

**Appendix—Sources and Methods for Distributing Withdrawals for  
the Ground-Water Availability Model**

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## Municipal Withdrawals

For the Chicot and Evangeline aquifers in Harris, Galveston, and Fort Bend Counties, municipal withdrawal data for the historical period 1891–1975 were obtained from Carr and others (1985). For 1976–2000, withdrawal data were compiled by and obtained from the HGCSA (Tom Michel, Harris-Galveston Coastal Subsidence District, written commun., 2000) and the FBSD (Tom Michel, Harris-Galveston Coastal Subsidence District, written commun., 2000), and augmented with TWDB water-use data (Cindy Ridgeway, Texas Water Development Board, written commun., 2001).

Estimates of ground-water withdrawals from 1891 through 1980 for the Chicot and Evangeline aquifers in Harris, Galveston, and Fort Bend Counties were the same as those used by Carr and others (1985) and Kasmarek and Strom (2002) augmented with TWDB water-use data.

Historical estimates of ground-water withdrawals from 1891 through 1996 for the Chicot and Evangeline aquifers in Brazoria, Chambers, Liberty, and Waller Counties and parts of Angelina, Austin, Colorado, Fayette, Grimes, Hardin, Jefferson, Lavaca, Matagorda, Montgomery, Polk, San Jacinto, Walker, Washington, and Wharton Counties were the same as those used by Kasmarek and Strom (2002) modified from Carr and others (1985).

Historical estimates of ground-water withdrawals were based on the water-use-survey database provided by the TWDB (Cindy Ridgeway, Texas Water Development Board, written commun., 2001) for the Chicot and Evangeline aquifers from 1997 through 2000 and for the Burkeville confining unit and Jasper aquifer from 1980 through 2000 for all counties except Harris, Galveston, and Fort Bend Counties. On the basis of well reports from drillers when and where possible, reported historical municipal withdrawals were assigned to specific wells using latitude, longitude, and well-screen-interval data. This enabled withdrawals to be distributed to the correct model layers and grid blocks. These well data were obtained by combining data from the Texas Commission on Environmental Quality (2002) Public Water System database, the USGS National Water Information System (NWIS) database (N.A. Houston, U.S. Geological Survey, unpub. data, 2002), the Texas Water Development Board (2002c) State well database, the TWDB water users follow-up survey (Cindy Ridgeway, Texas Water Development Board, written commun., 2001), and other minor data sources. For a given water user, if more than one well was referenced, then the ground-water withdrawals were divided evenly among those wells.

Comprehensive records of historical withdrawals for 1891 to 1979 do not exist for the somewhat permeable outcrop of the Burkeville confining unit and the Jasper aquifer. Therefore municipal withdrawals for those units for all counties in the GAM area for 1891–1979 were estimated by assuming withdrawals in these aquifers increased at the same rate as withdrawals in the Chicot and Evangeline aquifers in the area of the Kasmarek and Strom (2002) model for this time period. This approach also was applied to the Chicot and Evangeline

aquifers in the GAM area outside the area of the Kasmarek and Strom (2002) model.

## Manufacturing, Mining, and Power-Generation Withdrawals

Manufacturing, mining, and power-generation (industrial) withdrawals were actual monthly withdrawals reported by the water users (Cindy Ridgeway, Texas Water Development Board, written commun., 2001), which were available for 1980 through 2000. On the basis of well reports from drillers when and where possible, reported historical withdrawals for manufacturing, mining, and power generation were assigned to specific wells using latitude, longitude, and well-screen-interval data. This enabled the withdrawals to be distributed to the correct model layers and grid blocks. These well data were obtained by combining data from the Texas Commission on Environmental Quality (2002) Public Water System database, the USGS NWIS database (N.A. Houston, U.S. Geological Survey, unpub. data, 2002), the Texas Water Development Board (2002c) State well database, the TWDB water users follow-up survey (Cindy Ridgeway, Texas Water Development Board, written commun., 2001), and other minor data sources. For a given water user, if more than one well was referenced, the ground-water withdrawals were divided evenly among those wells.

