatment Conference. All public water supply systems serving more than 10,000 persons were invited. The conference focused the requirements of Interim Enhanced Surface Water Treatment Rule and the Disinfectants/Disinfection By-Product Rule. Other sessions included Turbidimeter Calibration and Verification, Area-Wide Optimization and Comprehensive Performance Evaluations. More than 100 operators and managers from 30 systems attended the session.

### Permitting

WQD drafts and issues all required wastewater permits and administers pretreatment, toxics and storm water programs. It also develops general permits for facilities with similar processes that could be authorized to construct or operate under a single permit.

The Water Quality Division reviews and processes all plans and specifications for the construction of drinking water and municipal wastewater facilities and line extensions. WQD also reviews and maintains sludge management plans for the proper disposal or beneficial reuse of sludge.

## OPDES Permitting

The basic intent of issuing a general permit (and authorizations thereunder) is to provide a more expedient permitting alternative to individual permits, at the same time providing the required level of protection for the surface waters and ground waters of the state, thus freeing time for more complex permitting issues. It is generally practical only for sufficiently large categories of dischargers and other entities requiring permits (other than by rule) to be issued a general permit.

Several new classes of general permits were developed. In FY 2000 OPDES permitting staff issued general permits for hydrostatic test project discharges. The storm water industrial multi-sector permit, minor discharging municipal lagoon general permit and aquaculture (fish farms) general permit were developed in FY 2000 and are currently under EPA review.

## Drinking Water State Revolving Fund (DWSRF) Program

The 1996 Amendments to the Safe Drinking Water Act set forth a mechanism for achieving full state and municipal responsibility for

## Water Quality Permitting Administration

|  | QTR 1 | QTR 2 | QTR 3 | QTR 4 | TOTAL |
|--|-------|-------|-------|-------|-------|
| <b>Construction Applications/Permits Issued</b>                      |       |       |       |       |       |
| Public Water Supply Received   | 209   | 153   | 257   | 187   | 806   |
| Public Water Supply Issued   | 212   | 181   | 172   | 188   | 753   |
| Municipal Wastewater Received  | 145   | 109   | 143   | 121   | 518   |
| Municipal Wastewater Issued  | 133   | 110   | 105   | 109   | 457   |
| <b>Municipal Wastewater Applications/Permits Issued</b>              |       |       |       |       |       |
| Discharge Applications Received                                      | 13    | 8     | 7     | 11    | 39    |
| Discharge Permits Issued   | 25    | 8     | 13    | 6     | 52    |
| <b>Industrial Wastewater Applications/ Individual Permits Issued</b> |       |       |       |       |       |
| Discharge Applications Received                                      | 4     | 5     | 10    | 10    | 29    |
| Discharge Permits Issued   | 3     | 6     | 3     | 5     | 17    |
| Non-Discharge Applications Received                                  | 3     | 8     | 2     | 9     | 22    |
| Non-Discharge Permits Issued   | 3     | 1     | 1     | 5     | 10    |
| Industrial User Pretreatment Applications Received                   | 2     | 1     | 1     | 1     | 5     |
| Industrial User Pretreatment Permits Issued                          | 0     | 1     | 1     | 1     | 3     |
| <b>Stormwater</b>  |       |       |       |       |       |
| Construction Authorization Processed                                 | 225   | 141   | 163   | 112   | 641   |
| Multi-Sector Industrial Authorization Processed                      | 61    | 153   | 176   | 141   | 531   |
| <b>Other Industrial General Permits</b>                              |       |       |       |       |       |
| Applications Received  | 4     | 7     | 7     | 27    | 45    |
| Authorizations Issued  | 8     | 7     | 5     | 15    | 35    |
| <b>Sludge Management Applications/Plans Approved</b>                 |       |       |       |       |       |
| Applications Received  | 2     | 6     | 5     | 3     | 16    |
| Plans Approved   | 3     | 5     | 4     | 3     | 15    |

financing, building, operating, maintaining and replacing drinking water treatment facilities. EPA made a grant to the Water Quality Division to fund a Drinking Water State Revolving Fund (DWSRF). Achieving protection of public health is the primary purpose of this grant.

The grant provides low interest loans and other financial assistance to public water supply systems for the construction of public water supply facilities. To be funded from the DWSRF, the facility must show a need for assistance in treatment, distribution/storage systems, new intake/raw water lines or new storage. Each proposed project must be presented for an opportunity for community participation before it is funded.



