

Coffman Resigns

Agronomist Kevin Coffman resigned effective March 13, 1998. After joining the staff on April 1, 1997, Coffman worked with the District's soil moisture monitoring program...

TSSWCB yard trimmings project illustrates composting benefits

The yard trimmings may Texans consider garbage and throw out with their household trash could help to open up landfill space and improving water quality throughout the state.

A recently completed demonstration project funded by the Texas State Soil and Water Conservation Board (TSSWCB) through the U.S. Environmental Protection Agency's 319(h) program, showed that compost and wood clippings from yard trimmings could be used to significantly benefit two problem areas affecting urban and agricultural sectors in Texas-water contamination from eroding farmland and the growing scarcity of landfill space.

Part of the program's objective was to determine the effectiveness of using compost to increase the water infiltration of erodible soils, making them less likely to be blown or washed away. When water carries topsoil away as runoff (particularly from erodible land), it can carry soil and agricultural chemicals into drinking water supplies. This is known as nonpoint source pollution.

Increasing the amount of water entering the soil (infiltration) will reduce the likelihood of it being eroded. Tests at a demonstration site in Big Spring indicated the addition of wood chips and compost can significantly increase a soil's infiltration, said Scott McCoy, program specialist/compost recycling section with the Texas Natural Resource Conservation Commission (TNRCC) in Austin.

Water infiltration, or the amount of water entering the soil, improved from 10.7 percent on uncomposted soils to 11.3 percent with compost was applied at 10 tons per acre; 15.1 percent with 20 tons of wood chips per acre, and 21 percent with 20 tons of wood chips per acre, according to TNRCC figures.

Ken Awrey of Nacogdoches, Piney Woods Resource Conservation & Development Coordinator (RC&D), orchestrated the use of yard trimmings compost collected at the Lufkin city landfill for use on plots at a nearby vegetable farm. The test area contained typical, sandy, east Texas soil, and showed a marked improvement in structure after the addition of compost, said Awrey.

Many people are beginning to realize the benefits of compost, particularly when used to aid soils supporting crops such as cotton, which doesn't add much organic material to the land. Even with application rates as low as five tons per acre, soil benefits would accrue over a period of years.

The project's second goal was to measure how diverting yard waste into compost might lessen the burden on landfills. Last year, approximately 11 million tons of compostable materials were put into state landfills, according to the TNRCC.

Composting sites in Pampa, Big Spring, and Lufkin were set up to process yard clippings and brush and to document the total compostable materials diverted from the landfill.

In Pampa (population 20,000), yard trimmings diverted from disposal in the city landfill amounted to 2,909 tons during 1994; 3,649 tons in 1995; and 3,525 tons in 1996. More than 20 local residents come to the Pampa landfill each week for free compost.

In Lufkin (population 31,000), approximate amounts of brush and yard trimmings composted during the project were 3,900 tons in 1995; 4,500 tons in 1996; and 6,536 tons in 1997. Dennis Weaver, superintendent of solid waste/recycling for the city of Lufkin, predicted 1998 amounts to double last year's figures. Between 20 and 25 cubic yards of compost are sold weekly to commercial and private users for \$5 a cubic foot. Loading is done by the city at no charge.

Most of the trimmings diverted at the Big Spring site (population 23,000) were wood chips, said Howard Shivers, Big Spring superintendent of solid waste. During 1997, the landfill processed 15,000 tons of wood chips and 20 tons of compost.

In addition to increasing the water infiltration of erodible soils and saving landfill space, compost applications also boosted production of crops grown at demonstration sites.

Cotton yields at a project site in Big Spring improved from 110.4 pounds of lint per acre with no compost added to 152 pounds of lint per acre with 20 tons of wood chips added per acre; and 163.3 pounds of lint per acre with 40 tons of compost added per acre, according to TNRCC figures.

At a demonstration site in Pampa, grain yields increased from 24 bushels per acre with no compost added to 37 bushels per acre with 30 tons of compost added per acre.

Partners in the project with the TSSWCB include the TNRCC, the Big County RC&D, the North Rolling Plains RC&D, the West-Tex RC&D, the Piney Woods RC&D, and the USDA-Natural Resources Conservation Service.