From 1891 to 1979, data for the four layers were compiled from many sources (see list at end of appendix) and distributed to the appropriate model layer and grid block using latitude and longitude information from the source or by querying the same databases listed above. In geographic areas (usually counties) where few or no pre-1980 data were found, linear regressions were applied to estimate withdrawals. Annual or larger stress periods were the explanatory variable, and withdrawals were the response variable. Thus known post-1979 withdrawals and any available pre-1980 withdrawals were used to develop relations to estimate withdrawals for stress periods with no data.

## Livestock Withdrawals

The TWDB water-use-survey database (Cindy Ridgeway, Texas Water Development Board, written commun., 2001) also included historical annual withdrawal estimates for livestock (and irrigation and county-other) for the years 1980 through 2000 for each county-basin. A county-basin is a geographic unit delineated by the intersection of the river basin and county boundaries.

Livestock withdrawal totals within each county-basin were distributed uniformly over the rangeland within the county-basin on the basis of land-use maps, using the categories of herbaceous rangeland, shrub and brush rangeland, and mixed rangeland from the U.S. Geological Survey (2004) national land cover .

For 1980, 1982, and 1988, annual livestock water-use data were distributed uniformly on a monthly basis. Although this approach does not reflect the seasonality of livestock water use, livestock withdrawals account for less than 1 percent of the total withdrawals in the GAM area.

As with industrial withdrawals, data for 1891–1979 were compiled from numerous sources. Where few or no pre-1980 data were found, withdrawals were estimated using regressions in the same way as described above for manufacturing, mining, and power-generation withdrawals.

## Irrigation Withdrawals

Within each county-basin area, irrigation withdrawals were spatially distributed for the land-use categories of row crops, orchard/vineyard, and small grains. These land-use data were obtained from the U.S. Geological Survey (2004) national land cover.

For 1980, 1982, and 1988, annual irrigation withdrawals by aquifer were apportioned on a monthly basis using known monthly water deficits based on historical precipitation data and crop evapotranspiration estimates. This technique was used for each crop-reporting district in the GAM using the approach of Borrelli and others (1998).

As with other categories of withdrawals, data for 1891–1979 were compiled from numerous sources. Where few or no pre-1980 data were found, linear regressions were applied to estimate withdrawals in the same way as described above for manufacturing, mining, and power generation.

## County-Other Withdrawals

“County-other” primarily consists of unreported domestic withdrawals. County-other withdrawals were distributed within each county-basin exclusive of urban areas and using a 1-mi buffer area around surficial water bodies. If the aquifer or screened interval(s) of the well was unknown, assignment of county-other withdrawals to the proper model layer was done by evaluating similar wells with known screened intervals in the geographic area that was listed in the Texas Water Development Board (2002c) State well database.

## List of Sources by County [except first listing]

### Gulf Coast

Carr, J.E., Meyer, W.R., Sandeen, W.M., and McLane, I.R., 1985, Digital models for simulation of ground-water hydrology of the Chicot and Evangeline aquifers along the Gulf Coast of Texas: Texas Department of Water Resource Report 289, 101 p.

Kasmarek, M.C., and Strom, E.W., 2002, Hydrogeology and simulation of ground-water flow and land-surface subsidence in the Chicot and Evangeline aquifers, Houston area, Texas: U.S. Geological Survey Water-Resources Investigations Report 02–4022, 61 p.

### Austin County

Texas Water Development Board, 1967, Industrial ground water use for calendar years 1955–1966 (gallons per year) Anderson–Hardin County: Texas Water Development Board [no pagination].

Texas Water Development Board, 1996, Surveys of irrigation in Texas—1958, 1964, 1969, 1974, 1979, 1984, 1989, and 1994: Texas Water Development Board Report 347, 102 p.

Wilson, C.A., 1967, Ground-water resources of Austin and Waller Counties, Texas: Texas Water Development Board Report 68, 231 p.

### Brazoria County

Ryder, P.D., and Ardis, A.F., 2002, Hydrology of the Texas Gulf Coast aquifer systems: U.S. Geological Survey Professional Paper 1416–E, 77 p.

Sandeen, W.M., and Wesselman, J.B., 1973, Ground-water resources of Brazoria County, Texas: Texas Water Development Board Report 163, 202 p.

Texas Water Development Board, 1967, Industrial ground water use for calendar years 1955–1966 (gallons per year) Anderson–Hardin County: Texas Water Development Board [no pagination].

Texas Water Development Board, 1996, Surveys of irrigation in Texas—1958, 1964, 1969, 1974, 1979, 1984, 1989, and 1994: Texas Water Development Board Report 347, 102 p.