## Source Water Protection Program

On March 24, 2000, WQD received approval for its Source Water Assessment and Protection Program (SWAP) from EPA. The SWAP program is a requirement established under the Safe Drinking Water Act (SDWA) Reauthorization of 1996. States are required to assess the drinking water sources that serve public water systems for susceptibility to pollution through delineation of the boundaries of the areas providing source water for the public water supplies and identification of the origins of regulated and certain unregulated contaminants in the delineated area to determine



## Drinking Water State Revolving Fund

Financial assistance was awarded to the following communities in FY 2000:

| System                         | Amount      |
|--------------------------------|-------------|
| Bryan Co. RWD #2               | \$ 576,675  |
| Clinton PWA                    | \$ 644,000  |
| Stillwater Utilities Authority | \$8,533,708 |
| Purcell PWA                    | \$1,990,000 |
| Creek Co. RWD #7               | \$ 615,000  |
| El Reno Municipal Authority    | \$4,690,572 |
| Lindsay Public Works Authority | \$3,195,000 |

the chances for the public water systems exposure to such contaminants. This information will allow communities to place a voluntary source water protection program to protect drinking water source.

The goal of the SDWA is for the states to evaluate all sources (including ground and surface water sources) serving public water systems. For the state of Oklahoma, this represents approximately 3,300 permanent drinking water sources that need to be assessed.

There are over 3,200 ground water sources and 129 surface water sources that will be included in Oklahoma's SWAP. However, the majority of the population of the state (over 70 percent) receives drinking water from surface water sources. The 129 surface water sources serve 235 systems providing water to 2.3 million citizens.

The groundwater sources within the state supply approximately 1.0 million people.

Oklahoma is currently developing a customized Geographical Information System (GIS) that has the capacity to produce a SWAP report for any given PWS intake at any time. The system will be completed by the end of FY2002. Final reports can then be produced for submittal to all systems in the state and published via the DEQ's web site.

## Geographical Information System

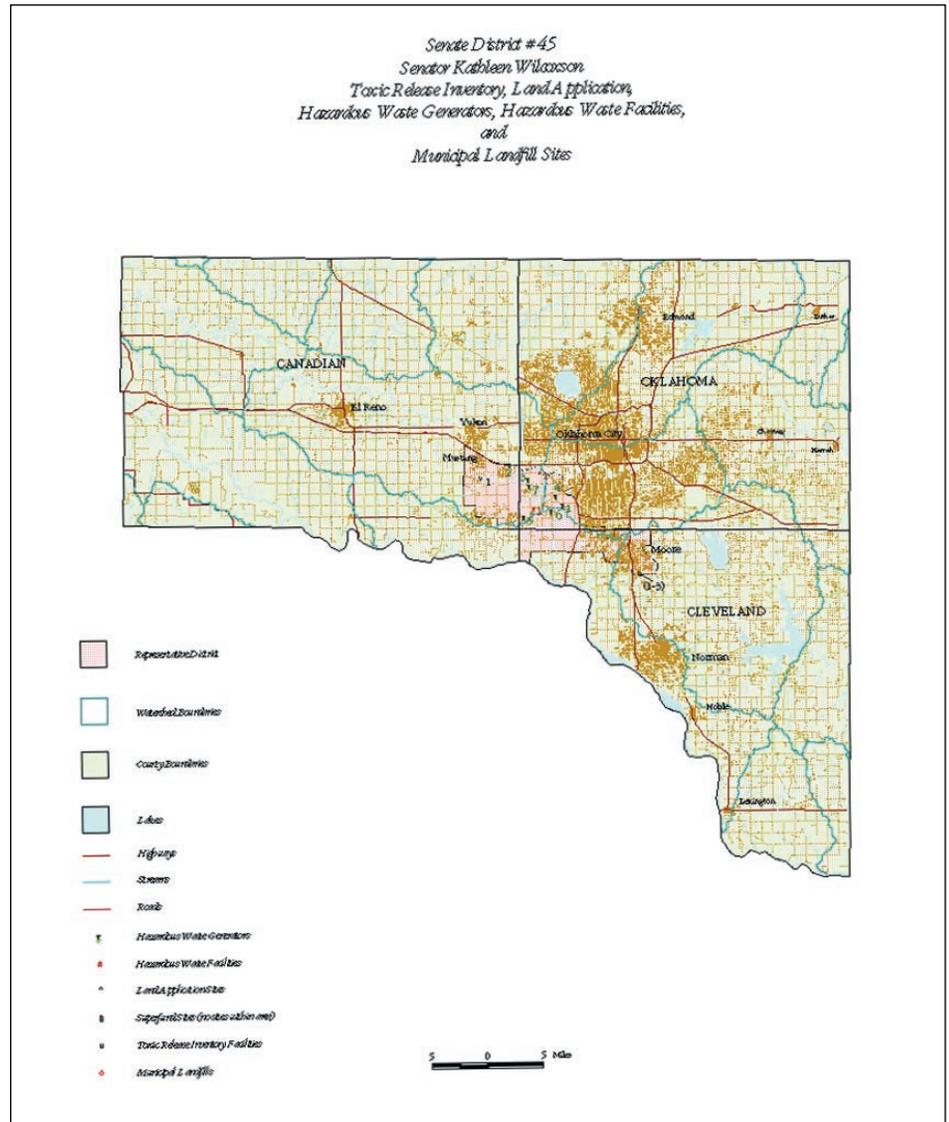
### DEQ Permitted Facilities within Legislative Districts

