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DISCLAIMER

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RAILROAD COMMISSION (RRC) administers environmental programs that affect transit operations. TNRCC and the other state agencies maintain comprehensive environmental web sites that provide compliance information for the environmental programs they administer. These sites are often the most convenient resource for information, guidance, and forms. The agencies and their respective areas of environmental regulation are listed in Table 1.

<table>
<thead>
<tr>
<th>Compliance Agency</th>
<th>TNRCC</th>
<th>TDH</th>
<th>GLO</th>
<th>RRC</th>
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<td>Air Quality</td>
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<tr>
<td>TNRCC—Municipal, industrial and hazardous waste, air quality, air emissions, spills or releases from any source, pollution prevention, inland and coastal water quality</td>
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<td>TDH—Toxics and asbestos, indoor air quality, the work environment, certain municipal wastes and disposal</td>
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<td>GLO—Alternative fuel usage, coastal and waters, oil spills, energy conservation</td>
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<td>RRC—Alternative fuel technical standards, pipelines, fuels, oil spills</td>
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</table>

**Table 1. Texas agencies and environmental regulation**

**What We Found . . .**

**Environmental Regulatory Agencies**

Federal environmental requirements are often administered and enforced by state agencies. TNRCC is the principal state environmental regulatory agency in Texas, and therefore administers and enforces the majority of state and federal environmental compliance requirements. However, other state agencies may also administer and enforce environmental requirements. In particular, TDH, the General Land Office (GLO), and the Texas Environmental Compliance Chapters

Based on the regulatory review and transit operator input, researchers developed categories and enforces the majority of state environmental regulatory agency in Texas. The TNRCC is the principal regulatory agency for the administration and enforcement of environmental programs. The TNRCC web site contains numerous guidance documents, forms, and rules to assist with environmental compliance of transit facilities.

**RCRA**

RCRA, which amended the Solid Waste Disposal Act, addresses solid wastes (Subtitle D) and hazardous waste (Subtitle C) management activities. Congress granted EPA the authority to regulate hazardous wastes from “cradle to grave.” The objective of hazardous waste regulation is the protection of human health and the environment. RCRA regulation is also intended to encourage the conservation and recovery of valuable materials. In Texas, the principal regulatory authority for the control and disposal of waste is the TNRCC.

**Maintenance activities at transit facilities are known to generate solid wastes. Solid wastes include everything from discarded paper and light bulbs to used engine oil and solvents. Among these solid wastes, some may be classified as hazardous waste, some are classified as non-hazardous waste, and some are special wastes. However, if you produce any amount of waste—regardless of whether you store, recycle, or throw it away—you are subject to state and federal regulations. When it comes to managing waste, the rules and regulations can be very perplexing. There are:**

- federal laws and rules from EPA;
- state laws and rules enforced by TNRCC; and
- exemptions for certain amounts of waste, special requirements for others.

**Taken together, waste regulations are intended to promote responsible management and tracking of wastes in order to avoid spills, releases, and unauthorized disposal. The key to compliance with waste regulations includes:**

- understanding waste terminology and definitions,
- minimizing waste to stay below regulatory thresholds and reduce costs,
- good housekeeping practices, and
- good record-keeping practices.

**CERCLA**

The 1980 Clean Air Act Amendments affect transit agencies most directly by regulating vehicle emissions, bus engine emissions, fuels formulation, and the use of refrigerants. The CAAA also affects transit systems less directly by requiring transportation control measures for areas in non-attainment. The requirements for control measures are usually described in the state implementation plan (SIP). The SIP describes what control measures the state will enforce in order to meet federal clean air requirements. The level of control depends on the clean air attainment status of the agency location.

**The Researchers Recommend . . .**

Based on the results of this research project, the researchers recommend the following for transit agencies:

- Conduct outreach activities at public transportation meetings.
- Provide the compliance manual to small urban and rural transit agencies.
- Encourage the use of the quick checklist developed as a part of this project.
proposed areas of emphasis for small urban and rural transit systems. The project team created an environmental compliance manual for small urban and rural transit systems.