### Calhoun County

Marvin, R.F., Shafer, G.H., and Dale, O.C., 1962, Ground-water resources of Victoria and Calhoun Counties, Texas: Texas Board of Water Engineers, Bulletin 6202, 157 p.

Texas Water Development Board, 1967, Industrial ground water use for calendar years 1955–1966 (gallons per year) Anderson–Hardin County: Texas Water Development Board [no pagination].

### Chambers County

Texas Water Development Board, 1967, Industrial ground water use for calendar years 1955–1966 (gallons per year) Anderson–Hardin County: Texas Water Development Board [no pagination].

Texas Water Development Board, 1996, Surveys of irrigation in Texas—1958, 1964, 1969, 1974, 1979, 1984, 1989, and 1994: Texas Water Development Board Report 347, 102 p.

Wesselman, J.B., 1971, Ground-water resources of Chambers and Jefferson Counties, Texas: Texas Water Development Board Report 133, 183 p.

### Colorado County

Loskot, C.L., Sandeen, W.M., and Follett, C.R., 1982, Ground-water resources of Colorado, Lavaca, and Wharton Counties, Texas: Texas Department of Water Resources Report 270, 240 p.

## 108 Ground-Water Flow and Land-Surface Subsidence in the Northern Part of the Gulf Coast Aquifer System, Texas

Texas Water Development Board, 1967, Industrial ground water use for calendar years 1955–1966 (gallons per year) Anderson–Hardin County: Texas Water Development Board [no pagination].

Texas Water Development Board, 1986, Surveys of irrigation in Texas—1958, 1964, 1969, 1974, 1979, 1984: Texas Water Development Board Report 294, 228 p.

Texas Water Development Board, 1996, Surveys of irrigation in Texas—1958, 1964, 1969, 1974, 1979, 1984, 1989, and 1994: Texas Water Development Board Report 347, 102 p.

### Fayette County

Rogers, L.T., 1967, Availability and quality of ground water in Fayette County, Texas: Texas Water Development Board Report 56, 125 p.

Texas Water Development Board, 1967, Industrial ground water use for calendar years 1955–1966 (gallons per year) Anderson–Hardin County: Texas Water Development Board [no pagination].

Texas Water Development Board, 1986, Surveys of irrigation in Texas—1958, 1964, 1969, 1974, 1979, 1984: Texas Water Development Board Report 294, 228 p.

Texas Water Development Board, 1996, Surveys of irrigation in Texas—1958, 1964, 1969, 1974, 1979, 1984, 1989, and 1994: Texas Water Development Board Report 347, 102 p.

### Fort Bend County

Texas Water Development Board, 1967, Industrial ground water use for calendar years 1955–1966 (gallons per year) Anderson–Hardin County: Texas Water Development Board [no pagination].

Texas Water Development Board, 1996, Surveys of irrigation in Texas—1958, 1964, 1969, 1974, 1979, 1984, 1989, and 1994: Texas Water Development Board Report 347, 102 p.

Thorkildsen, David, 1990, Evaluation of water resources of Fort Bend County, Texas: Texas Water Development Board Report 321, 21 p.

### Galveston County

Anders, R.B., and Naftel, W.L., 1963, Pumpage of ground water and changes in water levels in Galveston County, Texas, 1958–1962: Texas Water Commission Bulletin 6303, 37 p.

Ryder, P.D., and Ardis, A.F., 2002, Hydrology of the Texas Gulf Coast aquifer systems: U.S. Geological Survey Professional Paper 1416–E, 77 p.

Texas Water Development Board, 1967, Industrial ground water use for calendar years 1955–1966 (gallons per year) Anderson–Hardin County: Texas Water Development Board [no pagination].

Texas Water Development Board, 1996, Surveys of irrigation in Texas—1958, 1964, 1969, 1974, 1979, 1984, 1989, and 1994: Texas Water Development Board Report 347, 102 p.

Wood, L.A., 1958, Pumpage of ground water and changes in water levels in Galveston County, Texas, 1952–1957: Texas Board of Water Engineers Bulletin 5808, 28 p.

### Gonzales County

Shafer, G.H., 1965, Ground-water resources of Gonzales County, Texas: Texas Water Development Board Report 4, 93 p.