For the FY 2000 legislative session, the Water Quality Division produced maps that showed all DEQ permitted facilities within each legislative district. The legislative districts were identified and outlined, maps of the facilities

*To the right is a sample of a map given to Oklahoma legislators.*

within each district were produced and data tables with information on those facilities were generated for each Senate and Representative district in the state of Oklahoma.

A total of 447 maps were produced, which included 750 data tables containing information for the following types of facilities: air quality facilities which are permitted for regulated emissions; land application sites which receive treated wastewater sludge, hazardous waste generators, hazardous waste facilities, NPDES dischargers of treated wastewater, public water supply surface water intakes, Superfund sites (National Priority List), Toxic Release Inventory reporting facilities, and municipal landfills.



## Operator Certification Program

The Operator Certification program provides training, testing, certification and enforcement of the Water and Wastewater Works Operator Certification Rules for operators of municipal public water supply, wastewater and laboratory facilities and collection and distribution systems across Oklahoma. The Operator Certification program ensures that safe drinking water is provided to Oklahoma public water supply systems and that wastewater facilities are operated properly.

In FY 2000, Operator Certification underwent several changes to bring DEQ into a new direction. The first major task was to revise the Chapter 700 rules for operators. A completely new streamlined chapter was written, making the rules easier to read with fewer rules to follow. Chapter 710 Water and Wastewater Works Operator Certification rules became effective June 12, 2000. Operator Certification also changed the name and the look of the certified operator newsletter, "The Main Event." "The Main Event" is a publication that is sent to all certified operators three times a year and is available on-line. The publication provides the operator with class schedules, exam dates and locations, information on rule changes, and programs available to water and wastewater systems by DEQ. Another accomplishment of Operator Certification was validating and updating the exams administered to operators. During FY 2000,

more than 2,500 approved training hours were provided to operators using distant learning sites located across the state as well as colleges, career technology centers, and private learning facilities. The division issued new or higher level certificates to 981 water operators and 808 municipal wastewater operators in addition to 143 water laboratory operators and 104 municipal wastewater laboratory operators.

## Watershed Planning

A TMDL, or Total Maximum Daily Load, is a process aimed at reducing water pollution levels in streams, rivers, and lakes so that water quality standards may be attained. The process begins by collecting physical, chemical, biological, and other information about the waterbody. Then, the information is analyzed and the sources of pollution are identified. A computer model is used to determine how much the current level of pollution must be reduced in order to meet standards. Recommended reductions are assigned to each source of pollution, such as wastewater treatment plants, urban stormwater runoff, and agricultural runoff from pastures and croplands. Various methods of implementing the recommended reductions may be included in a TMDL. Currently, Oklahoma has 17 major watershed-scale TMDL projects funded that will address pollution in over 1,000 miles of rivers and streams and over 80,000 lake acres.