Environmental Compliance

Based on the regulatory review and transit operator input, researchers developed categories of environmental compliance into manual chapters for each area relevant to small urban and rural operators. The chapters include:

- **Ch. 1 Introduction and Overview**
- **Ch. 2 Air Quality: Bus Emissions, Fuels, and Fleets**
- **Ch. 3 Petroleum Storage Tanks**
- **Ch. 4 Waste Management**
- **Ch. 5 Pollution Prevention**
- **Ch. 6 Stormwater**
- **Ch. 7 Toxic Substances**
- **Ch. 8 Post-Cleanup and Compliance**
- **Ch. 9 CERCA Liability andRCRA**
- **Ch. 10 Contamination and Clean-ups**
- **Ch. 11 National Environmental Policy Act (NEPA)**

Figure 1 illustrates the compliance areas in relation to transit operations.

Table 1. Texas agencies and environmental regulation

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**RCRA**

- The federal and state legislation affecting transit systems in Texas is summarized below. Many of the federal environmental requirements are mirrored at the state level with similarly directed legislation. The regulations that affect the transit agencies primarily originate from the Resource Conservation and Recovery Act (RCRA), the Clean Air Act Amendments (CAA), the Clean Water Act (CWA), and CERCLA. In Texas, these rules are generally administered by TNRC and supported with complementary legislation and rules found in the Texas Administrative Code (TAC) and the Texas Health and Safety Code (THSC). The first stop for information on environmental compliance is the TNRC web site (http://www.tnrrc.state.tx.us/). The TNRC web site contains numerous guidance documents, forms, and rules to assist with environmental compliance of transit facilities.

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**The SIP is the official document, housed at EPA, which details the efforts and commitments made by a state in fulfilling its Clean Air Act obligations. A SIP revision that has been adopted by TNRC becomes state law immediately but does not become part of the SIP officially until it has been approved by EPA. If a transit agency operates in non-attainment counties, a change in the SIP is more likely to affect operation than other regulations.**

**CWA**

- Maintenance activities at transit facilities are known to cause stormwater pollution in urban areas. Activities such as fueling, brake repair and equipment cleaning require the use of detergents, solvents, and other chemicals that become waterborne when rainfall washes the pollutants from buildings, garages, parking lots, and storage areas into nearby rivers and streams. The Water Quality Act of 1987 included requirements to control stormwater discharges. Water pollution generated during storm events, whether it is referred to as urban stormwater or non-point source pollution, is now a regulatory focus. Recently, TNRC was given the authority to administer all stormwater programs. Municipalities with populations greater than 100,000 (Phase I cities) had to comply with these regulations by 1993. If the transit facility is in a city of more than 100,000, these requirements are not new. Now compliance extends to municipalities with populations less than 100,000 (Phase II cities), which may affect many small urban and rural transit providers. The Phase II Rule automatically covers on a nationwide basis all small municipal separate storm sewer systems (MS4s) located in “urbanized areas.”

Numerous inter-related environmental communication and compliance requirements challenge the transit industry. Within small urban and rural transit systems, these challenges are often met with limited resources and limited expertise. Environmental compliance is just one of the many responsibilities facing a transit manager. One way to effectively manage the demands of these requirements is through the use of an environmental compliance manual and reference guide that addresses the most commonly encountered issues. This research summary report provides an overview of an environmental compliance manual developed for small urban and rural transit systems in Texas.

**What We Did . . .**

Environmental Compliance and Regulatory Review for Transit Systems

Researchers conducted a review of environmental compliance issues to identify relevant federal and state requirements, guidelines, rules, and codes. The regulatory review focused primarily on the guidelines and requirements for stormwater management, pollution prevention, and the use of an environmental compliance manual developed for small urban and rural transit systems.

**TxDOT Implementation Status**

August 2001

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