Texas Water Development Board, 1967, Industrial ground water use for calendar years 1955–1966 (gallons per year) Anderson–Hardin County: Texas Water Development Board [no pagination].

Texas Water Development Board, 1996, Surveys of irrigation in Texas—1958, 1964, 1969, 1974, 1979, 1984, 1989, and 1994: Texas Water Development Board Report 347, 102 p.

### Grimes County

Baker, E.T., Jr., Follett, C.R., McAdoo, G.D., and Bonnett, C.W., 1974, Ground-water resources of Grimes County, Texas: Texas Water Development Board Report 186, 61 p.

Texas Water Development Board, 1967, Industrial ground water use for calendar years 1955–1966 (gallons per year) Anderson–Hardin County: Texas Water Development Board [no pagination].

Texas Water Development Board, 1996, Surveys of irrigation in Texas—1958, 1964, 1969, 1974, 1979, 1984, 1989, and 1994: Texas Water Development Board Report 347, 102 p.

### Hardin County

Baker, E.T., Jr., 1964, Geology and ground-water resources of Hardin County, Texas: Texas Water Commission Bulletin 6406, 99 p.

Texas Water Development Board, 1967, Industrial ground water use for calendar years 1955–1966 (gallons per year) Anderson–Hardin County: Texas Water Development Board [no pagination].

Texas Water Development Board, 1996, Surveys of irrigation in Texas—1958, 1964, 1969, 1974, 1979, 1984, 1989, and 1994: Texas Water Development Board Report 347, 102 p.

### Harris County

Barbie, D. L., and Locke, G. L., 1992, Ground-water withdrawals, water levels, and ground-water quality in the Houston district, Texas, with emphasis on 1985–89: U.S. Geological Survey Water-Resources Investigations Report 92–4180, 28 p.

Gabrysch, R.K., 1982, Ground-water withdrawals and changes in water levels in the Houston District, Texas: U.S. Geological Survey Open-File Report 82–431, 39 p.

Gabrysch, R.K., 1982, Ground-water withdrawals and land-surface subsidence in the Houston–Galveston region, Texas, 1906–80: U.S. Geological Survey Open-File Report 82–571, 68 p.

Ryder, P.D., and Ardis, A.F., 2002, Hydrology of the Texas Gulf Coast aquifer systems: U.S. Geological Survey Professional Paper 1416-E, 77 p.

Texas Water Development Board, 1967, Industrial ground water use for calendar years 1955–1966 (gallons per year) Harris-Lynn County: Texas Water Development Board [no pagination].

Texas Water Development Board, 1996, Surveys of irrigation in Texas—1958, 1964, 1969, 1974, 1979, 1984, 1989, and 1994: Texas Water Development Board Report 347, 102 p.

White, W.N., Rose, N.A., and Guyton, W.F., 1942, Ground-water resources of the Houston district: Texas Board of Water Engineers miscellaneous publication, 191 p.

## Jackson County

Baker, E.T., Jr., 1965, Ground-water resources of Jackson County, Texas: Texas Water Development Board Report 1, 228 p.

Ryder, P.D., and Ardis, A.F., 2002, Hydrology of the Texas Gulf Coast aquifer systems: U.S. Geological Survey Professional Paper 1416-E, 77 p.

Texas Water Development Board, 1967, Industrial ground water use for calendar years 1955–1966 (gallons per year) Harris-Lynn County: Texas Water Development Board [no pagination].

Texas Water Development Board, 1996, Surveys of irrigation in Texas—1958, 1964, 1969, 1974, 1979, 1984, 1989, and 1994: Texas Water Development Board Report 347, 102 p.

## Jasper County

Texas Water Development Board, 1967, Industrial ground water use for calendar years 1955–1966 (gallons per year) Harris-Lynn County: Texas Water Development Board [no pagination].

Texas Water Development Board, 1996, Surveys of irrigation in Texas—1958, 1964, 1969, 1974, 1979, 1984, 1989, and 1994: Texas Water Development Board Report 347, 102 p.

Wesselman, J.B., 1967, Ground-water resources of Jasper and Newton Counties: Texas Water Development Board Report 59, 177 p.

## Jefferson County

Texas Water Development Board, 1967, Industrial ground water use for calendar years 1955–1966 (gallons per year) Harris-Lynn County: Texas Water Development Board [no pagination].