## Water Quality Operator Certification

|  | QTR 1 | QTR 2 | QTR 3 | QTR 4 | TOTAL |
|--|-------|-------|-------|-------|-------|
| <b>Operator Training and Certification</b> |       |       |       |       |       |
| Approved Training Hours Provided           | 908   | 957   | 685   | 664   | 3,214 |
| <b>New Certified Examinations</b>          |       |       |       |       |       |
| Water Operator                             | 257   | 263   | 231   | 230   | 981   |
| Wastewater Operator                        | 204   | 209   | 193   | 202   | 808   |
| Water Laboratory Operator                  | 19    | 35    | 41    | 48    | 143   |
| Wastewater Laboratory Operator             | 19    | 29    | 36    | 20    | 104   |



# WASTE

## Management Division

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### Solid Waste

Managing the vast amount of trash generated as a part of our modern daily lives is a constant and continuing challenge. Oklahoma, blessed with plentiful land, is better off than many states in our options for safe and protective disposal of solid waste. Proper locating, building and operation of landfills is an important part of the wise use of our land resources.

There are 247 permits for active and closed solid waste disposal facilities regulated by the Solid Waste Compliance Section (SWCS). The types and numbers of permits monitored by the SWCS are in the column on the right:

Though the SWCS has regulatory oversight of all facilities identified, its focus is on inspection of municipal solid waste landfills (MSWLFs) and waste tire processing facilities. MSWLFs are inspected at least once each quarter, more often when necessary. Waste tire processing facilities are inspected monthly. To ensure adequate monitoring of all facilities staff of local DEQ offices provide invaluable assistance by performing routine inspections of the other types of facilities.

The Solid Waste Program received 125 applications for permits, modifications and plans last year and issued 106 approvals.

### Solid Waste Permits

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|  |     |
|--|-----|
| Biomedical Waste Autoclave Facilities    | 1   |
| Biomedical Waste Transfer Stations       | 3   |
| Composting Facilities                    | 3   |
| Construction/Demolition Landfills        | 5   |
| Municipal Solid Waste Incinerators       | 2   |
| Municipal Solid Waste Landfills          | 40  |
| Non-hazardous Industrial Waste Landfills | 17  |
| Solid Waste Transfer Stations            | 39  |
| Waste Tire Processing Facilities         | 3   |
| Waste Tire Storage Facilities            | 1   |
| Closed Landfills                         | 133 |

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The Solid Waste Permitting Section (SWPS) also inspects landfills during construction to ensure they are properly built. During the year permit engineers made 93 field visits to assist landfill owners. In addition, solid waste engineers made 29 other field visits to landfill sites to deal with permit questions.

With the assistance of Environmental Complaints and Local Services (ECLS), over 500 inspections of solid waste facilities were performed during FY 2000. This resulted in 15 Notices of Violation, 19 Orders being issued, and a fine of \$15,000 being collected. The \$15,000 fine was the largest single fine ever collected by DEQ from a solid waste disposal facility.

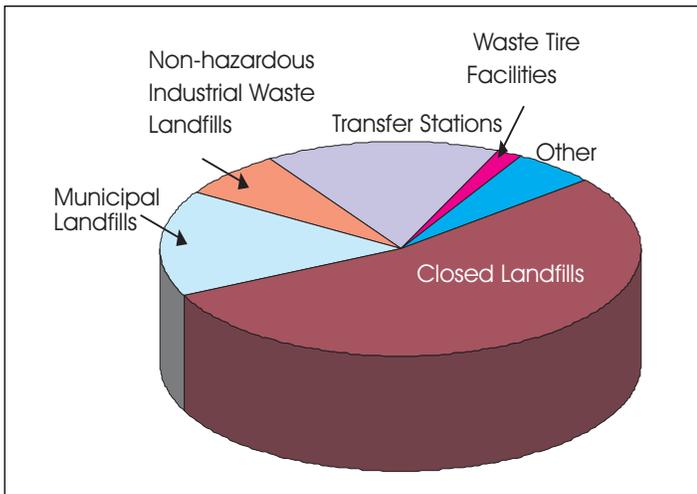
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" ... I SAW BELOW ME THAT GOLDEN VALLEY ..."

The non-hazardous industrial waste (NHIW) program is another program managed by the SWCS. DEQ rules divide NHIWs into three management classifications, based on potential environmental and health risks. Two of the classifications require a notification to the DEQ (via an application form), with one requiring DEQ approval before a landfill can accept the NHIW. During FY 2000, 900 NHIW disposal applications were processed by the SWCS.