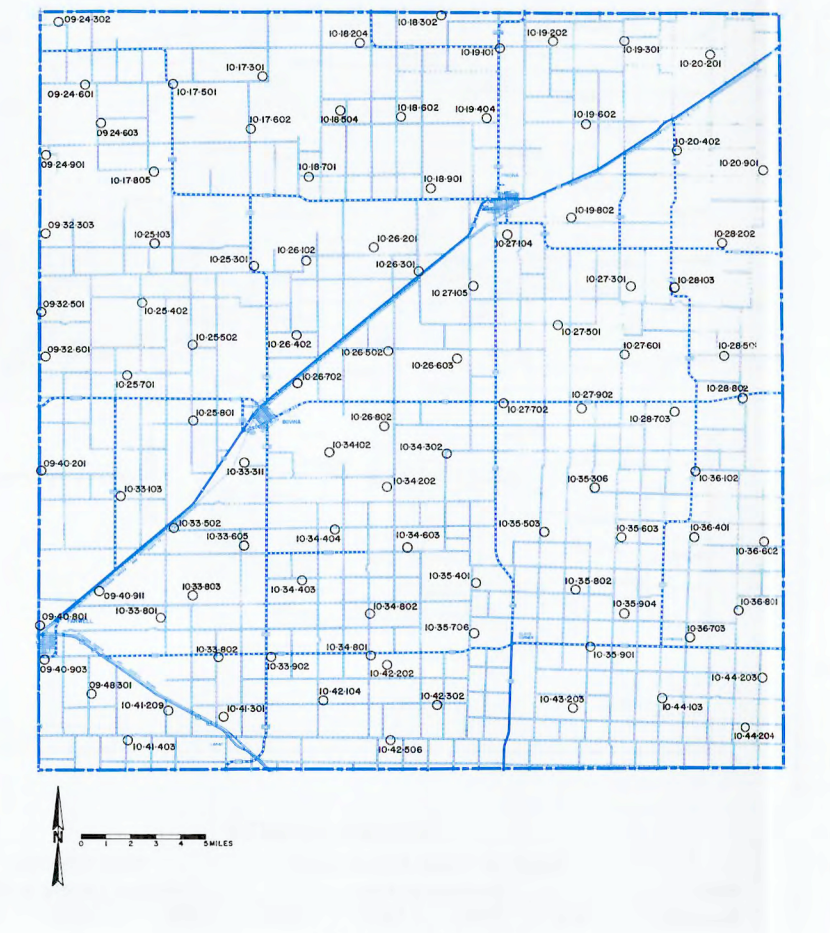


Table for PARMER COUNTY with columns: Well Number, 1988, 1993, 1997, 1998, Total Change, 1988 to 1998, 1993 to 1997, 1997 to 1998.

Main data table for PARMER COUNTY listing well numbers and water level changes in feet for various years.