Texas Water Development Board, 1996, Surveys of irrigation in Texas—1958, 1964, 1969, 1974, 1979, 1984, 1989, and 1994: Texas Water Development Board Report 347, 102 p.

Wesselman, J.B., 1971, Ground-water resources of Chambers and Jefferson Counties, Texas: Texas Water Development Board Report 133, 183 p.

## Lavaca County

Loskot, C.L., Sandeen, W.M., and Follett, C.R., 1982, Ground-water resources of Colorado, Lavaca, and Wharton Counties, Texas: Texas Department of Water Resources Report 270, 240 p.

Texas Water Development Board, 1967, Industrial ground water use for calendar years 1955–1966 (gallons per year) Harris-Lynn County: Texas Water Development Board [no pagination].

Texas Water Development Board, 1996, Surveys of irrigation in Texas—1958, 1964, 1969, 1974, 1979, 1984, 1989, and 1994: Texas Water Development Board Report 347, 102 p.

## Liberty County

Anders, R.B., McAdoo, G.D., and Alexander, W.H., Jr., 1968, Ground-water resources of Liberty County, Texas: Texas Water Development Board Report 72, 144 p.

Texas Water Development Board, 1967, Industrial ground water use for calendar years 1955–1966 (gallons per year) Harris-Lynn County: Texas Water Development Board [no pagination].

Texas Water Development Board, 1996, Surveys of irrigation in Texas—1958, 1964, 1969, 1974, 1979, 1984, 1989, and 1994: Texas Water Development Board Report 347, 102 p.

## Matagorda County

Hammond, W.W., Jr., 1969, Ground-water resources of Matagorda County, Texas: Texas Water Development Board Report 91, 167 p.

Ryder, P.D., and Ardis, A.F., 2002, Hydrology of the Texas Gulf Coast aquifer systems: U.S. Geological Survey Professional Paper 1416-E, 77 p.

Sundstrom, R.W., Cromack, G.H., and West, N.N., 1949, Ground-water resources of Matagorda County, Texas: Texas Board of Water Engineers miscellaneous publication, 44 p.

Texas Water Development Board, 1967, Industrial ground water use for calendar years 1955–1966 (gallons per year) McCullough–Zavala County: Texas Water Development Board [no pagination].

Texas Water Development Board, 1996, Surveys of irrigation in Texas—1958, 1964, 1969, 1974, 1979, 1984, 1989, and 1994: Texas Water Development Board Report 347, 102 p.

## Montgomery County

Popkin, B.P., 1971, Ground-water resources of Montgomery County, Texas: Texas Water Development Board Report 136, 149 p.

Texas Water Development Board, 1967, Industrial ground water use for calendar years 1955–1966 (gallons per year) McCullough–Zavala County: Texas Water Development Board [no pagination].

Texas Water Development Board, 1996, Surveys of irrigation in Texas—1958, 1964, 1969, 1974, 1979, 1984, 1989, and 1994: Texas Water Development Board Report 347, 102 p.

## **Newton County**

Texas Water Development Board, 1967, Industrial ground water use for calendar years 1955–1966 (gallons per year) McCullough–Zavala County: Texas Water Development Board [no pagination].

Texas Water Development Board, 1996, Surveys of irrigation in Texas—1958, 1964, 1969, 1974, 1979, 1984, 1989, and 1994: Texas Water Development Board Report 347, 102 p.

Wesselman, J.B., 1967, Ground-water resources of Jasper and Newton Counties: Texas Water Development Board Report 59, 177 p.

## **Orange County**

Texas Water Development Board, 1967, Industrial ground water use for calendar years 1955–1966 (gallons per year) McCullough–Zavala County: Texas Water Development Board [no pagination].

Texas Water Development Board, 1996, Surveys of irrigation in Texas—1958, 1964, 1969, 1974, 1979, 1984, 1989, and 1994: Texas Water Development Board Report 347, 102 p.

Wesselman, J.B., 1965, Geology and ground-water resources of Orange County, Texas: Texas Water Commission Bulletin 6516, 116 p.

## **Polk County**

Tarver, G.R., 1968, Ground-water resources of Polk County, Texas: Texas Water Development Board Report 82, 109 p.

Texas Water Development Board, 1967, Industrial ground water use for calendar years 1955–1966 (gallons per year) McCullough–Zavala County: Texas Water Development Board [no pagination].

