

# FACT SHEET

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## ENVIRONMENTAL PROTECTION REQUIREMENTS FOR SWINE OPERATIONS

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Water and air pollution from swine feeding operations can be minimized by proper site selection and facility design. The design of swine waste management systems depends heavily upon State and Federal pollution control regulations. These requirements are summarized briefly in this publication.

### State Water Pollution Control Regulations

The Texas Water Quality Act of 1967 states that no person or operation can handle waste in any manner that causes a discharge of pollutants off-premises without a permit from the Texas Water Quality Board (TWQB). Under this act, the TWQB in 1970 issued a "Regulation for Registration of Commercial Swine Production Waste Control Facilities." This regulation requires swine feeding operations with more than 50 head of breeder or feeder hogs (or 500 piglets) in confinement to obtain a "Certificate of Registration" which stipulates *no discharge of wastewater or runoff* from the premises. (The term *confinement* applies when the average space per animal is less than 2,000 square feet for mature animals, or 200 square feet for piglets weighing less than 50 pounds.) Smaller operations, with 20 to 50 head, may be required to register if the production facility lies within 250 feet of a flowing stream or reservoir.

To meet the "no-discharge" standard it will be necessary to provide appropriate waste collection

and disposal facilities. These facilities should be capable of performing the following functions:

1. Divert uncontaminated outside runoff and roof drainage around the facility.
2. Route runoff from open feedpens through a settling channel or basin for solids removal.
3. Retain, in holding ponds, all contaminated runoff from the 25 year frequency, 24 hour duration rainfall (Figures 1 and 2) plus a 30-day accumulation of manure and waste water.

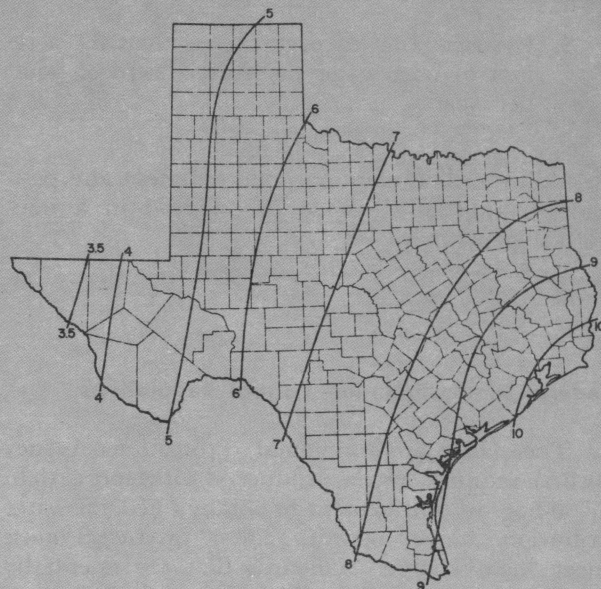


Figure 1. Magnitude of 25 year frequency, 24-hour duration rainfall (inches) for designing runoff retention ponds according to TWQB and EPA standards.