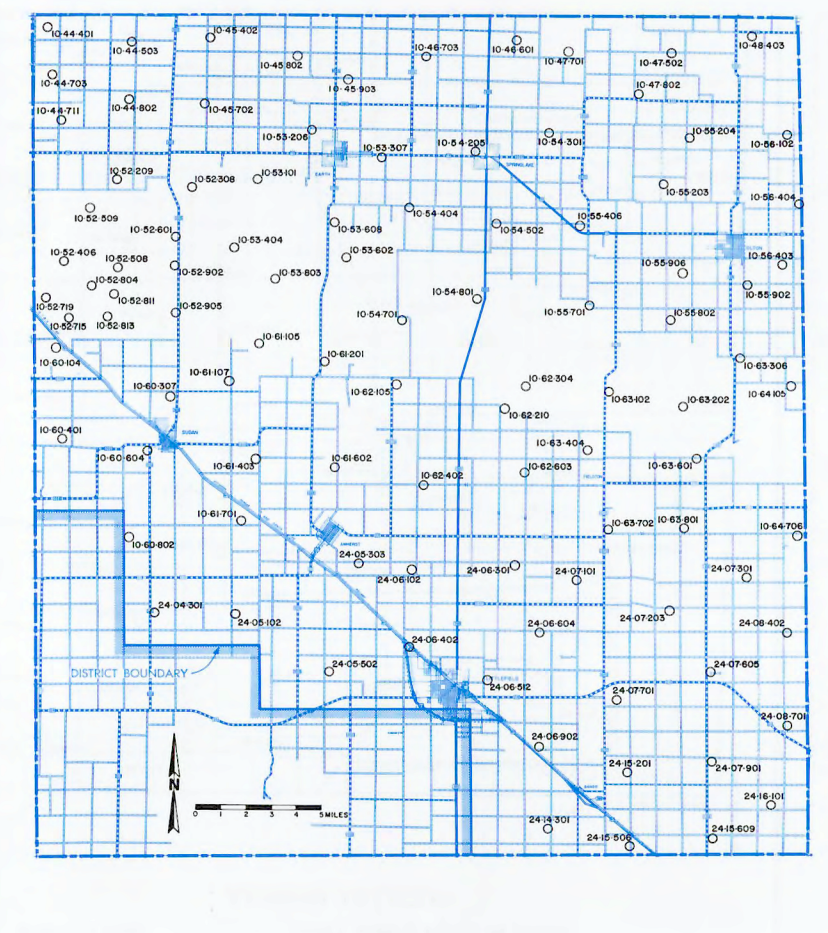


Table for LAMB COUNTY with columns: Well Number, 1988, 1993, 1997, 1998, Total Change, 1988 to 1998, 1993 to 1997, 1997 to 1998.

Main data table for LAMB COUNTY listing well numbers and water level changes in feet for various years.

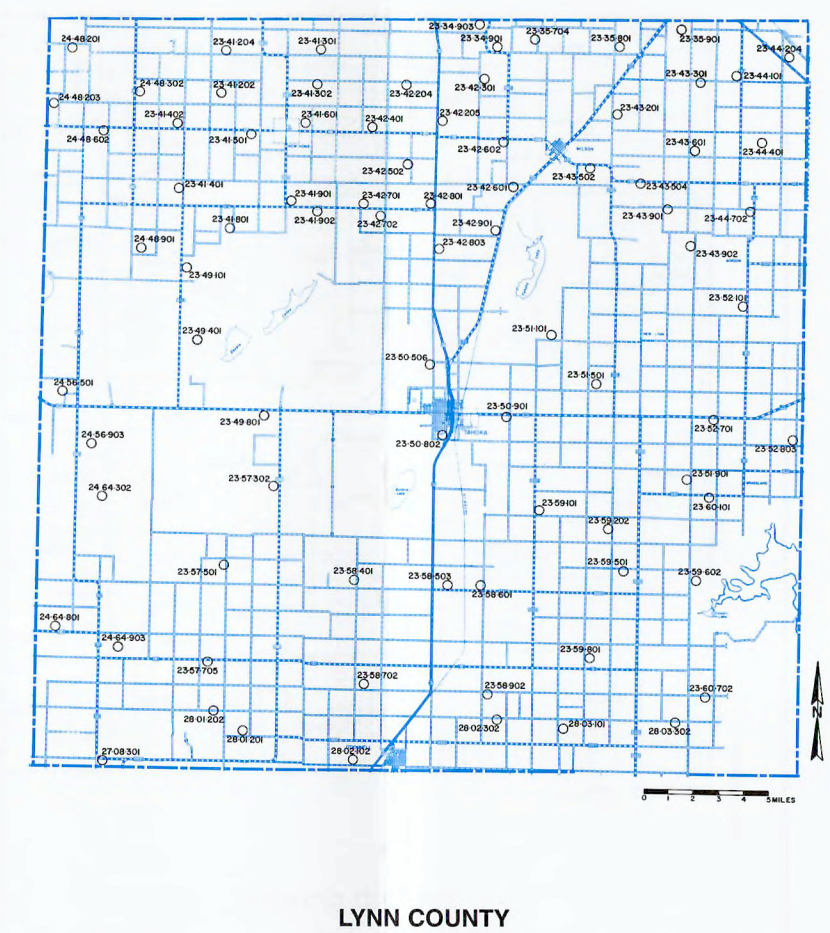


Table for LYNN COUNTY with columns: Well Number, 1988, 1993, 1997, 1998, Total Change, 1988 to 1998, 1993 to 1997, 1997 to 1998.