DEQ rules provide a mechanism whereby landfills meeting certain construction and training requirements may begin performing their own NHIW reviews and approvals. During FY2001, we anticipate some landfills will begin performing this work.

The Solid Waste Compliance Section is involved in an extensive outreach effort. At the request of those we regulate, a rules



development committee, composed of 40 representatives of the regulated community and DEQ, was established. The committee will perform a thorough review of our solid waste rules to streamline the rules, make them simpler to use, and reduce regulatory burden while maintaining a high quality of environmental protection. The committee meets every six weeks. Progress of the committee can be followed on the DEQ's web page at <http://www.deq.state.ok.us/waste/SW/swrulesdev.htm>.

## Hazardous Waste

The hazardous waste section of the WMD is charged with promoting and enforcing practices that ensure safe management of hazardous waste from cradle to grave. This group is divided into two sections: the Hazardous Waste Permitting & Corrective Action Section and the Hazardous Waste Compliance Section.

### Hazardous Waste Permitting and Corrective Action

The RCRA permitting group reviews permit applications and writes permits for hazardous waste disposal sites including storage units, transfer facilities, recycling units and treatment units. This group also conducts inspections of permitted hazardous waste facilities and federal facilities, regulates corrective actions at various hazardous waste sites and voluntary clean ups. During this fiscal



The two pictures are an example of what our compliance and enforcement efforts have achieved. The first picture shows a significant leachate seep flowing into a stream that runs off-site. The second picture is in the same area and shows, after corrective measures were implemented, no leachate seeps at all.

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## Waste Management Permit Administration

|                                      | QTR 1 | QTR 2 | QTR 3 | QTR 4 | TOTAL |
|--------------------------------------|-------|-------|-------|-------|-------|
| <b>Waste Management Permitting</b>   |       |       |       |       |       |
| <b>Solid Waste</b>                   |       |       |       |       |       |
| Applications Received                | 13    | 52    | 28    | 32    | 125   |
| Permits Issued/Plans Approved        | 14    | 19    | 43    | 24    | 100   |
| Permit Protest                       | 2     | 0     | 0     | 0     | 2     |
| <b>Hazardous Waste</b>               |       |       |       |       |       |
| Applications Received                | 39    | 39    | 62    | 50    | 190   |
| Permits Issued/Plans Approved        | 35    | 39    | 53    | 46    | 173   |
| Permit Protest Hearing               | 0     | 0     | 0     | 0     | 0     |
| Haulers Licensed                     | 21    | 60    | 207   | 30    | 318   |
| <b>Underground Injection Control</b> |       |       |       |       |       |
| Applications Received                | 1     | 1     | 5     | 3     | 10    |
| Permits Issued/Plans Approved        | 1     | 1     | 3     | 2     | 7     |
| <b>Radiation</b>                     |       |       |       |       |       |
| Applications Received                | 45    | 20    | 16    | 14    | 95    |
| Permits Issued                       | 45    | 20    | 16    | 14    | 95    |
| Total Permits Issuance > Timelines   | 0     | 0     | 0     | 0     | 0     |

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## Waste Management Enforcement Administration

|  | QTR 1 | QTR 2 | QTR 3 | QTR 4 | TOTAL |
|--|-------|-------|-------|-------|-------|
| <b>Solid Waste</b>                                 |       |       |       |       |       |
| Notice of Violation                                | 3     | 5     | 5     | 2     | 15    |
| Formal Actions                                     | 3     | 2     | 5     | 9     | 19    |
| Fines Paid (in thousands)                          | 0     | 0     | 15    | 0     | 15    |
| Supplemental Environmental Projects (in thousands) | 0     | 0     | 0     | 1     | 1     |
| <b>Hazardous Waste</b>                             |       |       |       |       |       |
| Notice of Violation                                | 14    | 15    | 14    | 7     | 50    |
| Formal Actions                                     | 0     | 2     | 1     | 2     | 5     |
| Fines Paid (in thousands)                          | 0     | 0     | 7.5   | 0     | 7.5   |
| Supplemental Environmental Projects (in thousands) | 0     | 0     | 7.5   | 20    | 27.5  |

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year, 190 applications and/or plans were received to review and 173 plans were approved or permits issued.