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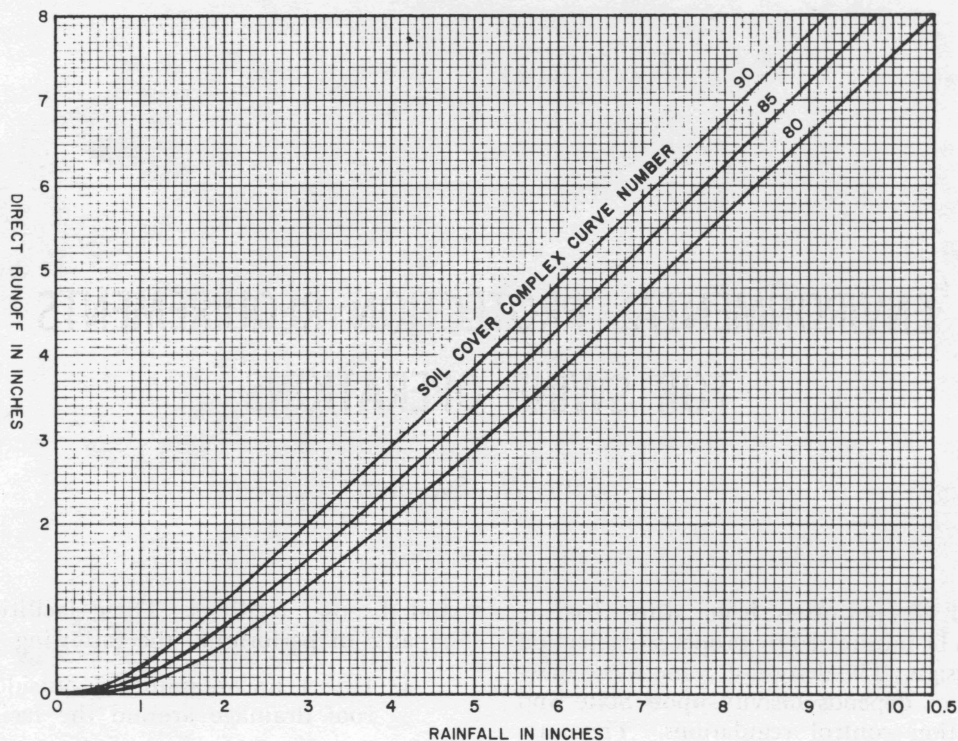


Figure 2. Prediction of runoff from dirt feedlots using the soil cover complex procedure of the Soil Conservation Service-USDA.

4. Dispose of collected runoff either by irrigation within 14 days, or by evaporation in ponds designed to withstand the 10-year period of maximum recorded rainfall.
5. Restrict pond seepage to less than 0.1 acre-foot of wastewater per surface acre of pond per year.

In addition, solid manure, pond sediment and pesticides should be disposed of on land in a non-polluting manner.

#### Federal Water Pollution Control Regulations

The U.S. Environmental Protection Agency (EPA) requires swine producers with more than 2,500 hogs in confinement to obtain a Federal water pollution control permit. These producers must meet "no-discharge" standards that are essentially the same as those of the TWQB stated above.

Because of these similarities, a single (joint) permit can be obtained to satisfy both EPA and

Texas Water Quality Board requirements. Applications for the joint permit should be submitted to TWQB using the EPA application form, together with supplemental information which includes a legal property description, names of adjacent land owners and drainage paths.

Under either a joint Federal-State permit or a separate EPA permit, the swine producer is required to monitor rainfall amounts, holding pond contents and pumpdown rates to satisfy the agencies that all steps are being taken to avoid a discharge.

Construction of new facilities in accordance with EPA standards and receipt of a Federal or joint Federal-State permit insures that the swine producer will not be subject to more stringent pollution control requirements within 10 years after construction or during the period of amortization, whichever period ends first.

#### State Air Pollution Control Program

The Texas Air Control Board has imposed permit requirements on large swine operations. New production operations with more than 1,000

head of hogs of any size, as well as existing operations that are to expand by 100 percent or more in feeding capacity, must obtain a *construction permit* before any construction can begin. An *operating permit* must be applied for within 60 days from start of feeding operations. The Texas Air Control Board is interested mainly in the location of the proposed facility with respect to neighbors and prevailing winds (Figure 3). The agency also considers operating factors that are known to produce or abate odors. Information on odor control measures is contained in the Extension bulletin MP-1128 *Liquid Manure Management for Swine Operations*.

