

# ECOREGIONS OF TEXAS

2010

BUREAU OF ECONOMIC GEOLOGY

SCOTT W. TINKER, DIRECTOR  
JACKSON SCHOOL OF GEOSCIENCES  
THE UNIVERSITY OF TEXAS AT AUSTIN

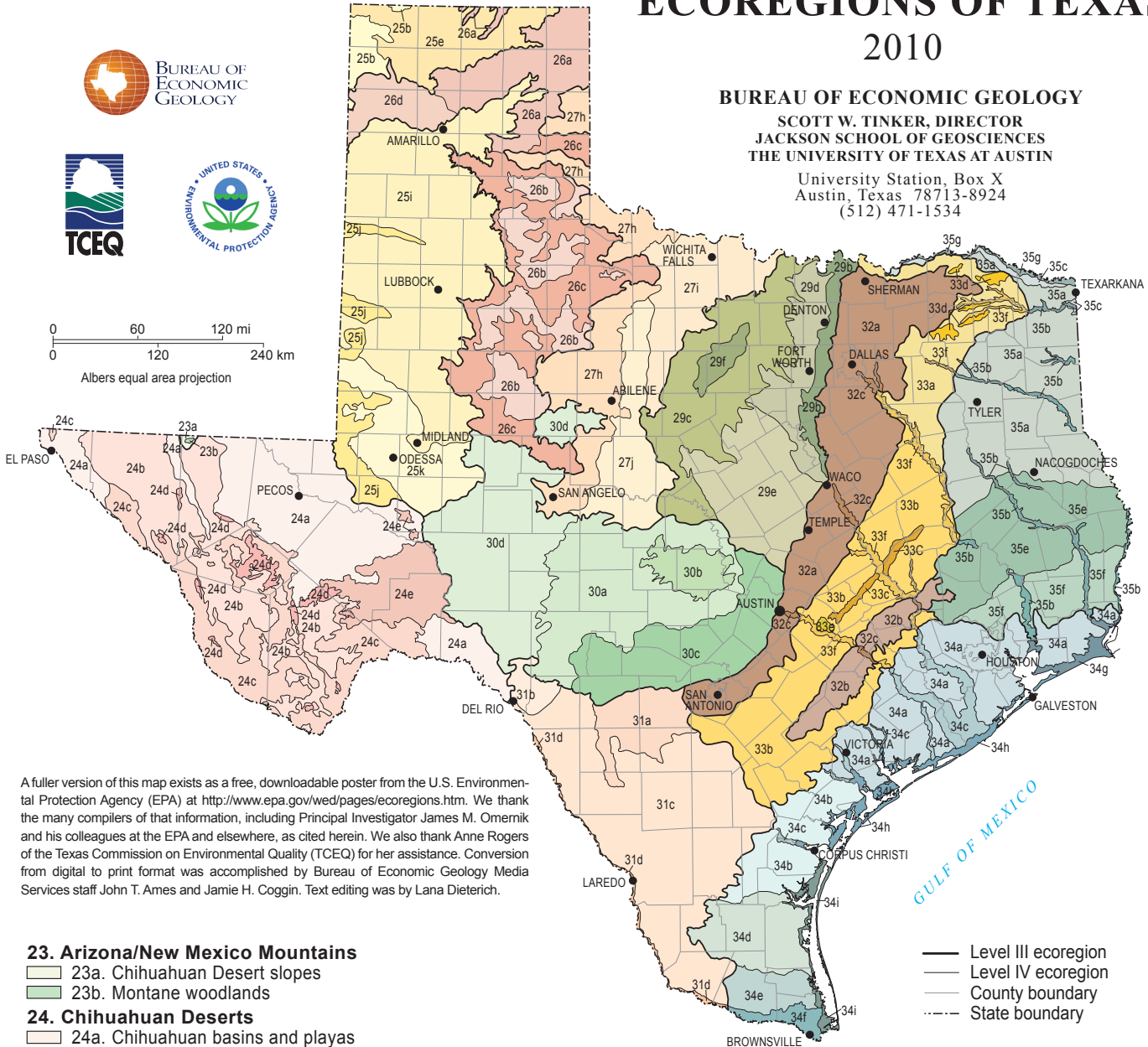
University Station, Box X  
Austin, Texas 78713-8924  
(512) 471-1534



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0 60 120 mi  
0 120 240 km  
Albers equal area projection



A fuller version of this map exists as a free, downloadable poster from the U.S. Environmental Protection Agency (EPA) at <http://www.epa.gov/wed/pages/ecoregions.htm>. We thank the many compilers of that information, including Principal Investigator James M. Omernik and his colleagues at the EPA and elsewhere, as cited herein. We also thank Anne Rogers of the Texas Commission on Environmental Quality (TCEQ) for her assistance. Conversion from digital to print format was accomplished by Bureau of Economic Geology Media Services staff John T. Ames and Jamie H. Coggin. Text editing was by Lana Dieterich.