Main data table for LYNN COUNTY listing well numbers and water level changes in feet for various years.

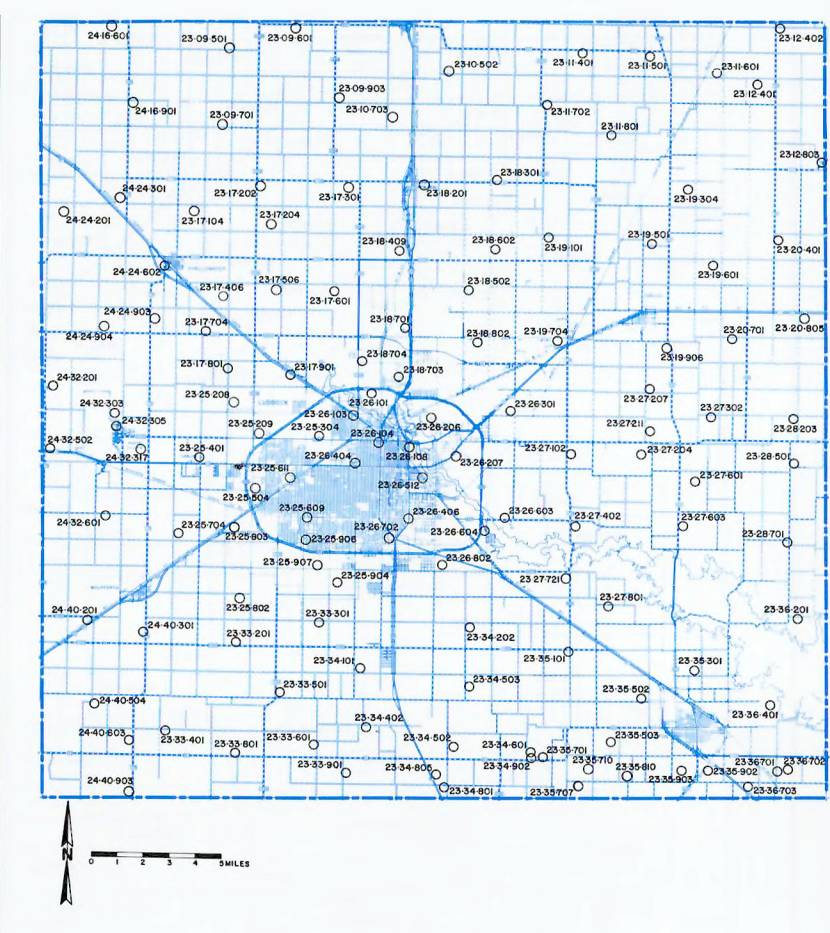


Table for LUBBOCK COUNTY with columns: Well Number, 1988, 1993, 1997, 1998, Total Change, 1988 to 1998, 1993 to 1997, 1997 to 1998.

Main data table for LUBBOCK COUNTY listing well numbers and water level changes in feet for various years.

