

# Chapter 12





# Chapter 12



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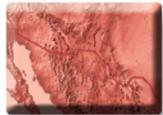




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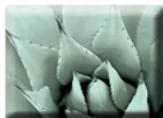
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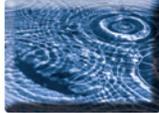


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## Chapter 5

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## Chapter 6

### Challenge Theme 4. People in the Borderlands



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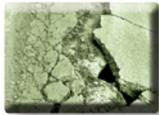


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*Chapter 4*  
**Challenge Theme 2. Assuring Water Availability and Quality in the 21st Century**



Estimation of Aquifer Thickness in the Mimbres Groundwater Basin, New Mexico, Using Gravity (*page 78*) ..... Charles E. Heywood

Capture Maps Help Water Managers Understand the Effects of Groundwater Pumping on Streams, Springs, and Riparian Vegetation (*page 84*) ..... Stanley A. Leake, Donald R. Pool, and James M. Leenhouts

The Use of Semipermeable Membrane Devices to Assess Organic Compounds in the Rio Grande from Presidio to Brownsville, Texas (*page 90*) ..... J. Bruce Moring and Rita Setser



*Chapter 6*  
**Challenge Theme 4. People in the Borderlands**



AGAVES—Assessment of Goods and Valuation of Ecosystem Services in the San Pedro River Basin, United States and Mexico (*page 142*)..... Darius J. Semmens, Nita Tallent-Halsell, David C. Goodrich, Laura M. Norman, Charles van Riper III, Robert Winthrop, William G. Kepner, David Brookshire, D. Philip Guertin, and Malka Pattison

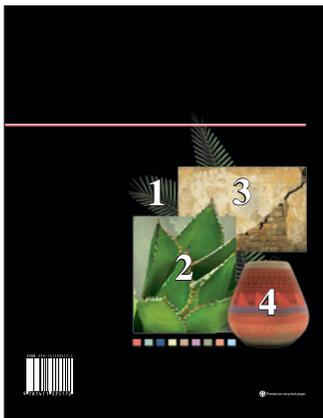
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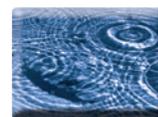
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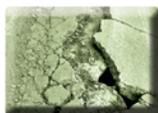
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# poster



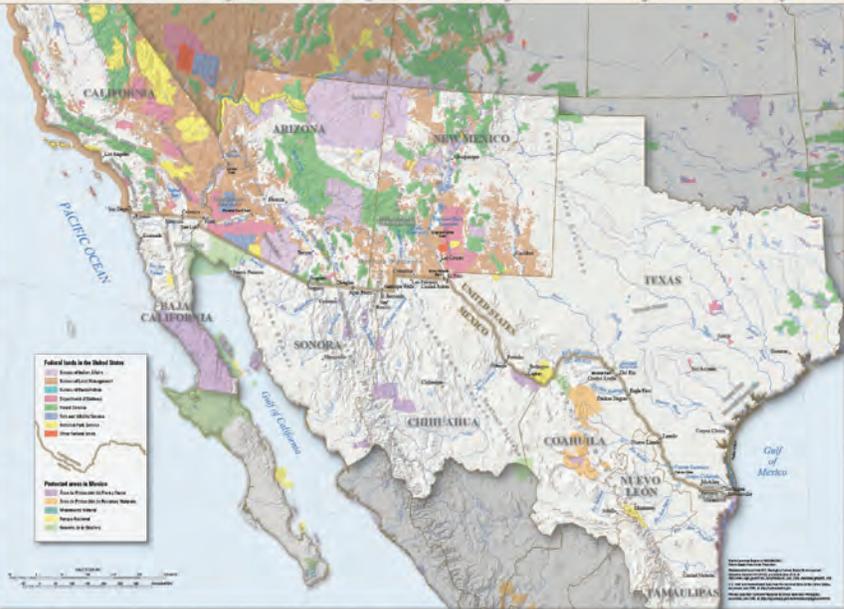

## United States–Mexican Borderlands

...facing tomorrow's challenges through USGS science

Edited by Ronald D. Smith, Thomas R. Bell, William R. Page, Michael J. Parker, Jim S. Hartman, and William T. Gburek  
Design: Image and Icons by Carol A. Sembray



U.S. Department of the Interior  
U.S. Geological Survey  
Product to accompany Circular 1380



**Federal lands in the United States**

- Bureau of Land Management
- Bureau of Reclamation
- National Park System
- U.S. Forest Service
- U.S. Fish and Wildlife Service
- U.S. Postal Service
- U.S. Coast Guard
- U.S. Navy
- U.S. Air Force
- U.S. Marine Corps
- U.S. Army
- U.S. Department of Justice
- U.S. Department of Health and Human Services
- U.S. Department of Education
- U.S. Department of Energy
- U.S. Department of Transportation
- U.S. Department of Agriculture
- U.S. Department of the Treasury
- U.S. Department of State
- U.S. Department of Defense
- U.S. Department of Justice
- U.S. Department of Health and Human Services
- U.S. Department of Education
- U.S. Department of Energy
- U.S. Department of Transportation
- U.S. Department of Agriculture
- U.S. Department of the Treasury
- U.S. Department of State
- U.S. Department of Defense

**Political areas in Mexico**

- Baja California Sur
- Baja California
- Sonora
- Chihuahua
- Coahuila
- Nuevo Leon
- Tamaulipas

**borderlands challenge themes**

**1** **Ecological Resources**

The borderlands represent the largest diversity of desert plants and one of the largest stretches of the riparian and wetland ecosystems in the United States. The borderlands are rich in biological resources and are home to many species of plants and animals that are found nowhere else in the world.

**2** **Water Availability and Quality**

Water availability is one of the most important issues in the borderlands because of its connection with the environment, the economy, and the quality of life. The borderlands are home to many species of plants and animals that are found nowhere else in the world.

**3** **Energy and Mineral Resources**

The borderlands are rich in energy and mineral resources. The borderlands are home to many species of plants and animals that are found nowhere else in the world.

**4** **Natural Hazards**

The borderlands are home to many natural hazards, including earthquakes, hurricanes, and drought. The borderlands are home to many species of plants and animals that are found nowhere else in the world.

**5** **Climate Change**

Climate change is a global issue that affects the borderlands. The borderlands are home to many species of plants and animals that are found nowhere else in the world.

**6** **Human Health**

The borderlands are home to many human health issues, including air and water quality, and the health of the borderlands population. The borderlands are home to many species of plants and animals that are found nowhere else in the world.

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