### 23. Arizona/New Mexico Mountains

- 23a. Chihuahuan Desert slopes
- 23b. Montane woodlands

### 24. Chihuahuan Deserts

- 24a. Chihuahuan basins and playas
- 24b. Chihuahuan Desert grasslands
- 24c. Low mountains and bajadas
- 24d. Chihuahuan montane woodlands
- 24e. Stockton Plateau

### 25. High Plains

- 25b. Rolling sand plains
- 25e. Canadian/Cimarron High Plains
- 25i. Llano Estacado
- 25j. Shinnery Sands
- 25k. Arid Llano Estacado

### 26. Southwestern Tablelands

- 26a. Canadian/Cimarron Breaks
- 26b. Flat tablelands and valleys
- 26c. Caprock Canyons, Badlands, and Breaks
- 26d. Semiarid Canadian Breaks

### 27. Central Great Plains

- 27h. Red prairie
- 27i. Broken red plains
- 27j. Limestone plains

### 29. Cross Timbers

- 29b. Eastern cross timbers
- 29c. Western cross timbers
- 29d. Grand Prairie
- 29e. Limestone cut plain
- 29f. Carbonate cross timbers

### 30. Edwards Plateau

- 30a. Edwards Plateau woodland
- 30b. Llano Uplift
- 30c. Balcones Canyonlands
- 30d. Semiarid Edwards Plateau

### 31. Southern Texas Plains

- 31a. Northern Nueces alluvial plains
- 31b. Semiarid Edwards bajada
- 31c. Texas-Tamaulipan thornscrub
- 31d. Rio Grande floodplain and terraces

### 32. Texas Blackland Prairies

- 32a. Northern Blackland Prairie
- 32b. Southern Blackland/Fayette Prairie
- 32c. Floodplains and low terraces

### 33. East Central Texas Plains

- 33a. Northern post oak savanna
- 33b. Southern post oak savanna
- 33c. San Antonio prairie
- 33d. Northern prairie outliers
- 33e. Bastrop Lost Pines
- 33f. Floodplains and low terraces

### 34. Western Gulf Coastal Plain

- 34a. Northern humid gulf coastal prairies
- 34b. Southern subhumid gulf coastal prairies
- 34c. Floodplains and low terraces
- 34d. Coastal sand plain
- 34e. Lower Rio Grande valley
- 34f. Lower Rio Grande alluvial floodplain
- 34g. Texas-Louisiana coastal marshes
- 34h. Midcoast barrier islands and coastal marshes
- 34i. Laguna Madre barrier islands and coastal marshes

### 35. South Central Plains

- 35a. Tertiary uplands
- 35b. Floodplains and low terraces
- 35c. Pleistocene fluvial terraces
- 35e. Southern Tertiary uplands
- 35f. Flatwoods
- 35g. Red River bottomlands

- Level III ecoregion
- Level IV ecoregion
- County boundary
- State boundary

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# Ecoregions of Texas

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Ecoregions denote areas of general similarity in ecosystems and in type, quality, and quantity of environmental resources. They are designed to be a spatial framework for research, assessment, management, and monitoring of ecosystems and ecosystem components. Ecoregions stratify the environment by its probable response to disturbance (Bryce and others, 1999). These general-purpose regions are critical to the structuring and implementation of ecosystem management strategies across Federal agencies, State agencies, and nongovernmental organizations responsible for different types of resources within the same geographical areas (Omernik and others, 2000).

Ecological and biological diversity of Texas is enormous. The state encompasses barrier islands and coastal lowlands, large river floodplain forests, rolling plains and plateaus, forested hills, deserts, and a variety of aquatic habitats. There are 12 level III ecoregions and 56 level IV ecoregions in

Texas, and most continue into ecologically similar parts of adjacent states in the U.S. or Mexico.

This map is based on the premise that ecological regions are hierarchical and can be identified through analysis of spatial patterns and the composition of biotic and abiotic phenomena that affect or reflect differences in ecosystem quality and integrity (Wiken, 1986; Omernik 1987, 1995). These phenomena include geology, physiography, vegetation, climate, soils, land use, wildlife, and hydrology. The relative importance of each characteristic varies from one ecological region to another.

A hierarchical scheme indicates different levels of ecological regions. Level I divides North America into 15 ecological regions. Level II divides the continent into 52 regions (Commission for Environmental Cooperation Working Group, 1997). At level III, the continental United States contains 104 ecoregions,

and the conterminous United States has 84 ecoregions (U.S. Environmental Protection Agency, 2003). Level IV, depicted here for Texas, is a further refinement of level III ecoregions. Explanations of the methods used to define the U.S. Environmental Protection Agency's (EPA) ecoregions are given in Omernik (1995), Omernik and others (2000), and Gallant and others (1989).

This map is modified from a collaborative project between EPA Region VI, EPA National Health and Environmental Effects Research Laboratory (Corvallis, Oregon), the Texas Commission on Environmental Quality (TCEQ), and the U.S. Department of Agriculture—Natural Resources Conservation Service (NRCS). Collaboration and consultation also occurred with the U.S. Geological Survey (USGS)—Earth Resources Observation Systems Data Center.

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MANAGING EDITOR: Peter Eichhubl

MEDIA MANAGER: Cathy J. Brown

GRAPHICS: John T. Ames and Jamie H. Coggin

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AUTHORS: Glenn E. Griffith (Dynamac Corporation), Sandra A. Bryce (Dynamac Corporation), James M. Omernik (USGS), Jeffrey A. Comstock (Indus Corporation), Anne C. Rogers (TCEQ), Bill Harrison (TCEQ), Stephen L. Hatch (Texas A&M University), and David Bezanson (Natural Area Preservation Association).

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## Bureau of Economic Geology

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The **Bureau of Economic Geology**, established in 1909, is the oldest research unit at The University of Texas at Austin. The Bureau functions as the state geological survey of Texas, and Director Scott W. Tinker is the State Geologist. The Bureau conducts basic and applied research programs in energy resources and economics, coastal and environmental studies, land resources and use, geologic and mineral mapping, hydrogeology, geochemistry, and subsurface nanotechnology.