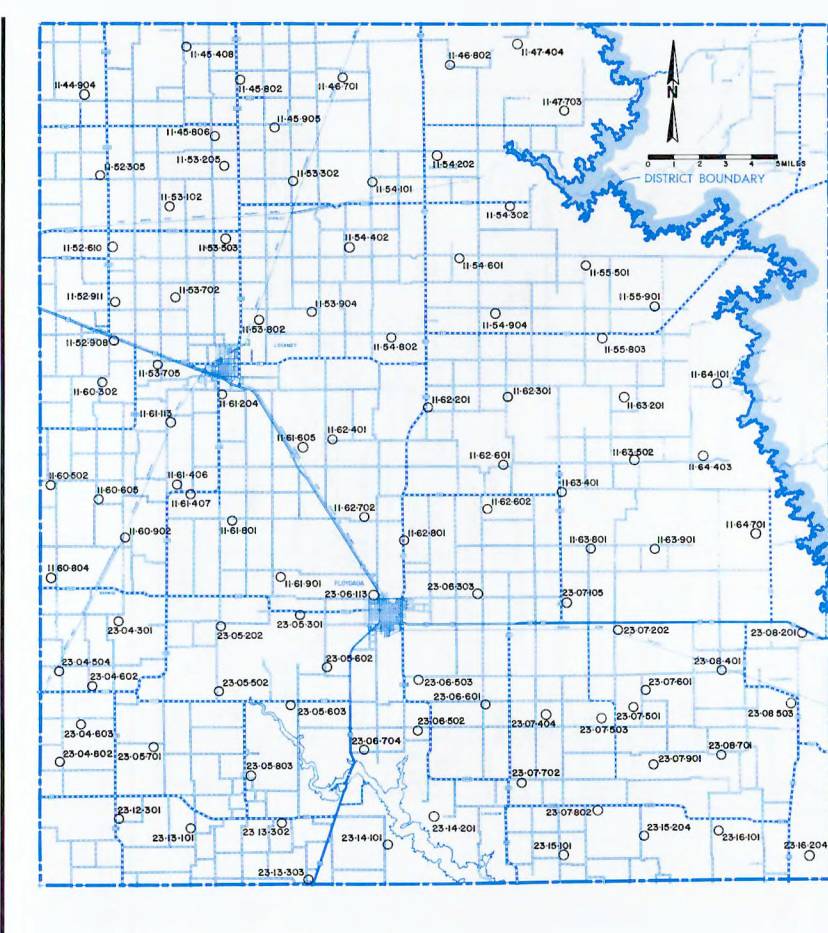


Table for FLOYD COUNTY with columns: Well Number, 1988, 1993, 1997, 1998, Total Change, 1988 to 1998, 1993 to 1997, 1997 to 1998.

Main data table for FLOYD COUNTY listing well numbers and water level changes in feet for various years.

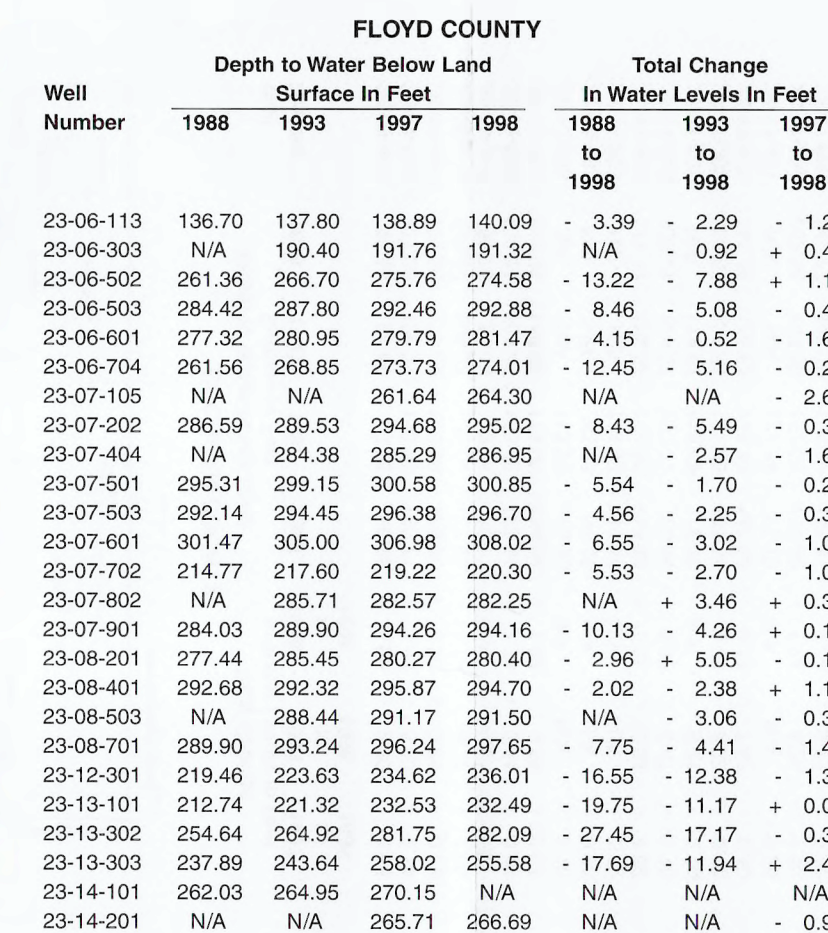


Table for DEAF SMITH COUNTY with columns: Well Number, 1988, 1993, 1997, 1998, Total Change, 1988 to 1998, 1993 to 1997, 1997 to 1998.