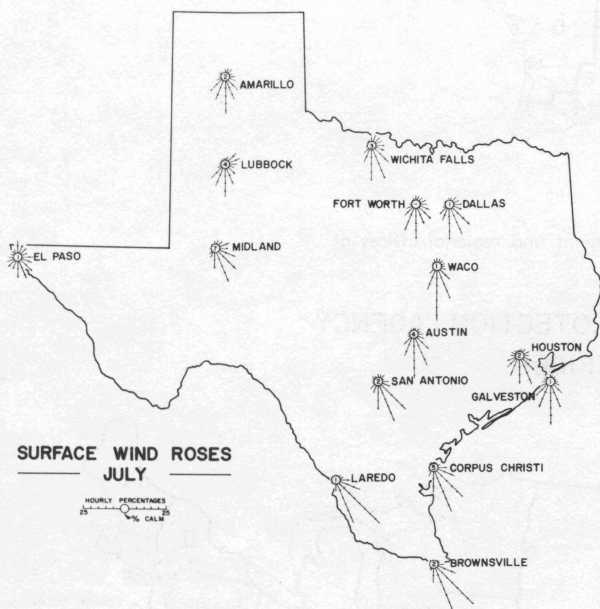


Figure 3. Wind rose diagram depicting the percentage of time wind blows from each direction.

The Texas Air Control Board also regulates odors from existing swine feeding facilities under a general nuisance regulation. This is handled on an individual complaint basis.

**Permit Procedures**

Procedures for obtaining permits from the Texas Water Quality Board, the Texas Air Control Board and the U.S. Environmental Protection Agency normally consist of the following basic steps:

1. With engineering assistance, prepare preliminary plans for the swine feeding facility and waste handling system.

2. Arrange an on-site meeting involving agency representatives, your engineer and yourself to decide what controls are needed.
3. Prepare final plans for the swine waste management system based on decisions reached in step 2.
4. Submit application forms and supporting documents to the regulatory agencies.
5. Publicize and attend public hearings on applications as directed by the agencies. (Hearings are not required in obtaining a TWQB certificate of registration.)
6. Modify plans for the waste management system as requested by agencies.
7. Initiate construction in accordance with the terms and conditions of the permit.

These steps for obtaining the permits may require several weeks or months to complete. Professional assistance from engineers and/or attorneys may be needed. To initiate the process of obtaining permits, the producer should contact the appropriate district or regional representatives of the three agencies. These are located as shown in Figures 4, 5 and 6.

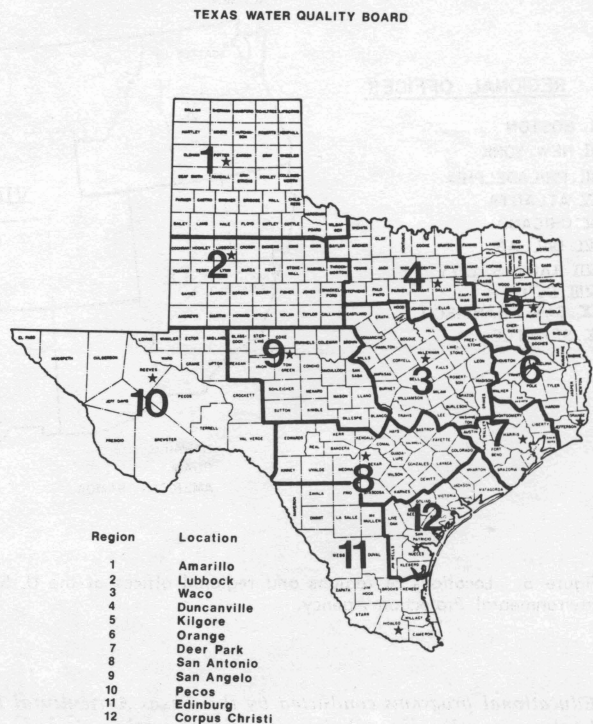


Figure 4. Locations of intrastate regions and regional offices of the Texas Water Quality Board.