Texas Water Development Board, 1996, Surveys of irrigation in Texas—1958, 1964, 1969, 1974, 1979, 1984, 1989, and 1994: Texas Water Development Board Report 347, 102 p.

## **San Jacinto County**

Sandeen, W.M., 1968, Ground-water resources of San Jacinto County, Texas: Texas Water Development Board Report 80, 95 p.

Texas Water Development Board, 1967, Industrial ground water use for calendar years 1955–1966 (gallons per year) McCullough–Zavala County: Texas Water Development Board [no pagination].

## **Trinity County**

Texas Water Development Board, 1967, Industrial ground water use for calendar years 1955–1966 (gallons per year) McCullough–Zavala County: Texas Water Development Board [no pagination].

Texas Water Development Board, 1986, Surveys of irrigation in Texas—1958, 1964, 1969, 1974, 1979, 1984: Texas Water Development Board Report 294, 228 p.

## **Tyler County**

Tarver, G.R., 1968, Ground-water resources of Tyler County, Texas: Texas Water Development Board Report 74, 91 p.

Texas Water Development Board, 1967, Industrial ground water use for calendar years 1955–1966 (gallons per year) McCullough–Zavala County: Texas Water Development Board [no pagination].

Texas Water Development Board, 1996, Surveys of irrigation in Texas—1958, 1964, 1969, 1974, 1979, 1984, 1989, and 1994: Texas Water Development Board Report 347, 102 p.

## **Walker County**

Texas Water Development Board, 1967, Industrial ground water use for calendar years 1955–1966 (gallons per year) McCullough–Zavala County: Texas Water Development Board [no pagination].

Texas Water Development Board, 1996, Surveys of irrigation in Texas—1958, 1964, 1969, 1974, 1979, 1984, 1989, and 1994: Texas Water Development Board Report 347, 102 p.

Winslow, A.G., 1950, Geology and ground-water resources of Walker County, Texas: Texas Board of Water Engineers Bulletin 5003, 49 p.

## **Waller County**

Texas Water Development Board, 1967, Industrial ground water use for calendar years 1955–1966 (gallons per year) McCullough–Zavala County: Texas Water Development Board [no pagination].

Texas Water Development Board, 1996, Surveys of irrigation in Texas—1958, 1964, 1969, 1974, 1979, 1984, 1989, and 1994: Texas Water Development Board Report 347, 102 p.

Wilson, C.A., 1967, Ground-water resources of Austin and Waller Counties, Texas: Texas Water Development Board Report 68, 231 p.

## **Washington County**

Sandeen, W.M., 1972, Ground-water resources of Washington County, Texas: Texas Water Development Board Report 162, 111 p.

Texas Water Development Board, 1967, Industrial ground water use for calendar years 1955–1966 (gallons per year) McCullough–Zavala County: Texas Water Development Board [no pagination].

Texas Water Development Board, 1986, Surveys of irrigation in Texas—1958, 1964, 1969, 1974, 1979, 1984: Texas Water Development Board Report 294, 228 p.

Texas Water Development Board, 1996, Surveys of irrigation in Texas—1958, 1964, 1969, 1974, 1979, 1984, 1989, and 1994: Texas Water Development Board Report 347, 102 p.

## **Wharton County**

Loskot, C.L., Sandeen, W.M., and Follett, C.R., 1982, Ground-water resources of Colorado, Lavaca, and Wharton Counties, Texas: Texas Department of Water Resources Report 270, 240 p.

Ryder, P.D., and Ardis, A.F., 2002, Hydrology of the Texas Gulf Coast aquifer systems: U.S. Geological Survey Professional Paper 1416-E, 77 p.

Texas Water Development Board, 1967, Industrial ground water use for calendar years 1955–1966 (gallons per year) McCullough–Zavala County: Texas Water Development Board [no pagination].

Texas Water Development Board, 1986, Surveys of irrigation in Texas—1958, 1964, 1969, 1974, 1979, 1984: Texas Water Development Board Report 294, 228 p.

Texas Water Development Board, 1996, Surveys of irrigation in Texas—1958, 1964, 1969, 1974, 1979, 1984, 1989, and 1994: Texas Water Development Board Report 347, 102 p.

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U.S. Geological Survey

8027 Exchange Drive

Austin, TX 78754-4733

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