Main data table for DEAF SMITH COUNTY listing well numbers and water level changes in feet for various years.

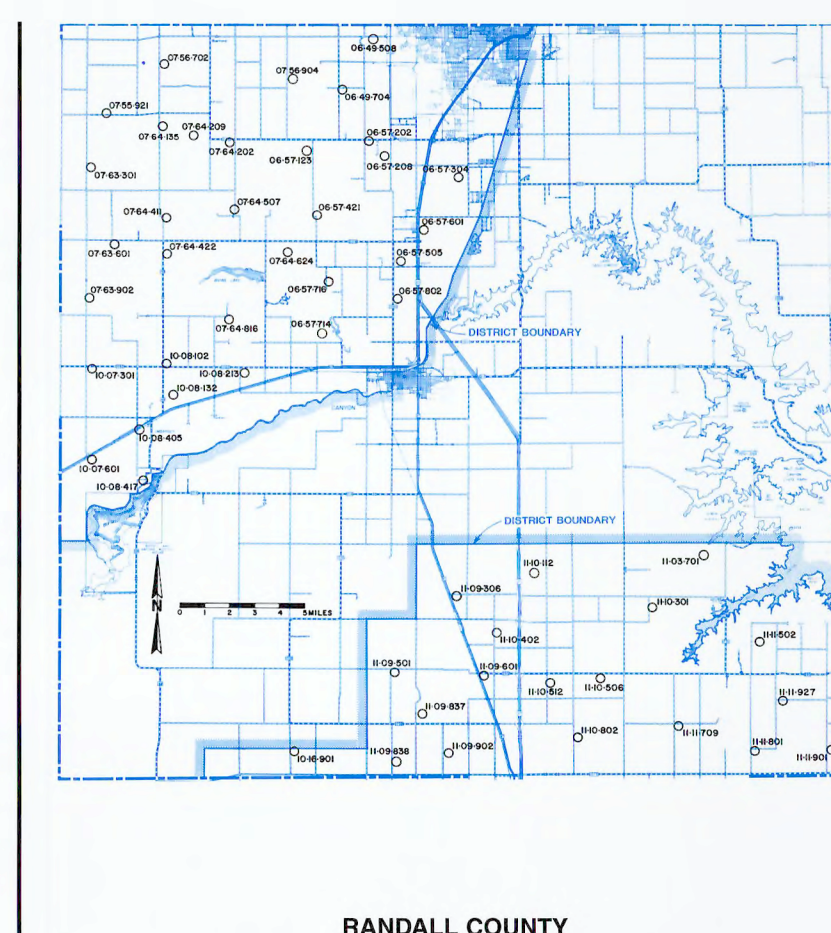


Table for RANDALL COUNTY with columns: Well Number, 1988, 1993, 1997, 1998, Total Change, 1988 to 1998, 1993 to 1997, 1997 to 1998.

Main data table for RANDALL COUNTY listing well numbers and water level changes in feet for various years.

Main data table for PARMER COUNTY (continued) listing well numbers and water level changes in feet for various years.

Main data table for LAMB COUNTY (continued) listing well numbers and water level changes in feet for various years.

Main data table for LYNN COUNTY (continued) listing well numbers and water level changes in feet for various years.

Main data table for LUBBOCK COUNTY (continued) listing well numbers and water level changes in feet for various years.

Main data table for FLOYD COUNTY (continued) listing well numbers and water level changes in feet for various years.

Main data table for DEAF SMITH COUNTY (continued) listing well numbers and water level changes in feet for various years.

Main data table for RANDALL COUNTY (continued) listing well numbers and water level changes in feet for various years.

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