TEXAS AIR CONTROL BOARD

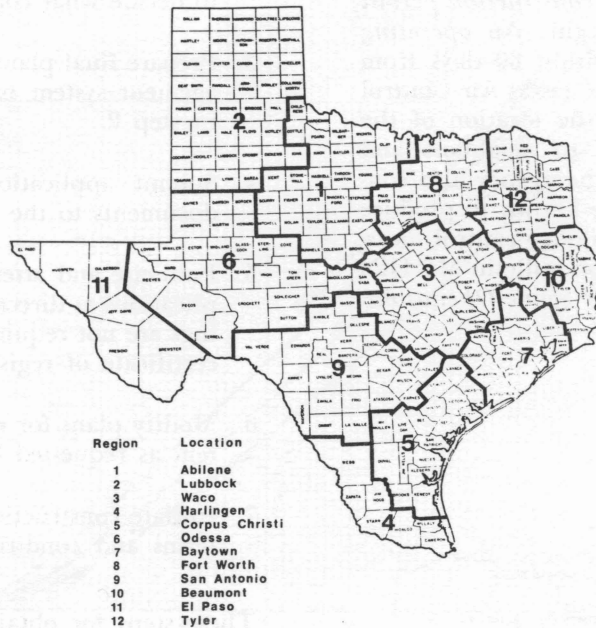


Figure 5. Locations of intrastate regions and regional offices of the Texas Air Control Board.

U.S. ENVIRONMENTAL PROTECTION AGENCY  
REGIONAL OFFICES

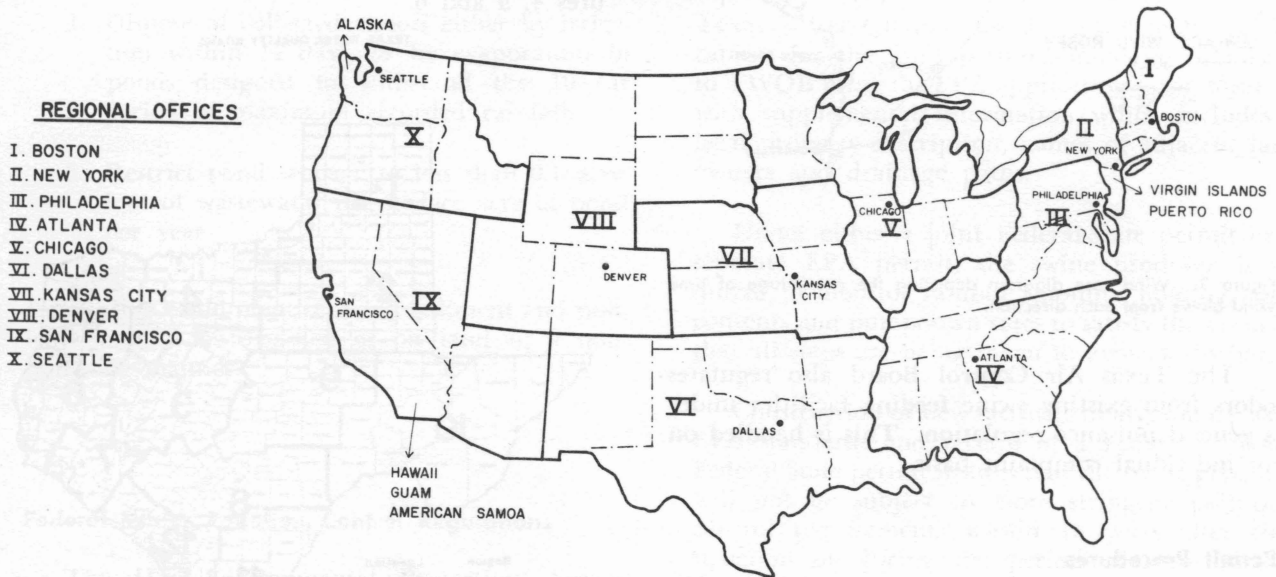


Figure 6. Locations of regions and regional offices of the U. S. Environmental Protection Agency.

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