The Waste Management Division oversees corrective action activities at more than forty hazardous waste facilities. During the past year, division staff reviewed and approved work plans involving different stages of site cleanup operations at many facilities. The Dayton Tire Company in Oklahoma City is an outstanding example of the progress toward remediation and restoration a RCRA facility can make.

In the past, Dayton Tire utilized a land treatment unit to dispose of liquid wastes generated during the manufacture of tires. Dayton implemented procedures over the years, which minimized ground water contamination beneath the site. Because the soil and ground water at the site were not impacted, the Waste Management Division granted Dayton a permit modification in 1997 which terminated both unsaturated soil core and ground water monitoring.

During the past year, Dayton has made great strides in reclaiming the property in and around the former land treatment unit. Working with the DEQ, Dayton has initiated a program to transform the property into an enhanced wildlife habitat. Plans for the reuse include the construction of trails, a small dam to increase water surface on the property, and a footbridge for people visiting the habitat. Dayton is working closely with the National Wildlife Habitat Council, the Oklahoma Department of Wildlife, and the DEQ to assure the most appropriate, beneficent, and safe use of the property. When completed, the habitat will provide a natural milieu for many types of aquatic life, birds and mammals indigenous to Oklahoma. The site, open to the public, will be maintained in perpetuity by Dayton as a woodland wildlife habitat.

### Hazardous Waste Compliance

The Resource Conservation and Recovery Act (RCRA) Compliance Unit of the Waste Management Division focuses on doing Compliance Evaluation Inspections (CEI's) on generators of hazardous waste. The Unit is also responsible for investigating complaints, performing waste sampling, participating in customer assistance activities and other special projects.

## Waste Management Inspection

|                                    | QTR 1 | QTR 2 | QTR 3 | QTR 4 | TOTAL |
|------------------------------------|-------|-------|-------|-------|-------|
| <b>Solid Waste Inspections</b>     |       |       |       |       |       |
| Compliance Evaluation Inspections  | 140   | 142   | 116   | 143   | 541   |
| Tire Dealer Inspections            | 95    | 98    | 10    | 34    | 237   |
| Tire Dump Surveys                  | 20    | 17    | 22    | 17    | 76    |
| <b>Hazardous Waste Inspections</b> |       |       |       |       |       |
| Compliance Evaluation Inspections  | 12    | 18    | 17    | 29    | 76    |
| Screening Inspections              | 38    | 40    | 35    | 40    | 153   |
| UIC Compliance Inspections         | 0     | 9     | 0     | 8     | 17    |
| <b>Radiation</b>                   |       |       |       |       |       |
| Compliance Evaluation Inspections  | 9     | 5     | 21    | 39    | 74    |

A CEI includes a very detailed review of all the waste handling practices of a facility. A typical CEI involves records review at DEQ and at the facility, on-site visits to the facility, a written report, checklists, photographs, and occasionally waste samples are taken to determine and document a facility's compliance. During FY 2000, the Unit conducted 96 RCRA compliance inspections.

The Unit is responsible for investigating complaints related to hazardous wastes. The complaint investigation starts by contacting known complainants within two working days of receipt of the complaint and then performing a site visit within seven working days. After the site visit the Unit decides the best way to resolve the complaint. During FY 2000 all complaints were resolved within 90 days.

The Unit provides customer assistance to our customers by providing technical and/or regulatory information. The Unit also participates in Special Projects and Initiatives as needed throughout DEQ.

## Underground Injection Control

The underground injection control (UIC) group oversees the underground injection activities that are regulated by the DEQ. This group ensures that the underground sources of drinking water are not adversely impacted by injection activities. There are twelve non-hazardous injection wells located at eight facilities in Oklahoma. The UIC personnel review permit applications, plugging and abandonment plans, conduct inspections and investigate complaints. The DEQ tests the mechanical integrity of each deep injection well on a semi-annual schedule to ensure the well's integrity has not been compromised and that the drinking water sources remain pristine. This group received ten applications/plans for review this fiscal year and seven plans were approved. The group also conducted 24 inspections of deep well injection sites.

## Radiation

The Oklahoma Radiation Management Act charges DEQ with regulatory responsibility for ionizing and non-ionizing radiation safety for all sources of radiation except diagnostic x-ray machines. The Radiation Management Section fulfills these tasks for the agency.

The past several years have seen this Section working to assume jurisdiction over two federal radiation programs. The most important of these is "Agreement State" status. Through this process states assume the responsibility for radioactive materials regulation from the Nuclear Regulatory Commission (NRC). Thirty-



DEQ personnel holding a copy of the "Agreement State" document for radiation management.



DEQ staff receiving the NRC records as part of radioactive materials regulations.

one states had become Agreement States before Oklahoma. Oklahoma completed the preparatory work for becoming an Agreement State in FY 2000, though the actual turnover of authority did not take place until three months after the fiscal year was complete.

To become an Agreement State, DEQ had to satisfy NRC that Oklahoma had a radiation safety program in place that was adequate and compatible with the existing programs of NRC and other Agreement States. An important part of this was changing DEQ rules to include the subjects covered by NRC rules. This was particularly important and difficult because DEQ did this at the same time the rules were revised under the "Re-Write/De-Wrong" policy. Thus, the Radiation Management rules were completely rewritten to meet both NRC responsibilities and to fulfill our simplification mandate. In most cases, existing NRC rules were adopted by reference, rather than writing new versions. As a result of this, the 2000 edition of the radiation rules is only about two-thirds the length of the 1999 edition, despite adding rules governing the Agreement State program.

The Agreement State program involves responsibility for some major sources of radiation that are of great importance to Oklahoma's economy and environment. It covers a total of about 220 radioactive materials licenses. The program includes responsibility for radioactive sources used in nuclear medicine, academic research, and for moisture and density gauges that are of great importance in manufacturing and construction. It also includes responsibility for industrial radiography, which is critical in the oil pipeline and refining industry. Tulsa is one of the major centers of industrial radiography in the world. Finally, the program includes responsibility for safety regulation of well logging, which is also very significant to the petroleum industry.

The DEQ radiation staff put great effort into preparing the application packet for Agreement State status. The draft application was sent to NRC in September, 1999.

NRC reviewed the application and had a minimum number of comments and clarifications needed. DEQ addressed these issues, and the final application was submitted through the Governor's office in December 1999. The remainder of FY 2000 was spent coordinating with NRC. Final jurisdictional transfer took

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## Waste Management General Outreach

|                   | QTR 1 | QTR 2 | QTR 3 | QTR 4 | TOTAL |
|-------------------|-------|-------|-------|-------|-------|
| Radiation Surveys | 11    | 27    | 26    | 44    | 108   |

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## Waste Management Operator Certification

|                                 | QTR 1 | QTR 2 | QTR 3 | QTR 4 | TOTAL |
|---------------------------------|-------|-------|-------|-------|-------|
| Radiography Certification Exams | 39    | 58    | 29    | 27    | 153   |

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place on September 29, 2000. Since Oklahoma had been attempting to get the Agreement State program since 1966, this was a banner day for the agency.

DEQ staff also worked with Environmental Protection Agency (EPA) staff to transfer jurisdiction over the Radionuclides National Emissions Standards for Hazardous Air Pollution (NESHAP) standards. Rulemaking for this was completed as part of the "Re-Write/De-Wrong" process, and final transfer of jurisdiction will take place soon.

### Radiation Permit Administration

The figures for applications received and permits issued shows the number of industrial and analytical x-ray permits received and approved during FY 2000. Since Oklahoma had not become an Agreement State at this time, it does not include any Agreement State applications.

### Radiation Inspection

Compliance Evaluation includes safety inspections of x-ray equipment conducted by Radiation Management during FY 2000.

### Radiation Operator Certification

Personnel conducting industrial radiography with radioactive

materials are required to be certified by an entity approved by the NRC. Oklahoma has been administering the Texas industrial radiographer certification exam as a way to help radiographers in Oklahoma avoid travelling out-of-state to take the exam and be certified. Now that Oklahoma is an Agreement State, we will soon be issuing Oklahoma radiographer certifications rather than working as an agent of Texas.

## Superfund and Voluntary Clean Up

The Waste Management Division oversees the cleanup of a wide variety of contaminated sites, from small chemical spills to large-scale industrial plants. The Superfund Program addresses abandoned sites which, because of the contamination present at the site, were ranked on the National Priority List (NPL). NPL sites are often complex, large-scale sites requiring more extensive investigation and longer-term solutions. Abandoned or idled industrial properties which are not ranked on the NPL are often addressed by the Brownfields/Voluntary Cleanup Program. This program is based upon a state law which recognizes that in order to encourage industry to relocate in formerly used industrial areas some incentives must be made to prospective investors and developers.

Two Oklahoma sites were formally added to the National Priorities List (NPL) this year. In Payne County, a defunct refinery near

## Waste Management Superfund and Voluntary Cleanup

|                                | QTR 1 | QTR 2 | QTR 3 | QTR 4 | TOTAL |
|--------------------------------|-------|-------|-------|-------|-------|
| <b>Private Party Oversight</b> |       |       |       |       |       |
| Ongoing                        | 71    | 76    | 72    | 74    | N/A   |
| Completed                      | 5     | 4     | 9     | 4     | 22    |

Cushing known as the Hudson Refinery was added to the NPL. An abandoned refinery property in Carter County, on the east edge of Ardmore. The Imperial Refining Company site was the other one added. The addition of these sites brings the total number of NPL sites in Oklahoma to 13.

## Environmental Education

Public education is key for continuing advances in solid waste management and recycling. DEQ pursues a diligent outreach program to cities and towns, county commissioners, the regulated community, schools, businesses, and other Oklahomans who seek information. The major continuing themes are waste reduction, recycling, and environmental protection.

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## Waste Management Superfund Programs

|                                | QTR 1 | QTR 2 | QTR 3 | QTR 4 | TOTAL |
|--------------------------------|-------|-------|-------|-------|-------|
| <b>Superfund</b>               |       |       |       |       |       |
| Preliminary Assessments        | 0     | 0     | 0     | 0     | 0     |
| Site Inspections               | 3     | 0     | 0     | 2     | 5     |
| Management Assistance          | 10    | 10    | 10    | 10    | 10    |
| Remedial Design                | 1     | 1     | 0     | 0     | 2     |
| Federal Facilities             | 7     | 7     | 7     | 7     | 7     |
| Remedial Action                | 1     | 2     | 3     | 3     | 9     |
| Removal Actions                | 0     | 0     | 0     | 1     | 1     |
| CERCLA Universe Investigations | 0     | 0     | 0     | 0     | 0     |
| New Listing on NPL             | 0     | 2     | 0     | 0     | 2     |
| Sites Delisted                 | 0     | 1     | 0     | 0     | 1     |

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## Environmental Education

|                                    | QTR 1 | QTR 2 | QTR 3 | QTR 4 | TOTAL  |
|------------------------------------|-------|-------|-------|-------|--------|
| <b>Public Relations</b>            |       |       |       |       |        |
| Press Releases                     | 0     | 0     | 0     | 6     | 6      |
| Audio/Visual Materials Produced    | 4     | 1     | 0     | 2     | 7      |
| Conferences/Displays               | 12    | 6     | 6     | 7     | 31     |
| Presentations at Conferences       | 5     | 1     | 2     | 2     | 10     |
| Public Contacts                    | 1,743 | 3,934 | 7,090 | 4,055 | 16,822 |
| Information Packets Distributed    | 123   | 764   | 1,197 | 1,329 | 3,413  |
| Speeches                           | 14    | 13    | 16    | 17    | 60     |
| <b>Environmental Education</b>     |       |       |       |       |        |
| Adult/Community Education          | 2     | 27    | 22    | 7     | 58     |
| K-12 Outreach                      | 6     | 7     | 11    | 12    | 36     |
| <b>Recycling Information</b>       |       |       |       |       |        |
| Presentations/Technical Assistance | 20    | 13    | 27    | 11    | 71     |
| Recycle Training                   | 1     | 1     | 0     | 1     | 3      |
| Recycle Program Assistance         |       |       |       |       |        |
| (Agencies/Schools)                 | 41    | 78    | 53    | 36    | 208    |
| Speeches                           | 2     | 3     | 4     | 8     | 17     |
| Recycle Market Development         | 2     | 2     | 3     | 10    | 17     |
| Waste Audits                       | 1     | 0     | 0     | 0     | 1      |
| Campaigns                          | 2     | 1     | 1     | 0     | 4      |

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" ... THIS LAND WAS MADE FOR YOU AND ME ..."



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